[**LVP** = Judge ***Linda Vivienne Parker***, assigned to the bench ***Mar. 17, 2014***]
[**RSW** = Executive Magistrate Judge ***R. [Robert] Steven Whalen***, assigned to the bench ***Sep. 11, 2002***]

IN THE UNITED STATES DISTRICT COURT

EASTERN DISTRCT OF MICHIGAN

TIMOTHY KING,MARIAN ELLEN SHERIDAN, JOHN EARL HAGGARD, CHARLES JAMES RITCHARD, JAMES DAVID HOOPER and DAREN WADE RUBINGH, **Plaintiffs.** **v.** **GRETCHEN WHITMER, in her official capacity as Governor of the State of Michigan, JOCELYN BENSON, in her official capacity as Michigan Secretary of State and the Michigan BOARD OFSTATE CANVASSERS.** **Defendants.**	**CASE NO.**

COMPLAINT FOR DECLARATORY, EMERGENCY, AND PERMANENT INJUNCTIVE RELIEF

NATURE OF THE ACTION

1. This civil action brings to light a massive election fraud, multiple violations of the Michigan Election Code, *see, e.g.,* MCL §§ 168.730-738, in addition to the Election and Electors Clauses and Equal Protection Clause of the U.S. Constitution violations that occurred during the 2020 General Election throughout the State of Michigan,[1]as set forth in the affidavits of dozens of eye witnesses and the statistical anomalies and mathematical impossibilities detailed in the affidavits of expert witnesses.

2. The scheme and artifice to defraud was for the purpose of illegally and fraudulently manipulating the vote count to manufacture an election of Joe Biden as President of the United States. The fraud was executed by many means,[2] but the most fundamentally troubling, insidious, and egregious ploy was the systemic adaptation of old-fashioned "ballot-stuffing." It has now been amplified and rendered virtually invisible by computer software created and run by domestic and foreign actors for that very purpose. This Complaint details an especially egregious range of conduct in Wayne County and the City of Detroit, though this conduct occurred throughout the State at the direction of Michigan state election officials.

3. The multifaceted schemes and artifices implemented by Defendants and their collaborators to defraud resulted in the unlawful counting, or manufacturing, of hundreds of thousands of illegal, ineligible, duplicate or purely fictitious ballots in the State of Michigan, that

---

[1] The same pattern of election fraud and voter fraud writ large occurred in all the swing states with only minor variations in Michigan, Pennsylvania, Arizona and Wisconsin. See Exh. 101, William M. Briggs, Ph.D. "An Analysis Regarding Absentee Ballots Across Several States" (Nov. 23, 2020) ("Dr. Briggs Report").

[2] 50 U.S.C. § 20701 requires Retention and preservation of records and papers by officers of elections; deposit with custodian; penalty for violation, but as will be shown wide-pattern of misconduct with ballots show preservation of election records have not been kept; and Dominion logs are only voluntary, with no system wide preservation system. Without an incorruptible audit log, there is no acceptable system.

constitute a multiple of Biden's purported lead in the State. While this Complaint, and the eyewitness and expert testimony incorporated herein, identify with specificity sufficient ballots required to overturn and reverse the election results, the entire process is so riddled with fraud, illegality, and statistical impossibility that this Court, and Michigan's voters, courts, and legislators, cannot rely on, or certify, any numbers resulting from this election.

Dominion Voting Systems Fraud and Manipulation

4. The fraud begins with the election software and hardware from Dominion Voting Systems Corporation ("Dominion") used by the MichiganBoard of State Canvassers. The Dominion systems derive from the software designed by Smartmatic Corporation, which became Sequoia in the United States.

5. Smartmatic and Dominion were founded by foreign oligarchs and dictators to ensure computerized ballot-stuffing and vote manipulation to whatever level was needed to make certain Venezuelan dictator Hugo Chavez never lost another election.*See* Exh. 1, Redacted Declaration of Dominion Venezuela Whistleblower ("Dominion Whistleblower Report"). Notably, Chavez "won" every election thereafter.

6. As set forth in the DominionWhistleblower Report, the Smartmatic software was contrived through a criminal conspiracy to manipulate Venezuelan elections in favor of dictator Hugo Chavez:

> Importantly, I was a direct witness to the creation and operation of an electronic voting system in a conspiracy between a company known as Smartmatic and the leaders of conspiracy with the Venezuelan government. This conspiracy specifically involved President Hugo Chavez Frias, the person in charge of the National Electoral Council named Jorge Rodriguez, and principals, representatives, and personnel from Smartmatic. The purpose of this conspiracy was to create and operate a voting system that could change the votes in elections from votes against persons running the Venezuelan government to votes in their favor in order to maintain control of the government. In mid-February of 2009, there was a national referendum to change theConstitution of Venezuela to end

> term limits for elected officials, including the President of Venezuela. The referendum passed. This permitted Hugo Chavez to be re-elected an unlimited number of times. . . .
>
> Smartmatic's electoral technology was called "Sistema de Gestión Electoral" (the "Electoral Management System"). Smartmatic was a pioneer in this area of computing systems. Their system provided for transmission of voting data over the internet to a computerized central tabulating center. The voting machines themselves had a digital display, fingerprint recognition feature to identify the voter, and printed out the voter's ballot. The voter's thumbprint was linked to a computerized record of that voter's identity. Smartmatic created and operated the entire system. *Id.* ¶¶ 10 & 14.

7. A core requirement of the Smartmatic software design ultimately adopted by Dominion for the Michigan's elections was the software's ability to hide its manipulation of votes from any audit. As the whistleblower explains:

> Chavez was most insistent that Smartmatic design the system in a way that the system could change the vote of each voter without being detected. He wanted the software itself to function in such a manner that if the voter were to place their thumb print or fingerprint on a scanner, then the thumbprint would be tied to a record of the voter's name and identity as having voted, but that voter would not tracked to the changed vote. He made it clear that the system would have to be setup to not leave any evidence of the changed vote for a specific voter and that there would be no evidence to show and nothing to contradict that the name or the fingerprint or thumb print was going with a changed vote. Smartmatic agreed to create such a system and produced the software and hardware that accomplished that result for President Chavez.*Id.* ¶15.

8. The design and features *of* the Dominion software do not permit a simple audit to reveal its misallocation, redistribution, or deletion of votes. First, the system's central accumulator does not include a protected real-time audit log that maintains the date and time stamps of all significant election events. Key components of the system utilize unprotected logs. Essentially this allows an unauthorized user the opportunity to arbitrarily add, modify, or remove log entries, causing the machine to log election events that do not reflect actual voting tabulations—or more specifically, do not reflect the actual votes of or the will of the people. *See* Exh. 107, August 24, 2020 Declaration of HarriHursti, ¶¶45-48).

9. Indeed, under the professional standards within the industry in auditing and forensic analysis, when a log is unprotected, and can be altered, it can no longer serve the purpose of an audit log.There is incontrovertible physical evidence that the standards of physical security of the voting machines and the software were breached, and machines were connected to the internet in violation of professional standards, which violates federal election law on the preservation of evidence.

10. In deciding to award Dominion a$25 million, ten-year contract (to a Dominion project team led by Kelly Garrett, former Deputy Director of the Michigan Democratic Party), and then certifying Dominion software, Michigan officials disregarded all the concerns that caused Dominion software to be rejected by the Texas Board of elections in 2018 because it was deemed vulnerable to undetected and non-auditable manipulation. An industry expert, Dr. Andrew Appel, Princeton Professor of Computer Science and Election Security Expert has recently observed, with reference to Dominion Voting machines: "I figured out how to make a slightly different computer program that just before the polls were closed, it switches some votes around from one candidate to another. I wrote that computer program into a memory chip and now to hack a voting machine you just need 7 minutes alone with it and a screwdriver."[3]

11. Plaintiff's expert witness, Russell James Ramsland, Jr. (Exh. 101, "Ramsland Affidavit"), has concluded that Dominion alone is responsible for the injection, or fabrication, of 289,866 illegal votes in Michigan, that must be disregarded. This is almost twice the number of Mr. Biden's purported lead in the Michigan vote (without consideration of the additional illegal, ineligible, duplicate or fictitious votes due to the unlawful conduct outlined below), and thus by itself is grounds to set aside the 2020 General Election and grant the declaratory and injunctive

[3]Andrew W. Appel, *et al.*, "Ballot Marking Devices (BMDs) Cannot Assure the Will of the Voters" at (Dec. 27, 2019), attached hereto as Exhibit 2 ("Appel Study").

relief requested herein.

12. In addition to the Dominion computer fraud, this Complaint identifies several additional categories of "traditional" voting fraud and Michigan Election Code violations, supplemented by healthy doses of harassment, intimidation, discrimination, abuse and even physical removal of Republican poll challengers to eliminate any semblance of transparency, objectivity or fairness from the vote counting process. While this illegal conduct by election workers and state, county and city employees in concert with Dominion, even if considered in isolation, the following three categories of systematic violations of the Michigan Election Code cast significant doubt on the results of the election and mandate this Court to set aside the 2020 General Election and grant the declaratory and injunctive relief requested herein.

Fact Witness Testimony of Voting Fraud & Other Illegal Conduct

13. There were three broad categories of illegal conduct by election workers in collaboration with other employee state, county and/or city employees and Democratic poll watchers and activists.First, to facilitate and cover-up the voting fraud and counting of fraudulent, illegal or ineligible voters, election workers:

A. Denied Republican election challengers access to the TCF Center, where all Wayne County, Michigan ballots were processed and counted;

B. Denied Republic poll watchers at the TCF Center meaningful access to view ballot handling, processing, or counting and lockedcredentialedchallengersoutofthe counting room so they could not observe the process, during which time tens of thousands of ballots wereprocessed;

C. Engaged in a systematic pattern of harassment, intimidation and even physical removal of Republican election challengers or locking them out of the TCF Center;

D. Systematically discriminated against Republican poll watchers and favored Democratic poll watchers;

E. Ignored or refused to record Republican challenges to the violations outlined herein;

F. Refused to permit Republican poll challengers to observe ballot duplication and other instances where they allowed ballots to be duplicated by hand without allowing poll challengers to check if the duplication was accurate;

G. Unlawfully coached voters to vote for Joe Biden and to vote a straight Democrat ballot, including by going overtothevotingboothswithvotersinorder to watch them vote and coach them for whom to vote;

H. As a result of the above, Democratic election challengers outnumbered Republicans by 2:1 or 3:1 (or sometimes 2:0 at voting machines); and

I. Collaborated with Michigan State, Wayne County and/or City of Detroit employees (including police) in all of the above unlawful and discriminatory behavior.

14. Second, election workers illegally forged, added, removed or otherwise altered information on ballots, the Qualified Voter File (QVF) and Other Voting Records, including:

A. Fraudulently adding "tens of thousands" of new ballots and/or new voters to QVF in two separate batches on November 4, 2020, all or nearly all of which were votes for Joe Biden;

B. Forging voter information and fraudulently adding new voters to the QVF Voters, in particular, e.g., when a voter's name could not be found, the election worker assigned the ballot to a random name already in the QVF to a person who had notvoted and recordedthesenewvotersashavingabirthdate of1/1/1900;

C. Changing dates on absenteeballots received after 8:00 PM Election Day deadline to indicate that such ballots were received before the deadline;

D. Changing Votes for Trump and other Republican candidates; and

E. Added votes to "undervote" ballots and removing votes from "Over-Votes".

15. Third, election workers committed several additional categories of violations of the Michigan Election Code to enable them to accept and count other illegal, ineligible or duplicate ballots, or reject Trump or Republican ballots, including:

A. Permitting illegal double voting by persons that had voted by absentee ballot and in person;

B. Counting ineligible ballots – and in many cases – multiple times;

C. Counting ballots without signatures, or without attempting to match signatures, and ballots without postmarks, pursuant to direct instructions from Defendants;

D. Counting "spoiled" ballots;

E. Systematic violations of ballot secrecy requirements;

F. Unsecured ballots arrived at the TCF Center loading garage, not in sealed ballot boxes, without any chain of custody, and withoutenvelopes, after the 8:00 PM Election Day deadline, in particular, the tens of thousands of ballots that arrived on November 4, 2020; and

G. Accepting and counting ballots from deceased voters.

Expert Witness Testimony Regarding Voting Fraud

16. In addition to the above fact witnesses, this Complaint presents expert witness testimony demonstrating that several hundred thousand illegal, ineligible, duplicate or purely fictitious votes must be thrown out, in particular: (1) a report from Russel Ramsland, Jr. showing the "physical impossibility" of nearly 385,000 votes injected by four precincts/township on November 4, 2020, that resulted in the counting of nearly 290,000 more ballots processed than available capacity (which is based on statistical analysis that is independent of his analysis of Dominion's flaws); (2) a report from Dr. William Briggs, showing that there were approximately 60,000 absentee ballots listed as "unreturned" by voters that either never requested them, or that requested and returned their ballots; and (3) a report from Dr. Eric Quinell analyzing the anomalous turnout figures in Wayne and Oakland Counties showing that Biden gained nearly 100% and frequently more than 100% of all "new" voters in certain townships/precincts over 2016, and thus indicated that nearly 87,000 anomalous and likely fraudulent votes from these precincts.

17. As explained and demonstrated in the accompanying redacted declaration of a former electronic intelligence analyst under 305th Military Intelligence with experience gathering SAM missile system electronic intelligence, the Dominion software was accessed by agents acting on behalf of China and Iran in order to monitor and manipulate elections, including

the most recent US general election in 2020. This Declaration further includes a copy of the patent records for Dominion Systems in which Eric Coomer is listed as the first of the inventors of Dominion Voting Systems. (See Attached hereto as Ex. 105, copy of redacted witness affidavit, November 23, 2020).

18. Expert Navid Keshavarez-Nia explains that US intelligence services had developed tools to infiltrate foreign voting systems including Dominion. He states that Dominion's software is vulnerable to data manipulation by unauthorized means and permitted election data to be altered in all battleground states. He concludes that hundreds of thousands of votes that were cast for President Trump in the 2020 general election were transferred to former Vice-President Biden. (Ex. 109).

19. These and other "irregularities" provide this Court grounds to set aside the results of the 2020 General Election and provide the other declaratory and injunctive relief requested herein.

JURISDICTION ANDVENUE

20. This Court has subject matter under 28 U.S.C. § 1331 which provides, "The district courts shall have original jurisdiction of all civil actions arising under the Constitution, laws, or treaties of the United States."

21. This Court also has subject matter jurisdiction under 28 U.S.C. § 1343 because this action involves a federal election for President of the United States. "A significant departure from the legislative scheme for appointing Presidential electors presents a federal constitutional question." *Bush v. Gore*, 531 U.S. 98, 113 (2000) (Rehnquist, C.J., concurring); *Smiley v. Holm*, 285 U.S. 355, 365(1932).

22. ThejurisdictionoftheCourttograntdeclaratoryreliefisconferredby28U.S.C. §§ 2201

and 2202 and by Rule 57, Fed. R. Civ. P.

23. This Court has jurisdiction over the related Michigan constitutional claims and state-law claims under 28 U.S.C.§ 1367.Venueisproperbecausea substantial part of the events or omissions giving rise to the claim occurred in the Eastern District. 28 U.S.C. § 1391(b) &(c).

24. Because the United States Constitution reserves for state legislatures the power to set the time, place, and manner of holding elections for Congress and the President, state executive officers, including but not limited to Secretary Benson, have no authority to unilaterally exercise that power, much less flout existinglegislation.

THE PARTIES

25. Each of the following Plaintiffs are registered Michigan voters and nominees of the Republican Party to be a Presidential Elector on behalf of the State of Michigan: Timothy King, a resident of Washtenaw County, Michigan; Marian Ellen Sheridan, a resident of Oakland County, Michigan; and,John Earl Haggard, a resident of Charlevoix, Michigan;

26. Each of these Plaintiffshas standing to bring this action as voters and as candidates for the office of Elector under MCL §§ 168.42 & 168.43 (election procedures for Michigan electors).As such, Presidential Electors "have a cognizable interest in ensuring that the final vote tally reflects the legally valid votes cast," as "[a]n inaccurate vote tally is a concrete and particularized injury to candidates such as the Electors." *Carson v. Simon*, 978 F.3d 1051, 1057 (8th Cir. 2020) (affirming that Presidential Electors have Article III and prudential standing to challenge actions of Secretary of State in implementing or modifying State election laws); *see also McPherson v. Blacker*, 146 U.S. 1, 27 (1892); *Bush v. Palm Beach Cty. Canvassing Bd.*, 531 U.S. 70, 76 (2000) (per curiam). Each brings this action to set aside and decertify the election results for the Office of President of the United States that was certified by the Michigan Secretary of State on November 23, 2020. The certified results showed a plurality of 154,188

votes in favor of former Vice-President Joe Biden over President Trump.

27. Plaintiff James Ritchard is a registered voter residing in Oceana County. He is the Republican Party Chairman of Oceana County.

28. Plaintiff James David Hooper is a registered voter residing in Wayne County. He is the Republican Party Chairman for the Wayne County Eleventh District.

29. Plaintiff Daren Wade Ribingh is a registered voter residing in Antrim County. He is the Republican Party Chairman of Antrim County. is

30. Defendant Gretchen Whitmer (Governor of Michigan) is named herein in her official capacity as Governor of the State of Michigan.

31. Defendant JocelynBenson ("Secretary Benson") isnamed as adefendantinherofficial capacity as Michigan'sSecretaryofState. Jocelyn Benson is the "chief elections officer" responsible for overseeing the conduct of Michigan elections. MCL § 168.21 ("The secretary of state shall be the chief election officer of the state and shall have supervisory control over local election officials in the performance of their duties under the provisions of this act."); MCL § 168.31(1)(a)(the"SecretaryofStateshall…issueinstructions andpromulgaterules…fortheconduct of elections and registrations in accordance with the laws of this state"). Local election officials must follow Secretary Benson's instructions regarding the conduct of elections. Michigan law provides that Secretary Benson "[a]dvise and direct local election officials as to the proper methods of conducting elections." MCL § 168.31(1)(b). *See also Hare v. Berrien Co Bd. of Election*, 129 N.W.2d 864 (Mich. 1964); *Davis v. Secretary of State*, 2020 Mich. App. LEXIS 6128, at *9 (Mich. Ct. App. Sep. 16, 2020). Secretary Bensonis responsibleforassuringMichigan'slocalelectionofficialsconductelectionsinafair,just, and lawful manner. *See* MCL 168.21; 168.31; 168.32. *See also League of Women Voters of*

Michigan v. Secretary of State, 2020 Mich. App. LEXIS 709, *3 (Mich. Ct. App. Jan. 27, 2020); *Citizens Protecting Michigan's Constitution v. Secretary of State*, 922 N.W.2d 404(Mich.Ct.App.2018),aff'd921N.W.2d247(Mich.2018);*Fitzpatrickv.Secretaryof State*, 440 N.W.2d 45 (Mich. Ct. App. 1989).

32. Defendant Michigan Board of State Canvassers is "responsible for approv[ing] votingequipmentforuseinthestate,certify[ing]theresultofelectionsheldstatewide…." Michigan Election Officials' Manual, p. 4. *See also* MCL 168.841, *etseq*. On March 23, 2020, the Board of State Canvassers certified the results of the 2020 election finding that Joe Biden had received 154,188 more votes than President Donald Trump.

STATEMENT OF FACTS

33. Plaintiffs bring this action under 42 U.S.C. §§ 1983 and 1988, and under MCL 168.861, to remedy deprivations of rights, privileges, or immunities secured by the Constitution and laws of the United States and to contest the election results, and the corollary under the Michigan Constitution.

34. The United States Constitution sets forth the authority to regulate federal elections. With respect to congressional elections, the Constitution provides.

35. The Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State by the Legislature thereof; but the Congress may at any time by Law make or alter such Regulations, except as to the Places of choosing Senators. U.S. CONST. art. I, § 4 ("Elections Clause").

36. With respect to the appointment of presidential electors, the Constitution provides: Each State shall appoint, in such Manner as the Legislature thereof may direct, a Number of Electors, equal to the whole Number of Senators and Representatives to which the

State may be entitled in the Congress: but no Senator or Representative, or Person holding an Office of Trust or Profit under the United States, shall be appointed an Elector. U.S. CONST. art. II, § 1 ("Electors Clause"). Under the Michigan Election Code, the Electors of the President and Vice President for the State of Michigan are elected by each political party at their state convention in each Presidential election year. *See* MCL §§ 168.42 & 168.43.

37. Neither Defendant is a "Legislature" as required under the Elections Clause or Electors Clause. The Legislature is "'the representative body which ma[kes] the laws of the people.'" *Smiley*, 285 U.S. 365. Regulations of congressional and presidential elections, thus, "must be in accordance with the method which the state has prescribed for legislative enactments." Id. at 367; *see also Ariz. State Legislature v. Ariz. Indep. Redistricting Comm'n*, 576 U.S. 787, 135 S. Ct. 2652, 2668 (U.S. 2015).

38. While the Elections Clause "was not adopted to diminish a State's authority to determine its own lawmaking processes," *Ariz.State Legislature,* 135 S. Ct. at 2677, it does hold states accountable to their chosen processes when it comes to regulating federal elections, *id.* at 2668. "A significant departure from the legislative scheme for appointing Presidential electors presents a federal constitutional question." *Bush,* 531 U.S. at 113 (Rehnquist, C.J., concurring); *Smiley,* 285 U.S. at 365.

39. And Plaintiffs bring this action,to vindicate his constitutional right to a free and fair election ensuring the accuracy and integrity of the process pursuant to the Michigan Constitution, art. 2, sec. 4, par. 1(h), which states all Michigan citizenshave:

> The right to have the results of statewide elections audited, in such a manner as prescribed by law, to ensure the accuracy and integrity of elections.

40. TheMich.Const.,art.2,sec.4,furtherstates,"Allrightssetforthinthissubsection shall be self-executing. This subsection shall be liberally construed in favor of voters' rights in order to

effectuate itspurposes."

41. Based upon all the allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to enjoin the certification of the election results pending a full investigation and court hearing, and to order an independent audit of the November 3, 2020 election to ensure the accuracy and integrity of theelection

I. LEGAL BACKGROUND: RELEVANT PROVISIONS OF THE MICHIGAN ELECTION CODE AND ELECTION CANVASSING PROCEDURES.

A. Michigan law requires Secretary Benson and local election officials to provide designated challengers a meaningful opportunity to observe the conduct ofelections.

42. Challengers representing a political party, candidate, or organization interested in the outcome of the election provide a critical role in protecting the integrity ofelectionsincludingthepreventionofvoterfraudandotherconduct(whethermaliciously undertaken or by incompetence) that could affect the conduct of the election. *See* MCL § 168.730-738.

43. MichiganrequiresSecretaryofStateBenson,localelectionauthorities,and stateandcountycanvassingboardstoprovidechallengerstheopportunitytomeaningfully participate in, and oversee, the conduct of Michigan elections and the counting ofballots.

44. Michigan'selectioncodeprovidesthatchallengersshallhavethefollowing rights and responsibilities:

a. An election challenger shall be provided a space within a polling place where they can observe the election procedure and each person applyingto vote. MCL§ 168.733(1).

b. An election challenger must be allowed opportunity to inspect poll books as ballots are issued to electors and witness the electors' names being entered in the poll book. MCL§ 168.733(1)(a).

c. AnelectionChallengermustbeallowedtoobservethemannerinwhichthe duties of the election inspectors are being performed. MCL§ 168.733(1)(b).

d. An election challenger is authorized to challenge the voting rights of a person who the challenger has good reason to believe is not a registered elector. MCL§ 168.733(1)(c).

e. Anelectionchallengerisauthorizedtochallengeanelectionprocedurethat is not being properly performed. MCL§ 168.733(1)(d).

f. Anelectionchallengermaybringtoanelectioninspector'sattentionanyof the following: (1) improper handling of a ballot by an elector or election inspector; (2) a violation of a regulation made by the board of election inspectors with regard to the time in which an elector may remain in the polling place; (3) campaigning and fundraising being performed by an electioninspectororotherpersoncoveredbyMCL§168.744;and/or(4)any otherviolationofelectionlaworotherprescribedelectionprocedure.MCL § 168.733(1)(e).

g. An election challenger may remain present during the canvass of votesand until the statement of returns is duly signed and made. MCL§168.733(1)(f).

h. An election challenger may examine each ballot as it is being counted. MCL§ 168.733(1)(g).

i. An election challenger may keep records of votes cast and other election procedures as the challenger desires. MCL §168.733(1)(h).

j. Anelectionchallengermayobservetherecordingofabsentvoterballotson voting machines. MCL§168.733(1)(i).

45. The Michigan Legislature adopted these provisions to prevent and deter votefraud,requirethecondictofMichiganelectionstobetransparent,andtoassurepublic confidenceintheoutcomeoftheelectionnomatterhowclosethefinalballottallymaybe.

46. Michigan values the important role challengers perform in assuring the transparency and integrity of elections. For example, Michigan law provides it is a felony punishable by up to two years in state prison for any person to threaten or intimidate a challenger who is performing any activity described in Michigan law. MCL § 168.734(4). Itisafelonypunishablebyuptotwoyearsinstateprisonforanypersontopreventthepresence of a challenger exercising their rights or to fail to provide a challenger with "conveniences for the performance of the[ir] duties." MCL 168.734.

47. Theresponsibilitiesofchallengersareestablishedby Michiganstatute.MCL § 168.730 states:

> (1) Atanelection,apoliticalpartyor[anorganization]interestedinpreserving the purity of elections and in guarding against the abuse of the elective franchise, may designate challengers as provided in this act. Except as otherwise provided in this act, a political party [or interested organization] may designate not more than 2 challengers to serve in a precinct at any 1 time. A political party [or interested organization] may designate not more than 1 challenger to serve at each countingboard.
>
> (2) A challenger shall be a registered elector ofthisstate ..... A candidateforthe office of delegate to a county convention may serve as a challenger in a precinct other than the 1 in which he or she is a candidate. . . .
>
> (3) A challenger may be designated to serve in more than 1 precinct. The politicalparty[orinterestedorganization]shallindicatewhichprecinctsthe challenger will serve when designating challengers under subsection (1). If more than 1 challenger of a political party [or interested organization] is servinginaprecinctatany1time,only1ofthechallengershastheauthority to initiate a challenge at any given time. The challengers shall indicate to the board of election inspectors which of the 2 will have thisauthority. The challengers may change this authority and shall indicate the change to the board of electioninspectors.

48. SecretaryBensonandWayneCountyviolatedtheseprovisionsofMichigan law and violated the constitutional rights of Michigan citizens and voters when they did not conduct this general election in conformity with Michigan law and the United States Constitution.

B. The canvassing process in Michigan.

49. Michigan has entrusted the conduct of elections to three categories of individuals,a"boardofinspectors,"a"boardofcountycanvassers,"andthe"boardofstate canvassers."

50. The board of inspectors, among its other duties, canvasses the ballots and compares the ballots to the poll books. *See* MCL § 168.801. "Such canvass shall be public and the doors to the polling places and at least 1 door in the building housing the polling places and giving ready access to them shall not be locked during such canvas." *Id.* The members of the

board of inspectors (one from each party) are required to seal the ballots andelectionequipmentandcertifythestatementofreturnsandtallysheetsanddeliverthe statementofreturnsandtallysheettothetownshiporcityclerk,whoshalldeliverittothe probate court judge, who will than deliver the statement of returns and tally sheet to the "board of county canvassers." MCL § 168.809. "All election returns, including poll lists, statements,tallysheets,*absentvoters'returnenvelopesbearingthestatementrequired[to cast an absentee ballot] … must be carefully preserved*." MCL § 810a and § 168.811 (emphasis added).

51. After the board of inspectors completes its duties, the board of county canvassers is to meet at the county clerk's office "no later than 9 a.m. on the Thursday after" the election. November 5, 2020 is the date for the meeting. MCL 168.821. The board of county canvassers has power to summon and open ballot boxes, correct errors, and summon election inspectors to appear. Among other duties and responsibilities, the board of county canvassers shall do the following provided in MCL168.823(3).

52. The board of county canvassers shall correct obvious mathematical errors in the tallies and returns.

> *The board of county canvassers may, if necessary for a proper determination, summon the election inspectors before them*, and require them to count any ballots that the election inspectors failed to count, to make correct returns in case, in the judgment of the board of county canvassers after examining the returns, poll lists, or tally sheets, the returns already made are incorrect or incomplete, and the board of county canvassers shall canvass the votes from the corrected returns. In the alternative to summoning the election inspectors before them, the board of county canvassers may designate staff members from the county clerk's office to count any ballots that the election inspectors failed to count, to make correct returns in case, in the judgment of the board of county canvassers after examining the returns, poll lists, or tally sheets, thereturns already made are incorrect or incomplete, and the board of county canvassers shall canvass the votes from the corrected returns. When the examination of the papers is completed, or the ballots have been counted, theyshallbereturnedtotheballotboxesordeliveredtothepersonsentitled by law to their custody, and the boxes shall be locked and sealed and delivered to the

> legalcustodians. The county board of canvassers shall "conclude the canvass at the earliest possible time and in every case no later than the fourteenth day after the election," which isNovember17.MCL168.822(1).But,"[i]ftheboardofcountycanvassersfailstocertify the results of any election for any officer or proposition by the fourteenth day after the election as provided, the board of county canvassers shall immediately deliver to the secretary of the board of state canvassers all records and other information pertaining to theelection.Theboardofstatecanvassersshallmeetimmediatelyandmakethenecessary determinationsandcertifytheresultswithinthe10daysimmediatelyfollowingthereceip t of the records from the board of county canvassers." MCL168.822(2).

53. The Michigan board of state canvassers then meets at the Secretary of State's office the twentieth day after the election and announce its determination of the canvass "not later than the fortieth day after the election." For this general election that is November 23 and December 3. MCL 168.842. There is provision for the Secretary of State to direct an expedited canvass of the returns for the election of electors for President and VicePresident.

54. The county board of canvassers shall "conclude the canvass at the earliest possible time and in every case no later than the fourteenth day after the election," which isNovember17.MCL168.822(1).But,"[i]ftheboardofcountycanvassersfailstocertify the results of any election for any officer or proposition by the fourteenth day after the election as provided, the board of county canvassers shall immediately deliver to the secretary of the board of state canvassers all records and other information pertaining to theelection.Theboardofstatecanvassersshallmeetimmediatelyandmakethenecessary determinationsandcertifytheresultswithinthe10daysimmediatelyfollowingthereceipt of the records from the board of county canvassers." MCL168.822(2).

55. The Michigan board of state canvassers then meets at the Secretary of State's office the twentieth day after the election and announce its determination of the canvass "not later than the fortieth day after the election." For this general election that is November 23 and December 3. MCL 168.842. There is provision for the Secretary of State to direct an expedited

canvass of the returns for the election of electors for President and VicePresident.

56. The federal provisions governing the appointment of electors to the Electoral College, 3 U.S.C. §§ 1-18, require Michigan Governor Whitmer to preparea Certificate of Ascertainment by December 14, the date the Electoral Collegemeets.

57. The United States Code (3 U.S.C. §5) provides that if election results are contestedinanystate,andifthestate,priortoelectionday,hasenactedprocedurestosettle controversies or contests over electors and electoral votes, and if these procedures have been applied, and the results have been determined six days before the electors' meetings, thentheseresultsareconsideredtobeconclusiveandwillapplyinthecountingofthe electoral votes. This date (the "Safe Harbor" deadline) falls on December 8, 2020. The governor of any state where there was a contest, and in which the contest was decided according to established state procedures, is required (by 3 U.S.C. § 6) to send a certificate describing the form and manner by which the determination was made to the Archivist as soon as practicable.

58. The members of the board of state canvassers are Democrat Jeannette Bradshaw, Republican Aaron Van Langeveide, Republican Norman Shinkle, and Democrat Julie Matuzak. Jeanette Bradshaw is the Board Chairperson. The members of the Wayne County board of county canvassers are Republican Monica Palmer, Democrat Jonathan Kinloch, Republican William Hartmann, and Democrat Allen Wilson. Monica Palmer is the BoardChairperson.

59. More than one hundred credentialed election challengers provided sworn affidavits.Theseaffidavitsstated,amongothermatters,thatthesecredentialedchallengers were denied a meaningful opportunity to review election officials in Wayne County handling ballots, processing absent voter ballots, validating the legitimacy of absentvoterballots, and the general conduct of the election and ballot counting. *See* Exhibit 1 (affidavits of election challengers).

II. FACTUAL ALLEGATIONS AND FACT WITNESS TESTIMONYREGARDINGMICHIGAN ELECTION CODE VIOLATIONS AND OTHER UNLAWFUL CONDUCT BY ELECTION WORKERS AND MICHIGAN STATE, WAYNE COUNTY AND/OR CITY OF DETROIT EMPLOYEES.

60. Wayne County used the TCF Center in downtown Detroit to consolidate, collect, and tabulate all of the ballots for theCounty.TheTCFCenterwastheonlyfacilitywithinWayneCountyauthorizedtocountthe ballots.

A. Republican Election ChallengersWere Denied Opportunity to Meaningfully Observe the Processing and Counting of Ballots.

61. There is a difference between a ballot and a vote. A ballot is a piece of paper. A vote is a ballot that has been completed by a citizen registered to vote who has the right to cast a vote and has done so in compliance with Michigan election law by, among other things, verifying their identity and casting the ballot on or before Election Day. It is the task of Secretary Benson and Michigan election officials to assure that only ballots cast by individuals entitled to cast a vote in the election are counted and to make surethatallballotscastbylawfulvotersarecountedandtheelectionisconductedinaccord with Michigan's Election Code uniformly throughoutMichigan.

62. Challengers provide the transparency and accountability to assure ballots are lawfully cast and counted as provided in Michigan's Election Code and voters can be confidenttheoutcomeoftheelectionwashonestlyandfairlydeterminedbyeligiblevoters.

63. WayneCountyexcludedcertifiedchallengersfrommeaningfullyobserving the conduct of the election in violation of the Michigan Election Code. This allowed a substantial number of ineligible ballots to be counted, as outlined in Section B. below. These systematic Michigan Election Code violations, and the disparate treatment of Republican vs. Democratic poll challengers, also violated the Equal Protection Clause and other provisions of the U.S. Constitution as detailed herein. The following affidavits describe the specifics that were

observed. This conduct was pervasive in Wayne County as attested to in the affidavits attached at **EXHIBIT3**.

1. Republican Observers Denied Access to TCF Center

64. Many individuals designated as challengers to observe the conduct of the election were denied meaningful opportunity to observe the conduct of the election. For example, challengers designated by the Republican Party or Republican candidates were denied access to the TCF Center (formerly called Cobo Hall) ballot counting location in Detroit while Democratic challengers were allowed access. Exhibit 3 (Deluca aff. ¶¶7-9, 16-18; Langer aff. ¶3; Papsdorf aff. ¶3; Frego aff. ¶9; Downing aff. ¶¶2-9, 11, 15, 22; Sankey aff. ¶¶5-8; Ostin aff. ¶¶5-7; Cavaliere aff. ¶3; Cassin aff. ¶4; Rose aff. ¶18; Zimmerman aff. ¶8; Langer aff. ¶3; Poplawski aff. ¶3; Henderson aff. ¶7; Fuqua-Freyaff.¶5; Ungar aff. ¶4; Eilf aff. ¶¶9, 17; Jeup aff. ¶¶6-7; Tietz aff. ¶¶9-18; McCall aff. ¶¶5-6; Arnoldyaff.¶¶5,8-9(unlimitedmembersofthemediawerealsoallowedinsideregardless of COVID restrictions while Republican challengers were excluded)).

65. Many challengers stated that Republican challengers who had been admitted to the TCF Center but who left were not allowed to return. *Id.* (Bomer aff.¶16; Paschke aff. ¶4; Schneider aff., p. 2; Arnoldy aff. ¶6; Boller aff. ¶¶13-15 (removed and not allowed to serve as challenger); Kilunen aff. ¶7; Gorman aff. ¶¶6-8; Wirsing aff.,p. 1; Rose aff. ¶19; Krause aff. ¶¶9, 11; Roush aff. ¶16; M. Seely aff. ¶6; Fracassi aff. ¶6; Whitmore aff. ¶5). Furthermore, Republican challengers who left the TCF Center were not allowed to be replaced by other Republican challengers while Democratic challengers were replaced.

2. Disparate and Discriminatory Treatment of Republican vs. Democratic Challengers.

66. As a result of Republican challengers not being admitted or re-admitted, while

Democratic challengers were freely admitted, there were many more Democratic challengers allowed to observe the processing and counting of absent voter ballots than Republican challengers. *Id.* (Helminen aff. ¶12 (Democratic challengers out- numbered Republican challengers by at least a two-to-one ratio); Daavettila aff., p. 2 (ten timesasmanyDemocraticchallengersasRepublican);A.Seelyaff.¶19;Schneideraff.,p. 2; Wirsing aff., p. 1; Rauf aff. ¶21; Roush aff. ¶¶16-17; Topini aff.¶4).

67. Many challengers testified that election officials strictly and exactingly enforced a six-foot distancing rule for Republican challengers but not for Democratic challengers. *Id.* (Paschke aff. ¶4; Wirsing aff., p. 1; Montie aff. ¶4; Harris aff. ¶3; Krause aff. ¶7; Vaupel aff. ¶5; Russel aff. ¶7; Duus aff. ¶9; Topini aff. ¶6). As a result, Republican challengers were not allowed to meaningfully observe the ballot counting process.

3. Republican Challengers Not Permitted to View Ballot Handling, Processing or Counting.

68. Many challengers testified that their ability to view the handling, processing, and counting of ballots was physically and intentionally blocked by election officials.*Id*. (A.Seelyaff.¶15;Milleraff.¶¶13-14;Pennalaaff.¶4;Tysonaff.¶¶12- 13, 16; Ballew aff. ¶8; Schornak aff. ¶4; Williamson aff. ¶¶3, 6; Steffans aff. ¶¶15-16, 23- 24; Zaplitny aff. ¶15; Sawyer aff. ¶5; Cassin aff. ¶9; Atkins aff. ¶3; Krause aff. ¶5;Shereraff. ¶¶15, 24; Basler aff. ¶¶7-8; Early aff. ¶7; Posch aff. ¶7; Chopjian aff. ¶11; Shock aff.¶7; Schmidt aff. ¶¶7-8; M. Seely aff. ¶4; Topini aff. ¶8).

69. At least three challengers said they were physically pushed away from counting tables by election officials to a distance that was too far to observe the counting. *Id.* (Helminen aff. ¶4; Modlin aff. ¶¶4, 6; Sitek aff. ¶4). Challenger Glen Sitek reported that he was pushed twice by an election worker, the second time in the presence of police officers. *Id.* (Sitek aff. ¶4).

Sitek filed a police complaint.*Id.*

70. Challenger Pauline Montie stated that she was prevented from viewing the computer monitor because election workers kept pushing it further away and made her stand back away from the table. *Id.* (Montie aff. ¶¶4-7). When Pauline Montie told an election worker that she was not able to see the monitor because they pushed it farther away from her, the election worker responded, "too bad." *Id.*¶8.

71. Many challengers witnessed Wayne County election officials covering the windows of the TCF Center ballot counting center so that observers could not observe the ballot counting process. *Id.* (A. Seely aff. ¶¶9, 18; Helminen aff. ¶¶9, 12; Deluca aff. ¶13; Steffans aff. ¶22; Frego aff. ¶11; Downing aff. ¶21; Sankey aff. ¶14; Daavettila aff.,p.4;Zimmermanaff.¶10;Krauseaff.¶12;Shereraff.¶22;Johnsonaff.¶7;Poschaff.¶10;Raufaff.¶23 ;Lukeaff.,p.1;M.Seelyaff.¶8;Zelaskoaff.¶8;Ungaraff.¶12;Storm aff. ¶7; Fracassi aff. ¶8; Eilf aff. ¶25; McCall aff.¶9).

4. Harassment, Intimidation & Removal of Republican Challengers

72. Many challengers testified that they were intimidated, threatened, and harassed by election officials during the ballot processing and counting process. *Id.* (Ballew aff. ¶¶7, 9; Gaicobazzi aff. ¶¶12-14 (threatened repeatedly and removed); Schneideraff.,p.1;Piontekaff.¶11;Steffansaff.¶26(intimidationmadeherfeeltooafraid to make challenges); Cizmar aff. ¶8(G); Antonie aff. ¶3; Zaplitny aff. ¶20; Moss aff. ¶4; Daavettila aff., pp. 2-3; Tocco aff. ¶¶1-2; Cavaliere ¶3; Kerstein aff. ¶3; Rose aff. ¶16; Zimmerman aff. ¶5; Langer aff. ¶3; Krause aff. ¶4; Sherer aff. ¶24; Vaupel aff. ¶4; Basler aff. ¶8; Russell aff. ¶5; Burton aff. ¶5; Early aff. ¶7; Pannebecker aff. ¶10; Sitek aff. ¶4; Klamer aff. ¶4; Leonard aff. ¶¶6, 15; Posch aff. ¶¶7, 14; Rauf aff. ¶24; Chopjian aff. ¶10; Cooperaff.¶12;Shockaff.¶9;Schmidtaff.¶¶9-10;Duusaff.¶10;M.Seelyaff.¶4;Storm aff. ¶¶5, 7;

DePerno aff. ¶¶5-6; McCall aff. ¶¶5, 13). ArticiaBomer was called a "racist name" by an election worker and also harassed by other election workers. *Id.* (Bomeraff.¶7). Zachary Vaupel reported that an election supervisor called him an "obscene name" andtoldhimnottoaskquestionsaboutballotprocessingandcounting. *Id.*(Vaupelaff.¶4). Kim Tocco was personally intimidated and insulted by election workers. *Id.* (Tocco aff. ¶¶1-2). Qian Schmidt was the target of racist comments and asked, "what gives you the right to be here since you are not American?" *Id.* (Schmidt aff. ¶9).

73. Other challengers were threatened with removal from the counting area if they continued to ask questions about the ballot counting process. *Id.* (A. Seely aff. ¶¶6, 13, 15; Pennalaaff. ¶5). Challenger Kathleen Daavettila observed that Democratic challengers distributed a packet of information among themselves entitled, "Tactics to Distract GOP Challengers." *Id.* (Daavettila aff., p. 2). An election official told challenger Ulrike Sherer that the election authority had a police SWAT team waiting outside if Republican challengers argued too much. *Id.* (Sherer aff. ¶24). An election worker told challenger JazmineEarlythatsince"Englishwasnot[her]firstlanguage…[she]shouldnotbetaking part in this process." *Id.* (Early aff. ¶11).

74. Election officials at the TCF Center in Detroit participated in the intimidation experienced by Republican challengers when election officials would applaud, cheer, and yell whenever a Republican challenger was ejected from the counting area. *Id.* (Helminen aff. ¶9; Pennala aff. ¶5; Ballew aff. ¶9; Piontek aff. ¶11; Papsdorfaff.¶3;Steffansaff.¶25;Cizmaraff.¶8(D);Kilunenaff.¶5;Daavettilaaff.,p.4; Cavaliere aff. ¶3; Cassin aff. ¶10; Langer aff. ¶3; Johnson aff. ¶5; Early aff. ¶13; Klamer aff. ¶8; Posch aff. ¶12; Rauf aff. ¶22; Chopjian aff. ¶13; Shock aff.¶10).

5. Poll Workers Ignored or Refused to Record Republican Challenges.

75. Unfortunately, this did not happen in Wayne County. Many challengers testified that their challenges to ballots were ignored and disregarded. *Id.* (A.Seely aff. ¶4; Helminen aff. ¶5; Miller aff. ¶¶10-11; Schornak aff. ¶¶9, 15; Piontek aff. ¶6; Daavettilaaff.,p.3;Valiceaff.¶2;Sawyeraff.¶7;Kerstein aff.¶3;Modlinaff.¶4;Cassin aff. ¶6; Brigmon aff. ¶5; Sherer aff. ¶11; Early aff. ¶18; Pannebecker aff. ¶9; Vanker aff. ¶5; M. Seely aff. ¶11; Ungar aff. ¶¶16-17; Fracassi aff. ¶4).

76. As an example of challenges being disregarded and ignored, challenger Alexandra Seely stated that at least ten challenges she made were not recorded. *Id.* (A. Seely aff. ¶4). ArticiaBomer observed that ballots with votes for Trump were separated fromotherballots.*Id.*(Bomeraff.¶5).ArticiaBomerstated,"Iwitnessedelectionworkers open ballots with Donald Trump votes and respond by rolling their eyes and showing it to other poll workers. I believe some of these ballots may not have been properly counted." *Id.* ¶8. Braden Gaicobazzi challenged thirty-five ballots for whom the voter records did not exist in the poll book, but his challenge was ignored and disregarded. *Id.* (Giacobazzi aff. ¶10). When Christopher Schornak attempted to challenge the counting of ballots,anelectionofficialtoldhim,"Wearenottalkingtoyou,youcannotchallengethis." *Id.*(Schornakaff.¶15).WhenStephanieKrauseattemptedtochallengeballots,anelection workertoldherthatchallengeswerenolongerbeingacceptedbecausethe"rules'nolonger applied.'" *Id.* (Krause aff.¶13).

6. Unlawful Ballot Duplication.

77. If a ballot is rejected by a ballot-tabulator machine and cannot be read by the machine, the ballot must be duplicated onto a new ballot. The Michigan Secretary of State has instructed, "If the rejection is due to a false read the ballot must be duplicatedby *two election*

inspectors who have expressed a preference for different political parties." Michigan Election Officials' Manual, ch. 8, p. 6 (emphasis added). Thus, the ballot-duplicating process must be performed by bipartisan teams of election officials. It must also be performed where it can be observed bychallengers.

78. But Wayne County prevented many challengers from observing the ballot duplicating process. *Id.* (Miller aff. ¶¶6-8; Steffans aff. ¶¶15-16, 23-24; Mandelbaumaff.¶6;Shereraff.¶¶16-17;Burtonaff.¶7;Drzewieckiaff.¶7;Klameraff.¶9;Chopjianaff.¶10;Schmidtaff.¶7;Champagneaff.¶12;Shinkleaff.,p.1).Challenger John Miller said he was not allowed to observe election workers duplicating a ballot becausethe"duplicationprocesswaspersonallikevoting."*Id.*(Milleraff.¶8).Challenger Mary Shinkle stated that she was told by an election worker that she was not allowed to observeaballotduplicationbecause"ifwemakeamistakethenyouwouldbealloverus." *Id.* (Shinkle aff., p. 1).Anotherchallengerobservedelectionofficialsmakingmistakeswhen duplicating ballots. *Id.* (Piontek aff. ¶9).

79. Many challengers testified that ballot duplication was performed only by Democratic election workers, not bipartisan teams. Exhibit 1 (Pettibone aff. ¶3; Kinney aff.,p.1;Wasilewskiaff.,p.1;Schornakaff.¶¶18-19;Dixonaff.,p.1;Kolanagireddyaff.,p. 1; Kordenbrock aff. ¶¶3-4; Seidl aff., p. 1; Kerstein aff. ¶4; Harris aff. ¶3; Sitek aff. ¶4).

7. Democratic Election Challengers Frequently Outnumbered Republican Poll Watchers 2:1 or Even 2:0.

80. Dominon contractor Melissa Carrone testified that there were significantly more Democrats than Republicans at the TCF Center, and that as a result there were "over 20 machines [that] had two democrats judging the ballots-resulting in an unfair process." Exh. 5 ¶5.

Other affiants testified to the fact that Democrats outnumbered Republicans by 2:1 or more *Id.* (Helminon aff. ¶12). Democrats also impersonated Republican poll watchers. *Id.* (Seely aff. ¶19).

8. Collaboration Between Election Workers, City/County Employees, and Democratic Party Challengers and Activists.

81. Affiants testified to systematic and routine collaboration between election workers, Michigan public employees and Democratic election challengers and activists present, in particular to intimidate, harass, distract or remove Republic election watchers. *See, e.g.,* Exh. 1 (Ballow aff. ¶9; Gaicobazzi aff. ¶¶12, 14; Piontek aff. ¶11).

B. Election Workers Fraudulent Forged, Added, Removed or Otherwise Altered Information on Ballots, Qualified Voter List and Other Voting Records

82. A lawsuit recently filed by the Great Lakes Justice Center ("GLJC") raises similar allegations of vote fraud and irregularities that occurred in Wayne County. *See* Exhibit 4 (copyofcomplaintfiledintheCircuitCourtofWayneCountyin*Costantino,etal.v.City of Detroit, et al.*) ("GLJC Complaint").The allegations and affidavits included in the GLJC Complaint are incorporated by reference in the body of this Complaint.

1. Election Workers Fraudulently Added "Tens of Thousands" of New Ballots and New Voters in the Early Morning and Evening November 4.

83. The most egregious example of election workers fraudulent and illegal behavior concerns two batches of new ballots brought to the TCF Center after the 8:00 PM Election Day deadline. First, at approximately 4:30 AM on November 4, 2020, poll challenger Andrew Sitto observed "tens of thousands of new ballots" being brought into the counting room, and "[u]nlike the other ballots, these boxes were brought in from the rear of the room." Exh. 4, GLJC Complaint, Exh. C at ¶ 10. Mr. Sitto heard other Republican challengers state that "several

vehicles with out-of-state license plates pulled up to the TCF Center a little before 4:30 a.m. and unloaded boxes of ballots." *Id.* at ¶ 11. "All ballots sampled that I heard and observed were for Joe Biden." *Id.* at ¶ 12.

84. A second set of new boxes of ballots arrived at the TCF Center around 9:00 PM on November 4, 2020. According to poll watcher Robert Cushman, contained "several thousand new ballots." Exh. 4, GLJC Complaint, Exh. D at ¶ 5. Mr. Cushman noted that "none of the names on the new ballots were on the QVF or the Supplemental Sheets," *id.* at ¶ 7, and he observed "computer operators at several counting boards manually adding the names and addresses of these thousands of ballots to the QVF system." *Id.* at ¶ 8. Further, "[e]very ballot was being fraudulently and manually entered into the [QVF], as having been born on January 1, 1990." *Id.* at ¶ 15. When Mr. Cushman challenged the validity of the votes and the impossibility of each ballot having the same birthday, he "was told that this was the instruction that came down from the Wayne County Clerk's office." *Id.* at ¶ 16.

85. Perhaps the most probative evidence comes from Melissa Carone, who was "contracted to do IT work at the TCF Center for the November 3, 2020 election." Exh. 5, ¶1. On November 4, Ms. Carrone testified that there were "two vans that pulled into the garage of the counting room, one on day shift and one on night shift." *Id.* ¶8. She thought that the vans were bring food, however, she "never saw any food coming out of these vans," and noted the coincidence that "Michigan had discovered over 100,000 more ballots – not even two hours after the last van left." *Id.* Ms. Carrone witnessed this of this illegal vote dump, as well as several other violations outlined below.

2. Election Workers Forged and Fraudulently Added Voters to the Qualified Voter List.

86. Many challengers reported that when a voter was not in the poll book, the election

officials would enter a new record for that voter with a birth date of January 1, 1900. Exhibit 1 (Gaicobazzi aff. ¶10; Piontek aff. ¶10; Cizmer aff. ¶8(F); Wirsing aff., p. 1; Cassin aff. ¶9; Langer aff. ¶3; Harris aff. ¶3; Brigmon aff. ¶5; Sherer aff. ¶¶10-11; Henderson aff. ¶9; Early ¶16; Klamer aff. ¶13; Shock aff. ¶8; M. Seely aff. ¶9). *See also id.* (Gorman aff. ¶¶23-26; Chopjian aff. ¶12; Ungar aff. ¶15; Valden aff. ¶17). Braden Gaicobazzi reported that a stack of thirty-five ballots was counted even though there was no voter record. *Id.* (Giacobazzi aff.¶10).

87. The GLJC Complaint alleges the Detroit Election Commission "systematically processed and counted ballots from voters whose name failed to appear in either the Qualified Voter File (QVF) or in the supplemental sheets." Exh. 3, GLJC Complaintat 3. The GLJC Complaint provides additional witness affidavits detailing the fraudulent conduct of election workers, in particular, that of Zachary Larsen, who served as a Michigan Assistant Attorney General from 2012 through 2020 and was a certified poll challenger at the TCF Center. "Mr. Larsen reviewed the running list of scanned in ballots in the computer system, where it appeared that the voter had already been counted as having voted. An official operating the computer then appeared to assign this ballot to a different voter as he observed a completely different name that was added to the list of voters at the bottom of a running tab of processed ballots on the right side of the screen." *Id.* at ¶ 16. Mr. Larsen observed this "practice of assigning names and numbers" to non-eligible voters who did not appear in either the poll book or the supplement poll book. *Id.* at ¶ 17. Moreover, this appeared to be the case for the majority of the voters whose ballots he personally observed being scanned. *Id.*

3. Changing Dates on Absentee Ballots.

88. All absentee ballots that existed were required to be inputted into the QVF system by 9:00 p.m. on November 3, 2020. This was required to be done in order to have a final list of absentee voters who returned their ballots prior to 8:00 p.m. on November 3, 2020. In order to

have enough time to process the absentee ballots, all polling locations were instructed to collect the absentee ballots from the drop-box once every hour on November 3, 2020.

89. Jessica Connarn is an attorney who was acting as a Republican challenger attheTCFCenterinWayneCounty.**EXHIBIT6**.JessicaConnarn'saffidavitdescribeshow anelectionpollworkertoldJessicaConnarnthatthepollworker"wasbeingtoldtochange the date on ballots to reflect that the ballots were received on an earlier date." *Id.* ¶1. Jessica Connarn also provided a photograph of a note handed to her by the poll worker in which the poll worker indicated she (the poll worker) was instructed to change the date ballots were received. *See id.* Jessica Connarn's affidavit demonstrates that poll workers inWayneCountywerepre-datingabsentvoterballots,sothatabsentvoterballotsreceived after 8:00 p.m. on Election Day could be counted.

90. Plaintiffs have learned of a United States Postal Service ("USPS") worker Whistleblower, on November 4, 2020 told Project Veritas that a supervisor named Johnathan Clarke in Traverse City, Michigan potentially issued a directive to collect ballots and stamp them as received on November 3, 2020, even though there were not received timely, as required by law: "We were issued a directive this morning to collect any ballots we find in mailboxes, collection boxes, just outgoing mail in general, separate them at the end of the day so that they could hand stamp them with the previous day's date," the whistleblower stated. "Today is November 4th for clarification."[4] This is currently under IG Investigation at the U.S. Post Office. According to the Postal worker whistleblower, the ballots are in "express bags" so they could be sent to the USPS distribution center. *Id.*

91. As set forth in the GLJC Complaint and in the Affidavit of Jessy Jacob, an

[4]https://townhall.com/tipsheet/bethbaumann/2020/11/04/usps-whistleblower-in-michigan-claims-higher-ups-were-engaging-in-voter-fraud-n2579501

employee of the City of Detroit Elections Department, "on November 4, 2020, I was instructed to improperly pre-date the absentee ballots receive date that were not in the QVF as if they hadbeen received on or before November 3, 2020. I was told to alter the information in the QVF to falselyshowthattheabsenteeballotshadbeenreceivedintimetobevalid.Sheestimatesthatthis was done to thousands of ballots." Exh. 4, GLJC Complaint, Exh. B at ¶ 17.

4. Election Workers Changed Votes for Trump and Other Republican Candidates.

92. Challenger ArticiaBomer stated, "I observed a station where election workers were working on scanned ballots that had issues that needed to be manually corrected. I believe some of these workers were changing votes that had been cast for Donald Trump and other Republican candidates." *Id.* (Bomer aff. ¶9). In addition to this eyewitness testimony of election workers manually changing votes for Trump to votes for Biden, there is evidence that Dominion Voting Systems did the same thing on a much larger scale with its Dominion Democracy Suite software. *See generally infra* Section IV.D, Paragraphs 123-131.

5. Election Officials Added Votes and Removed Votes from "Over-Votes".

93. Another challenger observed over-votes on ballots being "corrected" so that the ballots could be counted. Exh. 3(Zaplitny aff.¶13). At least one challenger observedpollworkersaddingmarkstoaballotwheretherewasnomarkforanycandidate. *Id.*(Tysonaff.¶17).

C. Additional Violations of Michigan Election Code That Caused Ineligible, Illegal or Duplicate Ballots to Be Counted.

1. Illegal Double Voting.

94. At least one election worker "observedalargenumberofpeoplewhocametothesatellite location to vote in-person, but they had

already applied for an absentee ballot. These people were allowed to vote in-person and were not required to return the mailed absentee ballot or sign an affidavit that the voter lost the mailed absentee ballot." Exh. 4, GLJC Complaint (Exh. B) Jacob aff. at ¶ 10. Thiswouldpermitapersontovoteinpersonandalsosendinhis/herabsentee ballot, and thereby vote at least twice.

2. Ineligible Ballots Were Counted – Some Multiple Times.

95. Challengersreportedthatbatchesofballotswererepeatedlyrunthroughthe vote tabulation machines. Exh. 3 (Helminen aff. ¶4; Waskilewski aff., p. 1; Mandelbaum aff. ¶5; Rose aff. ¶¶4-14; Sitek aff. ¶3; Posch aff. ¶8; Champagne aff. ¶8). Challenger Patricia Rose stated she observed a stack of about fifty ballots being fed multiple times into a ballot scanner counting machine. *Id.* (Rose aff. ¶¶4-14). ArticiaBomer further stated thatshe witnessed the same group of ballots being rescanned into the counting machine "at least five times." *Id.* ¶12. Dominion contractor Melissa Carone observed that this was a routine practice at the TCF Center, where she "witnessed countless workers rescanning the batches without discarding them first" – as required under Michigan rules and Dominion's procedures – "which resulted in ballots being counted 4-5 times" by the "countless" number of election workers. Carone aff. ¶3. When she observed that a computer indicated that it had "a number of over 400 ballots scanned – which means one batch [of 50] was counted over 8 times," and complained to her Dominion supervisor, she was informed that "we are here to do assist with IT work, not to run their election." *Id.* at ¶4.

3. Ballots Counted with Ballot Numbers Not Matching Ballot Envelope.

96. Many challengers stated that the ballot number on the ballot did not match thenumberontheballotenvelope,butwhentheyraisedachallenge,thosechallengeswere disregarded and ignored by election officials, not recorded, and the ballots wereprocessed andcounted.Exh. 3(A.Seelyaff.¶15;Wasilewskiaff.,p.1;Schornakaff.¶13;Brunell aff. ¶¶17, 19;

Papsdorf aff. ¶3; Spalding aff. ¶¶8, 11; Antonie aff. ¶3; Daavettila aff., p. 3; Atkins aff. ¶3; Harris aff. ¶3; Sherer aff. ¶21; Drzewiecki aff. ¶¶5-6; Klamer aff. ¶4; Rauf aff. ¶¶9-14; Roush aff. ¶¶5-7; Kinney aff. ¶5). For example, when challenger Abbie Helminen raised a challenge that the name on the ballot envelope did not match the name on the voter list, she was told by an election official to "get away" and that the counting tableshewasobservinghad"adifferentprocessthanothertables."*Id.*(Helminenaff.¶5).

4. Election Officials Counted Ineligible Ballots with No Signatures or with No Postmark on Ballot Envelope.

97. Atleasttwochallengersobservedballotsbeingcountedwheretherewasno signature or postmark on the ballot envelope. *Id.* (Brunell aff. ¶¶17, 19; Spalding aff.¶13;Shereraff.¶13).ChallengerAnneVankerobservedthat"60%ormoreof[ballot] envelopes [in a batch] bore the same signature on the opened outer envelope." *Id.*(Vanker aff. ¶5).Challenger William Henderson observed that a counting table of election workers lost eight ballot envelopes. Exhibit 1 (Henderson aff.¶8).The GLJCComplaint further alleges the Election Commission "instructed election workers to not verify signatures on absentee ballots, to backdate absentee ballots, and to process such ballots regardless of their validity."

5. Election Officials Counted "Spoiled" Ballots.

98. At least two challengers observed spoiled ballots being counted. *Id.* (Schornak aff. ¶¶6-8; Johnson aff. ¶4). At least one challenger observed a box of provisional ballots being placed in a tabulation box at the TCF Center. Exhibit 1 (Cizmar aff. ¶5).

6. Systematic Violations of Ballot Secrecy Requirements

99. Affiant Larsen identified a consistent practice whereby election officials would remove ballots from the "secrecy sleeve" or peek into the envelopes, visually inspect the ballots, and based on this visual inspection of the ballot (and thereby identify the votes cast), determine

whether to "place the ballot back in its envelope and into a 'problem ballots' box that required additional attention to determine whether they would be processed and counted." Exh. 4, GLJC Complaint, Exh. A at ¶14. Mr. Larsen also observed that some ballots arriving without any secrecy sleeve at all were counted after visual inspection, whereas many ballots without a secrecy sleeve were placed in the "problem ballots" box. *Id.* at ¶¶21-22. "So the differentiation among these ballots despite both ballots arriving in secrecy sleeves was perplexing and again raised concerns that some ballots were being marked as 'problem ballots' based on who the person had voted for rather on any legitimate concern about the ability to count and process the ballot appropriately." *Id.* at ¶24.

7. Election Workers Accepted Unsecured Ballots, without Chain of Custody, after 8:00 PM Election Day Deadline.

100. Poll challengers observed two batches of new ballots brought to the TCF Center after the 8:00 PM Election Day deadline, as detailed in the GLJC Complaint and Paragraphs 79-81above. Affiant Daniel Gustafson further observed that these batches of ballots "were delivered to the TCF Center in what appeared to be mail bins with open tops." Exh. 4, GLJC Complaint, Exh. E at¶4. Mr. Gustafson further observed that these bins and containers "did not have lids, were not sealed, and did not have the capability of having a metal seal," *id.* at ¶5, nor were they "marked or identified in any way to indicated their source of origin." *Id.* at ¶6.

101. An election challenger at the Detroit Department of Elections office observed passengers in cars dropping off more ballots than there were people in the car. Exh. 3 (Meyers aff. ¶3). This challenger also observed an election worker accepting a ballot after 8:00 p.m. on Election Day. *Id.*¶7.

102. An election challenger at the Detroit Department of Elections office observed ballots being deposited in a ballot drop box located at the Detroit Department of Elections after

8:00 p.m. on Election Day. *Id.* (Meyers aff.¶6).

103. On November 4, 2020, Affiant Matt Ciantar came forward who, independently witnessed, while walking his dog, a young couple delivered 3-4 large plastic clear bags, that appear to be "express bags", as reflected in photographs taken contemporaneously, to a U.S. Postal vehicle waiting. *See generally*Exh. 7 Matt Ciantar Declaration. The use of clear "express bags" is consistent with the USPS whistleblower Johnathan Clarke in Traverse City, Michigan. *See infra* Paragraph 78.

8. Ballots from Deceased Voters Were Counted.

104. One Michigan voter stated that her deceased son has been recorded as voting twice since he passed away, most recently in the 2020 general election. Exh. 3 (Chase aff.¶3).

III. EXPERT WITNESS TESTIMONY SUPPORTING INDICATING WIDESPREAD VOTING FRAUD AND MANIPULATION

A. Approximately 30,000 Michigan Mail-In Ballots Were Lost, and Approximately 30,000 More Were Fraudulently Recorded for Voters who Never Requested Mail-In Ballots.

105. The attached report of William M. Briggs, Ph.D. ("Dr. Briggs Report") summarizes the multi-state phone survey data of 248 Michigan Republican voters collected by Matt Braynard, which was conducted from November 15-17, 2020 and covered voters in Arizona, Georgia, Michigan, Pennsylvania, and Wisconsin. *See* Exh. 101, Dr. Briggs Reportat 1, and Att. 1 ("Braynard Survey"). The Braynard Survey sought to identify two specific errors involving unreturned mail-in ballots that are indicative of voter fraud, namely: "**Error #1:** those who were recorded as receiving absentee ballots ***without***requesting them;" and "**Error #2:** those who returned absentee ballots but whose votes went missing (*i.e.*, marked as unreturned)." *Id.* Dr. Briggs then conducted a parameter-free predictive model to estimate, within 95% confidence or prediction intervals, the number of ballots affected by these errors out of a total of 139,190

unreturned mail-in ballots for the State of Michigan.

106. With respect to **Error #1**, Dr. Briggs analysis estimated that **29,611 to 36,529 ballots** out of the total 139,190 unreturned ballots (**21.27% - 26.24%)** were recorded for voters who had **not** requested them. *Id.* With respect to **Error #2**, the numbers are similar with **27,928 to 34,710 ballots** out of 139,190 unreturned ballots (**20.06% - 24.93%**) recorded for voters who **did return their ballots were recorded as being unreturned.** *Id.* Taking the average of the two types of errors together, **62,517 ballots, or 45% of the total, are "troublesome."**

107. These errors are not only conclusive evidence of widespread fraud by the State of Michigan,[5] but they are fully consistent with the fact witness statements above the evidence regarding Dominion presented below insofar as **these purportedly unreturned absentee ballots provide a pool of 60,000-70,000 unassigned and blank ballots that could be filled in by Michigan election workers, Dominion or other third parties to shift the election to Joe Biden**. With respect to Error #1, Dr. Briggs' analysis, combined with the statements of the Michigan voters in the Braynard Survey, demonstrates that approximately **30,000 absentee ballots were sent to someone besides the registered voter named in the request**, and thus could have been filled out by anyone and then submitted in the name of another voter. With respect to Error #2, Dr. Briggs' analysis indicates that approximately **30,000 absentee ballots were either lost or destroyed** (consistent with allegations of Trump ballot destruction) **and/or were replaced with blank ballots filled out by election workers, Dominion or other third parties.** Accordingly, Dr. Briggs' analysis showing that almost half of purportedly "unreturned

[5]The only other possible explanations for the statements of 248 Michigan mail-in voters included in the Braynard Survey data is (a) that the 248 voters (who had no known pre-existing relationship apart from being listed as having unreturned absentee ballots) somehow contrived to collude together to submit false information or (b) that these 248 suffered from amnesia, dementia or some other condition that caused them to falsely claim that they had requested a mail-in ballot or returned a mail-in ballot.

ballots" suffers from one of the two errors above – which is consistent with his findings in the four other States analyzed (Arizona 58%, Georgia 39%, Pennsylvania 37%, and Wisconsin 31%) – provides further support that these widespread "irregularities" or anomalies was one part of much larger interstate fraudulent scheme to rig the 2020 General Election for Joe Biden.

B. Statistical Analysis of Anomalous and Unprecedented Turnout Increases in Specific Precincts Indicate that There Were at Least 40,000 "Excess Voters" in Wayne County and At Least 46,000 in Oakland County.

108. The attached affidavit of Eric Quinell, Ph.D. ("Dr. Quinell Report") analyzes the extraordinary increase in turnout from 2016 to 2020 in a relatively small subset of townships and precincts outside of Detroit in Wayne County and Oakland County, and more importantly how nearly 100% or more of all "new" voters from 2016 to 2020 voted for Biden. *See* Exh. 102. Using publicly available information from Wayne County and Oakland County, Dr. Quinell first found that for the votes received up to the 2016 turnout levels, the 2020 vote Democrat vs. Republican two-ways distributions (i.e., excluding third parties) tracked the 2016 Democrat vs. Republican distribution very closely, which was 55%-45% for Wayne County (outside Detroit) and 54%/46% for Oakland County. *Id.* at ¶¶18 & 20.

109. However, after the 2016 turnout levels were reached, the Democrat vs. Republican vote share shifts decisively towards Biden by approximately 15 points, resulting in a 72%/28% D/R split for Oakland County and 70%/30% D/R split for Wayne County (outside of Detroit). What is even more anomalous – and suspicious – is the fact that nearly all of these "new" votes in excess of 2016 come from a small number of townships/precincts where the increased Biden vote share is nearly 100% or over 100% for Biden. *Id.* For example, in the township of Livonia in Wayne County, Biden gained 3.2 voters for every 1 new Trump voter, and Biden receive 97% of all "new" votes over 2016 and 151% of all new voter registrations. *Id.* at ¶6. In the township of Troy in Oakland County, the vote share shifted from 51%/49% in 2016

to 80%/20% in 2020 due to Biden receiving 98% of new votes above 2016 and 109% of new voter registrations. *Id.* at ¶20. Looking county-wide, Biden gained 2.32 new voters over 2016 levels to every 1 new Trump voter in Wayne County (outside Detroit) and 2.54 additional new voters per Trump voter for Oakland County. *Id.* ¶5.

110. Based on these statistically anomalous results that occurred in a handful of townships in these two counties, Dr. Quinell's model determined that there were 40,771 anomalous votes in Wayne County (outside Detroit) and 46,125 anomalous votes in Oakland County, for a total of nearly 87,000 anomalous votes or approximately 65% of Biden's purported lead in Michigan.

C. Over 13,000 Ineligible Voters Who Have Moved Out-of-State Illegally Voted in Michigan.

111. Evidence compiled by Matt Braynard using the National Change of Address ("NCOA") Database shows that 12,120 Michigan voters in the 2020 General Election moved out-of-state prior to voting, and therefore were ineligible. Mr. Braynerd identified 1,170 Michigan voters in the 2020 General Election who subsequently registered to vote in another state, and were therefore ineligible to vote in the 2020 General Election. When duplicates from the two databases are eliminated, the merged number is 13,248 ineligible voters whose votes must be removed from the total for the 2020 General Election.[6]

D. There Were At Least 289,866 More Ballots Processed in Four Michigan Counties on November 4 Than There Was Processing Capacity.

112. The expert witness testimony of Russell James Ramsland, Jr. ("Ramsland Affidavit"), which is described in greater detail below, identifies an event that occurred in Michigan on November 4 that is "physically impossible" *See* Exh. 104 at ¶14. The "event"

[6]Mr. Braynard posted the results of his analysis on Twitter. *See* https://twitter.com/MattBraynard/status/1329700178891333634?s=20. This Complaint includes a copy of his posting as Exhibit 103.

reflected in the data are "4 spikes totaling 384,733 ballots allegedly processed in a combined interval of 2 hour[s] and 38 minutes" for four precincts/townships in four Michigan counties (Wayne, Oakland, Macomb ne and Kent). *Id.* Based on Mr. Ramsland's analysis of the voting machines available at the referenced locations, he determined that the maximum processing capability during this period was only 94,867 ballots, so that "there were 289,866 more ballots processed in the time available for processing in the four precincts/townships, than there was processing capacity." *Id.* This amount is alone is **nearly twice the number of ballots by which Biden purportedly leads President Trump** (*i.e.,* approximately 154,180).

IV. FACTUAL ALLEGATIONS RE DOMINION VOTING SYSTEMS

A. Evidence of Specific Fraud Wayne County used ballot tabulators that were shown to miscount votes cast for President Trump and Vice President Pence and instead count them for the Biden-Harristicket.

113. On the morning of November 4, unofficial results posted by the Antrim County Clerk showed that Joe Biden had over 7,700 votes — 3,000 more than Donald Trump. Antrim County voted 62% in favor of President Trump in 2016. The Dominion Voting Systems election management system and voting machines (tabulators), which were used in Antrim County, are also used in many other Michigan counties, including Wayne County, were atfault.

114. However, Malfunctioning voting equipment or defective ballots may have affectedtheoutcomeofavoteonanofficeappearingontheballot."MichiganManualfor Boards of County Canvassers. Thesevotetabulatorfailuresareamechanicalmalfunctionthat,underMCL 168.831-168.839, requires a "special election" in the precincts affected.

115. SecretaryofStateBensonreleasedastatementblamingthecountyclerkfor notupdatingcertain"mediadrives,"butherstatementfailedtoprovideanycoherentexplanation of how

the Dominion Voting Systems software and vote tabulators produced such a massive miscount.[7]

116. Secretary Benson continued: "*After discovering the error in reporting the unofficial results, the clerk worked diligently to report correct unofficial results by reviewing the printed totals tape on each tabulator and hand-entering the results for each race, for each precinct in the county*."*Id.*What Secretary Benson fails to address is what would have happened if no one "discover[ed] the error," for instance, in Wayne County, where the number of registered voters is much greater than Antrim County, and where the tabulators were not individuallytested.

117. Wayne County used the same Dominion voting system tabulators as did AntrimCounty,andWayneCountytestedonlyasingleoneofitsvotetabulatingmachines before the election. The Trump campaign asked Wayne County to have an observer physically present to witness the process. *See* Exhibit 4. Wayne County denied the Trump campaigntheopportunitytobephysicallypresent.RepresentativesoftheTrumpcampaign did have opportunity to watch a portion of the test of a single machine by Zoomvideo.

B. The Pattern Of Incidents Shows An Absence Of Mistake - Always In The Favor Of Biden.

118. Rules of Evidence, 404(b), applicable to civil matters makes clear that,

> (b) Evidence of other crimes, wrongs, or acts shall not be admissible to prove the character of a person in order to show action in conformity therewith. **It may, however, be admissible for other purposes, including, but not limited to, proof of motive, opportunity, intent, preparation, plan, knowledge, identity, or absence of mistake or accident.**

119. Tabulator issues and election violations occurred elsewhere in Michigan reflecting a pattern, where multiple incidents occurred. In Oakland County, votes flipped a seat to an incumbent Republican, Adam Kochenderfer, from the Democrat challenger when

[7] https://www.michigan.gov/documents/sos/Antrim_Fact_Check_707197_7.pdf (emphasis in original).

120. "A computer issue in Rochester Hills caused them to send us results for seven precincts as both precinct votes and absentee votes. They should only have beensent to us as absentee votes," Joe Rozell, Oakland County Director of Elections for the City of Huntington Woods, said.[8]

121. This Oakland County flip of votes is significant not only because it reflects a second systems error wherein both favored the Democrats, precinct votes were sent out to be counted, and they were counted twice as a result until the error was caught on a recount, but precinct votes should never be counted outside of the precinct, instead they are required to be sealed in the precinct.

C. Dominion Voting Machines and Forensic Evidence of Wide-Spread Fraud in Defendant Counties

122. The State of Michigan entered into a contract with Dominion Systems' Democracy Suite 4.14-D first, and then included Dominion Systems Democracy Suite 5.0-S on or about January 27, 2017, which added a fundamental modification: "dial-up and wireless results transmission capabilities to the ImageCast Precinct and results transmission using the Democracy Suite EMS Results Transfer Manager module."

123. Whereas the same Dominion software in an updated contract with Pennsylvania, unlike in Michigan's contract, sets forth the standard as requiring physical security: *No components of the Democracy Suite 5.5A shall be connected to any modem or network interface, including the Internet, at any time, except when a standalone local area wired network configuration in which all connected devices are certified voting system components." Id. at 41 (Condition C).*

124. The Michigan Contract with Dominion Voting Systems Democracy packages

[8] Detroit Free Press, https://www.freep.com/story/news/local/michigan/oakland/2020/11/06/oakland-county-election-2020-race-results/6184186002/

include language that describes *Safety and Security*, which in part makes the risks of potential breach clear where keys can be lost despite the fact that they provide full access to the unit, and while it is clear that the electronic access provides control to the unit, and the ability to alter results, combined with the lack of observers, creates a lack of security that becomes part of a pattern of the absence of mistake, or fraud:

> The ImageCast tabulators are unlocked by an iButton security key, which is used to:
> • Authenticate the software version (ensuring it is a certified version that has not been tampered with)
> • Decrypt election files while processing ballots during the election
> • Encrypt results files during the election
> • Provide access control to the unit
> **It is anticipated that the iButton security keys may get lost; therefore, any substitute key created for the same tabulator will allow the unit to work fully.**[9]

125. In late December of 2019, three Senators, Warren, Klobuchar, Wyden and House Member Mark Pocanwrote about their '*particularized concerns that secretive & "trouble - plagued companies*""have long skimped on security in favor of convenience," in the context of how they described the voting machine systems that three large vendors – Election Systems & Software, Dominion Voting Systems, & Hart InterCivic – collectively provide voting machines & software that facilitate voting for over 90% of all eligible voters in the U.S."

126. As evidence of the risks of the Dominion Democracy Suite, as described above, the same Dominion Democracy Suite was denied certification in Texas by the Secretary of State on January 24, 2020 specifically because of a lack of evidence of efficiency and accuracy and

[9]See Exh. 8, State of Michigan Enterprise Procurement, Notice of Contract, Contract No. 071B770017 between the State of Michigan and Dominion Voting Systems Inc. at ¶2.6.2 ("Dominion Michigan Contract").

identified vulnerabilities**to fraud and unauthorized manipulation**.[10]

D. "Red Flags" in Dominion's Michigan Results for 2020 General Election Demonstrate Dominion Manipulated Election Results, and that the Number of Illegal Votes Is Nearly Twice As Great as Biden's Purported Margin of Victory.

127. The expert witness testimony of Russell James Ramsland, Jr. ("Ramsland Affidavit")[11]analyzes several "red flags" in Dominion's Michigan results for the 2020 election, and flaws in the system architecture more generally, to conclude that Dominion manipulated election results. Dominion's manipulation of election results enabled Defendants to engage in further voting fraud violations above and beyond the litany of violations recited above in Section II.A through Section II.C.

1. Antrim County "Glitch" Was Not "Isolated Error" and May Have Affected Other Counties.

128. The first red flag is the Antrim County, Michigan "glitch" that switched 6,000 Trump ballots to Biden, and that was only discoverable through a manual hand recount. *See supra* Paragraph 94. The "glitch" was later attributed to "clerical error" by Dominion and Antrim Country, presumably because if it were correctly identified as a "glitch", "the system would be required to be 'recertified' according to Dominion officials. This was not done." Exh. 104, Ramsland Aff. at ¶10. Mr. Ramsland is skeptical because "the problem most likely did occur due to a glitch where an update file did not properly synchronize the ballot barcode generation and reading portions of the system." *Id.* Further, **such a glitch would not be an**

---

[10] See Texas Analysis of February 15, 2019 from the Voting Systems Examiner to the Director of Elections (emphasis added).

[11]As detailed in the Ramsland Affidavit and the CV attached thereto, Mr. Ramsland is a member of the management team Allied Security Operations Group, LLC ("ASOG"), a firm specializing in cybersecurity, OSINT and PEN testing of networks for election security and detecting election fraud through tampering with electronic voting systems.

"isolated error," as it "would cause entire ballot uploads to read as zero in the tabulation batch, which we also observed happening in the data (provisional ballots were accepted properly but in-person ballots were being rejected (zeroed out and/or changed (flipped))." *Id.* Accordingly, Mr. Ramsland concludes that it is likely that other Michigan counties using Dominion may "have the same problem." *Id.*

2. Fractional Vote Counts in Raw Data Strongly Indicate Voting Manipulation through "Ranked Choice Voting Algorithm"

129. Mr. Ramsland's analysis of the raw data , which provides **votes counts, rather than just vote shares, in decimal form** provides highly probative evidence that, in his professional opinion, demonstrates that Dominion manipulated votes through the use of an "additive" or "Ranked Choice Voting" algorithm (or what Dominion's user guide refers to as the "RCV Method"). *See id.* at ¶12.[12] Mr. Ramsland presents the following example of this data – taken from "Dominion's direct feed to news outlets" – in the table below. *Id.*

state	timestamp	eevp	trump	biden	TV	BV
michigan	2020-11-04T06:54:48Z	64	0.534	0.448	1925865.66	1615707.52
michigan	2020-11-04T06:56:47Z	64	0.534	0.448	1930247.664	1619383.808
michigan	2020-11-04T06:58:47Z	64	0.534	0.448	1931413.386	1620361.792
michigan	2020-11-04T07:00:37Z	64	0.533	0.45	1941758.975	1639383.75
michigan	2020-11-04T07:01:46Z	64	0.533	0.45	1945297.562	1642371.3
michigan	2020-11-04T07:03:17Z	65	0.533	0.45	1948885.185	1645400.25

130. Mr. Ramsland describes how the RCV algorithm can be implemented, and the significance of the use of fractional vote counts, with decimal places, rather than whole numbers, in demonstrating that Dominion did just that to manipulate Michigan votes.

[12]*See id.* (*quoting*Democracy Suite EMS Results Tally and Reporting User Guide, Chapter 11, Settings 11.2.2., which reads, in part, "RCV METHOD: This will select the specific method of tabulating RCV votes to elect a winner.").

> For instance, blank ballots can be entered into the system and treated as "write-ins." Then the operator can enter an allocation of the write-ins among candidates as he wishes. The final result then awards the winner based on "points" the algorithm in the compute, not actual votes. The fact that we observed raw vote data that includes decimal places suggests strongly that this was, in fact, done. Otherwise, votes would be solely represented as whole numbers. Below is an excerpt from Dominion's direct feed to news outlets showing actual calculated votes with decimals. *Id.*

3. StrongEvidence That Dominion Shifted Votes from Trump to Biden.

131. A third red flag identified by Mr. Ramslund is the dramatic shift in votes between the two major party candidates as the tabulation of the turnout increased, and more importantly, the change in voting share before and after 2 AM on November 4, 2020, after Wayne County and other Michigan election officials had supposedly halted counting.

> Until the tabulated voter turnout reached approximately 83%, Trump was generally winning between 55% and 60% of every turnout point. **Then, after the counting was closed at 2:00 am, the situation dramatically reversed itself, starting with a series of impossible spikes shortly after counting was supposed to have stopped.** *Id.* at ¶13.

132. Once again the means through which Dominion appears to have implemented this scheme is through the use of blank ballots that were all, or nearly all, cast for Biden.

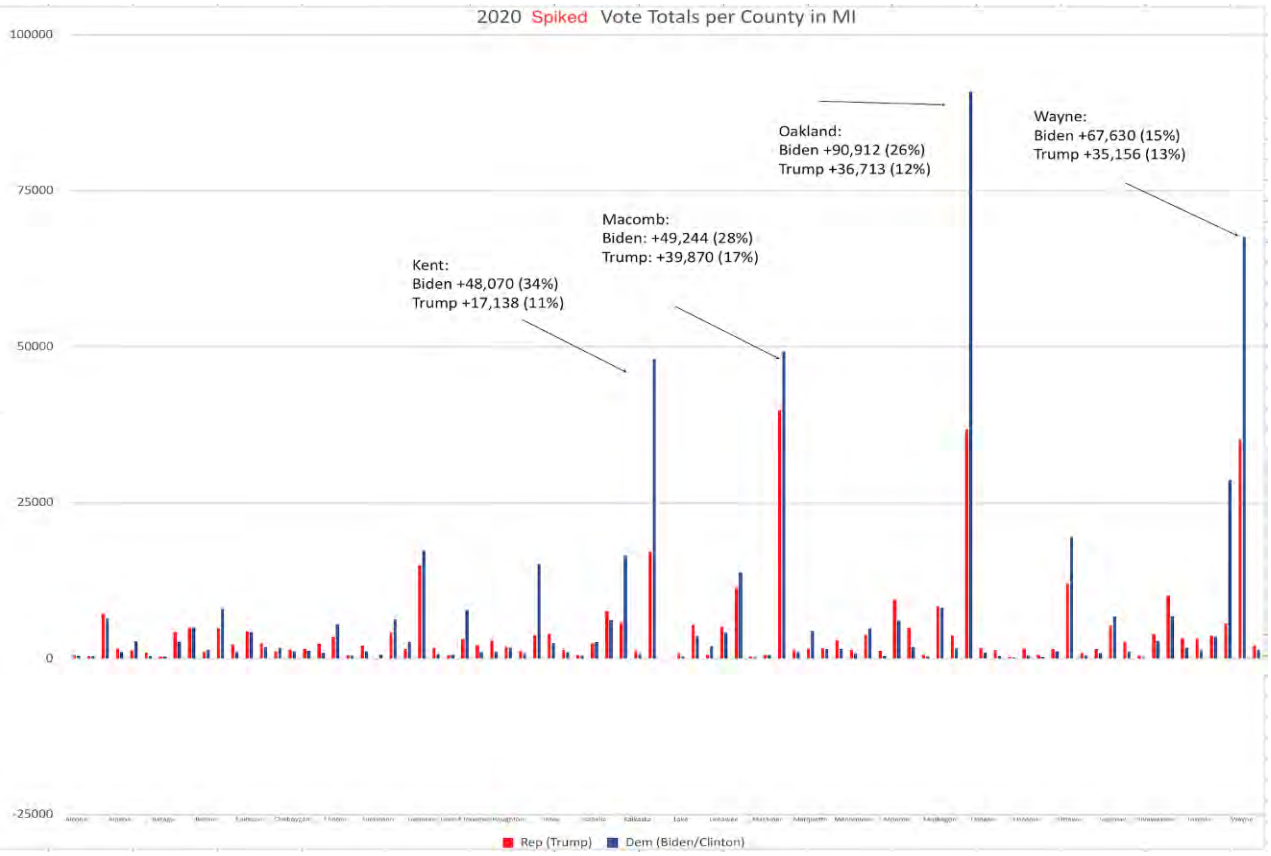
> The several spikes cast solely for Biden could easily be produced in the Dominion system by pre-loading batches of blank ballots in files such as Write-Ins, then casting them all for Biden using the Override Procedure (to cast Write-In ballots) that is available to the operator of the system. A few batches of blank ballots could easily produce a reversal this extreme, a reversal that is almost as statistically difficult to explain as is the impossibility of the votes cast to number of voters described in Paragraph 11 above.*Id.*

4. The November 4 Ballot Dumps Wayne County and Other Michigan Counties Was "Physically Impossible" Because There Were More Ballots Than Machines in Those Four Counties Could Have Counted Or Processed.

133. Mr Ramsland and his team analyzed the sudden injection of totaling 384,733 ballots by four Michigan counties (Wayne, Oakland, Macomb, and Kent) in a 2 hour 38 minute period in the early morning of November 4 (which would have included the first ballot dump

described above in Paragraph 72), and concluded that "**[t]his is an impossibility, given the equipment available at the 4 reference locations (precincts/townships).**" *Id.* at ¶14.

134. Specifically, Mr. Ramslund calculated that "94,867 ballots as the maximum number of ballots that could be processed" in that time period, and thus that "[t]here were 289,866 more ballots processed in the time available for processing in four precincts/townships, than the capacity of the system allows." *Id.* Mr. Ramsland concludes that "[t]he documented existence of the spikes are strongly indicative of a manual adjustment either by the operator of the system (see paragraph 12 above) or an attack by outside actors." *Id.* The vote totals added for all Michigan counties, including Wayne, Oakland, Macomb and Kent counties, for the period analyzed by Mr. Ramsland are reproduced in the figure below.



5. The Number of Illegal Votes Attributable to Dominion Is Nearly Twice the Biden's Purported Margin in Michigan.

135. Based on his analysis of the red flags and statistical anomalies discussed below, Mr. Ramsland concludes that:

> [T]hese statistical anomalies and impossibilities compels the conclusion to a reasonable degree of professional certainty that the vote count in Michigan and in Wayne County, in particular for candidates for President contain at least 289,866 illegal votes that must be disregarded.

Given that Mr. Biden's currently purported margin of victory is approximately 154,000, the number of illegal votes attributable Dominion's fraudulent and illegal conduct is by itself (without considering the tens or hundreds of thousands of illegal votes due to the unlawful conduct described in Section II), is nearly twice Mr. Biden's current purported lead in the State of Michigan. Thus Mr. Ramsland affidavit alone provides this Court more than sufficient basis to grant the relief requested herein.

E. Additional Independent Findings of Dominion Flaws.

136. Further supportive of this pattern of incidents, reflecting an absence of mistake, Plaintiffs have since learned that the "glitches" in the Dominion system -- that have the uniform effect of hurting Trump and helping Biden -- have been widely reported in the press and confirmed by the analysis of independent experts.

1. Central Operator Can Remove, Discard or Manipulate Votes.

137. Plaintiffs have also learned of the connection between Dominion Voting Systems, Smartmatic and the voting systems used in Venuezela and the Phillipines.

a. Dominion Voting has also contradicted itself in a rush to denial a pattern of errors that lead to fraud. For example, Dominion Voting Systems machines can read all of these instruments, including Sharpies.https://www.dominionvoting.com/

b. but Dominion Voting's Democracy Suite contract with Michigan specifically requires:

Black Inc: Black ink (or toner) must be dense, opaques, light-fast and permanent, with a measured minimum 1.2 reflection density (log) above the paper base.[13]

138. An Affiant, who is a network & Information cybersecurities expert, under sworn testimony explains that after studying the user manual for Dominion Voting Systems Democracy software, he learned that the information about scanned **ballots can be tracked inside the software system for Dominion:**

> (a) When bulk ballot scanning and tabulation begins, the "ImageCast Central" workstation operator will load a batch of ballots into the scanner feed tray and then start the scanning procedure within the software menu. The scanner then begins to scan the ballots which were loaded into the feed tray while the "ImageCast Central" software application tabulates votes in real-time. Information about scanned ballots can be tracked inside the "ImageCast Central" software application.
> (See Exh.Aff. of Watkins __, at par.11).

139. The **Affiant further explains that the central operator can remove or discard batches of votes.** "After all of the ballots loaded into the scanner's feed tray have been through the scanner, the "ImageCast Central" operator will remove the ballots from the tray then have the option to either "Accept Batch" or "Discard Batch" on the scanning menu …. "Id. at ¶ 12.

140. Affiantfurther testifies that the user manual makes clear that the system allows for threshold settings to be set to find all ballots get marked as "problem ballots" for discretionary determinations on where the vote goes stating:

> "*During the voting process, the voter will mark an oval on the ballot using a writing device. During the scanning process, the "ImageCast Central" software will detect how much of a percent coverage of the oval was filled in by the voter. The Dominion customer determines the thresholds of which the oval needs to be covered by a mark in order to qualify as a valid vote. If a ballot has a marginal mark which did not meet the specific thresholds set by the customer, then the ballot is considered a "problem ballot" and may be set aside into a folder named "NotCastImages". Through creatively tweaking the oval coverage threshold settings it should be possible to set thresholds in such a way that a non-trivial amount of ballots are marked "problem ballots" and sent to the "NotCastImages"*

---

[13]See Exh. 8, par. 2.6.2 of contract # 071B770017.

> *folder. It is possible for an administrator of the ImageCast Central work station to view all images of scanned ballots which were deemed "problem ballots" by simply navigating via the standard "Windows File Explorer" to the folder named "NotCastImages" which holds ballot scans of "problem ballots". It is possible for an administrator of the "ImageCast Central" workstation to view and delete any individual ballot scans from the "NotCastImages" folder by simply using the standard Windows delete and recycle bin functions provided by the Windows 10 Pro operating system.*

Id. at ¶¶ 13-14.

141. The Affiant further explains the vulnerabilities in the system when the copy of the selected ballots that are approved in the Results folder are made to a flash memory card – and that is connected to a Windows computer stating:

> *It is possible for an administrator of the "ImageCast Central" workstation toview and delete any individual ballot scans from the "NotCastImages" folder by simply using the standard Windows delete and recycle bin functions provided by the Windows 10 Pro operating system. ... The upload process is just a simple copying of a "Results" folder containing vote tallies to a flash memory card connected to the "Windows 10 Pro" machine. The copy process uses the standard drag-n-drop or copy/paste mechanisms within the ubiquitous "Windows File Explorer". While a simple procedure, this process may be error prone and is very vulnerable to malicious administrators.*

Id. at par. 14 and 15.

2. Dominion – By Design – Violates Federal Election & Voting Record Retention Requirements.

142. The Dominion System put in place by its own design violates the intent of Federal law on the requirement to preserve and retain records – which was clearly requires preservation of all records requisite to voting in such an election.

F. **§ 20701.** Retention and preservation of records and papers by officers of elections; deposit with custodian; penalty for violation

> Every officer of election shall retain and preserve, for a period of twenty-two months from the date of any general, special, or primary election of which candidates for the office of President, Vice President, presidential elector, Member of the Senate, Member of the House of Representatives, or Resident Commissioner from the Commonwealth of Puerto Rico are

> voted for, **all records and papers which come into his possession relating to any application, registration, payment of poll tax, or other act requisite to voting in such election,** except that, when required by law, such records and papers may be delivered to another officer of election and except that, if a State or the Commonwealth of Puerto Rico designates a custodian to retain and preserve these records and papers at a specified place, then such records and papers may be deposited with such custodian, and the duty to retain and preserve any record or paper so deposited shall devolve upon such custodian. Any officer of election or custodian who willfully fails to comply with this section shall be fined not more than $1,000 or imprisoned not more than one year, or both.

143. A Penn Wharton Study from 2016 concluded that "Voters and their representatives in government, often prompted by news of high-profile voting problems, also have raised concerns about the reliability and integrity of the voting process, and have increasingly called for the use of modern technology such as laptops and tablets to improve convenience.

144. As evidence of the risks of the Dominion Democracy Suite, as described above, the same Dominion Democracy Suite was denied certification in Texas by the Secretary of State on January 24, 2020 specifically because of a **lack of evidence of efficiency and accuracy and to be safe from fraud or unauthorized manipulation.**[14]

3. Dominion Vulnerabilities To Hacking.

145. Plaintiffs have since learned that the "glitches" in the Dominion system -- that have the uniform effect of hurting Trump and helping Biden -- have been widely reported in the press and confirmed by the analysis of independent experts.

146. Plaintiffs can show, through expert and fact witnesses that:

A. Massive End User Vulnerabilities.

---

[14] *See* Exh. X, Report of Review of Dominion Voting Systems Democracy Suite 5.5-A Elections Division by the Secretary of State's office, Elections Division, January 24, 2020.

(1) Users on the ground have full admin privileges to machines and software. The Dominion system is designed to facilitate vulnerability and allow a select few to determine which votes will be counted in any election. Workers were responsible for moving ballot data from polling place to the collector's office and inputting it into the correct folder. Any anomaly, such as pen drips or bleeds, is not counted and is handed over to a poll worker to analyze and decide if it should count. This creates massive opportunity for improper vote adjudication. (See Exh.____ For Affiant Watkins).

(2) Affiant witness (name redacted for security reasons[15]), in his sworn testimony explains he was selected for the national security guard detail of the President of Venezuela, and that he witnessed the creation of Smartmatic for the purpose of election vote manipulation:

> "I was witness to the creation and operation of a sophisticated electronic voting system that permitted the leaders of the Venezuelan government to manipulate the tabulation of votes for national and local elections and select the winner of those elections in order to gain and maintain their power. Importantly, I was a direct witness to the creation and operation of an electronic voting system in a conspiracy between a company known as Smartmatic and the leaders of conspiracy with the Venezuelan government. This conspiracy specifically involved President Hugo Chavez Frias, the person in charge of the National Electoral Council named Jorge Rodriguez, and principals, representatives, and personnel from Smartmatic which included … The purpose of this conspiracy was to create and operate a voting system that could change the votes in elections from votes against persons running the Venezuelan government to votes in their favor in order to maintain control of the government."

(*See* Exh. 14, pars. 6, 9, 10).

147. Specific vulnerabilities of the systems in question that have been documented or reported include:

A. Barcodes can override the voters' vote: As one University of California, Berkeley study shows, "In all three of these machines [including Dominion Voting Systems] the ballot marking printer is in the same paper path as the mechanism to deposit marked ballots into an attached ballot box. This opens up a very serious security vulnerability: the voting machine can make the paper ballot (to add votes or spoil already-case votes) after the last time the voter sees the paper, and then deposit that marked ballot into the ballot box

[1515]The Affiant's name will be produced in camera to the court, with a motion for seal of the information.

without the possibility of detection." (See Ex. __,) [16]

B. Voting machines were able to be connected to the internet by way of laptops that were obviously internet accessible. If one laptop was connected to the internet, the entire precinct was compromised.

C. "We … discovered that at least some jurisdictions were not aware that their systems were online," said Kevin Skoglund, an independent security consultant who conducted the research with nine others, all of them long-time security professionals and academics with expertise in election security. Vice. August 2019. 17

D. October 6, 2006 – Congresswoman Carolyn Maloney calls on Secretary of Treasury Henry Paulson to conduct an investigation into Smartmatic based on its foreign ownership and ties to Venezuela. (See Exh. __,).

E. Congresswoman Maloney wrote that "It is undisputed that Smartmatic is foreign owned and it has acquired Sequoia … Smartmatica now acknowledged that Antonio Mugica, a Venezuelan businessman has a controlling interest in Smartmatica, but the company has not revealed who all other Smartmatic owners are.

F. Dominion "got into trouble" with several subsidiaries it used over alleged cases of fraud. One subsidiary is Smartmatic, a company "that has played a significant role in the U.S. market over the last decade," according to a report published by UK-based AccessWire.

G. Litigation over Smartmatic "glitches" alleges they impacted the 2010 and 2013 mid-term elections in the Philippines, raising questions of cheating and fraud. An independent review of the source codes used in the machines found multiple problems, which concluded, "The software inventory provided by Smartmatic is inadequate, … which brings into question the software credibility," ABS-CBN reported.

H. Dominion acquired Sequoia Voting Systems as well as Premier Election Solutions (formerly part of Diebold, which sold Premier to ES&S in 2009, until antitrust issues forced ES&S to sell Premier, which then was acquired by Dominion). This map illustrates 2016 voting machine data—meaning, these data do not reflect geographic aggregation at the time of acquisition, but

---

[16]Ballot Marking Devices (BMDs) Cannot Assure the Will of the Voters, Andrew W. Appel, Richard T. DeMello, University of California, Berkeley, 12/27/2019.

[17]https://www.vice.com/en/article/3kxzk9/exclusive-critical-us-election-systems have-been-left-exposed-online-despite-official-denials

rather the machines that retain the Sequoia or Premier/Diebold brand that now fall under Dominion's market share. (The Business of Voting, Penn Wharton, Caufield, p. 16).

I. Dominion entered into a 2009 contract with Smartmatic and provided Smartmatic with the PCOS machines (optical scanners) that were used in the 2010 Philippine election, the biggest automated election run by a private company. The automation of that first election in the Philippines was hailed by the international community and by the critics of the automation. The results transmission reached 90% of votes four hours after polls closed and Filipinos knew for the first time who would be their new president on Election Day. In keeping with local Election law requirements, Smartmatic and Dominion were required to provide the source code of the voting machines prior to elections so that it could be independently verified.[18]

J. In late December of 2019, three Democrat Senators, Warren, Klobuchar, Wyden and House Member Mark Pocan wrote about their 'particularized concerns that secretive & "trouble -plagued companies"' "have long skimped on security in favor of convenience," in the context of how they described the voting machine systems that three large vendors – Election Systems & Software, Dominion Voting Systems, & Hart InterCivic – collectively provide voting machines & software that facilitate voting for over 90% of all eligible voters in the U.S." (See Exh. __, attached copy of Senators' letter).

K. Senator Ron Wyden (D-Oregon) said the findings [insecurity of voting systems] are "yet another damning indictment of the profiteering election vendors, who care more about the bottom line than protecting our democracy." It's also an indictment, he said, "of the notion that important cybersecurity decisions should be left entirely to county election offices, many of whom do not employ a single cybersecurity specialist." Vice. August 2019.[19]

148. The expert witness in pending litigation in the United States District Court of Georgia, _____, Harri Hursti, specifically testified to the acute security vulnerabilities, among other facts, by declaration filed on August 24, 2020, (See Exhibit

---

[18]LONDON, ENGLAND / ACCESSWIRE / August 10, 2017, *Voting Technology Companies in the U.S. - Their Histories and Present Contributions*

[19]*https://www.vice.com/en/article/3kxzk9/exclusive-critical-us-election-systems-have-been-left-exposed-online-despite-official-denials*

"___" attached hereto) wherein he testified or found:

A. "The scanner and tabulation software settings being employed to determine which votes to count on hand marked paper ballots are likely causing clearly intentioned votes to be counted" "The voting system is being operated in Fulton County in a manner that escalates the security risk to an extreme level" "Votes are not reviewing their BMD printed ballots, which causes BMD generated results to be un-auditable due to the untrustworthy audit trail." 50% or more of voter selections in some counties were visible to poll workers. Dominion employees maintain near exclusive control over the EMS servers. "In my professional opinion, the role played by Dominion personnel in Fulton County, and other counties with similar arrangements, should be considered an elevated risk factor when evaluating the security risks of Georgia's voting system." See Paragraph 26 of Hursti Declaration.

B. A video game download was found on one Georgia Dominion system laptop, suggesting that multiple Windows updates have been made on that respective computer.

C. There is evidence of remote access and remote troubleshooting which presents a grave security implication.

D. Certified identified vulnerabilities should be considered an "extreme security risk."

E. There is evidence of transfer of control the systems out of the physical perimeters and place control with a third party off site.

F. USB drives with vote tally information were observed to be removed from the presence of poll watchers during a recent election.

1. Hursti stated within said Declaration:

"The security risks outlined above – operating system risks, the failure to harden the computers, performing operations directly on the operating systems, lax control of memory cards, lack of procedures, and potential remote access are extreme and destroy the credibility of the tabulations and output of the reports coming from a voting system." (See Paragraph 49 of Hursti Declaration).

149. Rather than engaging in an open and transparent process to give credibility to Michigan's Dominion-Democracy Suite voting system, the processes were hidden during the receipt, review, opening, and tabulation of those votes in direct contravention of Michigan's Election Code and Federal law.

150. Finally, an analysis of the Dominion software system by a former US Military Intelligence expert concludes that the system and software have been accessible and were certainly compromised by rogue actors, such as Iran and China. By using servers and employees connected with rogue actors and hostile foreign influences combined with numerous easily discoverable leaked credentials, Dominion neglectfully allowed foreign adversaries to access data and intentionally provided access to their infrastructure in order to monitor and manipulate elections, including the most recent one in 2020. *See* Exh. 105, Spider Declaration.

4. Dominion Connections to Smartmatic and Hostile Foreign Governments and Domestic Groups Such as Antifa.

151. Plaintiffs can also show Smartmatic's incorporation and inventors who have backgrounds evidencing their foreign connections, including Serbia, specifically its identified inventors:

> Applicant: SMARTMATIC, CORP.
>
> Inventors**:** Lino Iglesias, Roger Pinate, Antonio Mugica, Paul Babic, Jeffrey Naveda, Dany Farina, Rodrigo Meneses, Salvador Ponticelli, Gisela Goncalves, Yrem Caruso[20]

152. Another Affiant witness testifies that in Venezuela, she was in official position related to elections and witnessed manipulations of petitions to prevent a removal of President Chavez and because she protested, she was summarily dismissed. She explains the vulnerabilities of the electronic voting system and Smartmatica to such manipulations. (See Exh. __, Anna Mercedes Diaz Cardozo).

153. Plaintiffs have also learned through several reports that in 2010 Eric Coomer joined Dominion as Vice President of U.S. Engineering. According to his bio,

---

20https://patents.justia.com/assignee/smartmatic-corp

Coomer graduated from the University of California, Berkeley with a Ph.D. in Nuclear Physics. Eric Coomer was later promoted to Voting Systems Officer of Strategy and Security although Coomer has since been removed from the Dominion page of directors after Joe Oltmann disclosed that as a reporter he infiltrated ANTIFA< a domestic terrorist organization where he recorded Eric Coomer representing that "Don't worry Trump won't win the election, we fixed that." – as well as twitter posts with violence threatened against President Trump. (*See* Joe Oltmann interview with Michelle Malkin dated November 13, 2020 which contains copies of Eric Coomer's recording and tweets).[21]

154. In sum, as set forth above, for a host of independent reasons, the Michigan certified election results concluding that Joe Biden received 154,180 more votes that President Donald Trump must be set aside.

COUNT I

Defendants Violated the Elections and Electors Clauses and 42 U.S.C. § 1983.

155. Plaintiffs reallege all preceding paragraphs as if fully set forth herein.

156. The Electors Clause states that "[e]ach State shall appoint, in such Manner as the Legislaturethereofmaydirect,aNumberofElectors"forPresident.U.S.Const.art. II, §1, cl. 2 (emphasis added).Likewise, the Elections Clause of the U.S. Constitution states that "[t]he Times,Places,andMannerofholdingElectionsforSenatorsandRepresentatives,shallbe prescribed in each State by *the Legislature* thereof." U.S. Const. art. I, §4, cl. 1 (emphasis added).

157. The Legislature is "'the representative body which ma[kes] the laws of the

21 https://www.youtube.com/watch?v=dh1X4s9HuLo&fbclid=IwAR2EaJc1M9RT3DaUraAjsycM0uPKB3uM_-MhH6SMeGrwNyJ3vNmlcTsHxF4

people.'" *Smiley*, 285 U.S. at 193. Regulations of congressional and presidential elections, thus, "must be in accordance with the method which the state has prescribed for legislative enactments." Id. at 367; *see also Ariz. State Legislature v. Ariz. Indep. Redistricting Comm'n*, 135 S. Ct. 2652, 2668 (2015).

158. Defendantsare not part of the Michigan Legislature and cannot exercise legislative power. Because the United States Constitution reserves for the Michigan Legislature the power to set the time, place, and manner of holding elections for the President and Congress, county boards of elections and state executive officers have no authority to unilaterally exercise that power, much less to hold them in ways that conflict with existing legislation. Defendants are not the legislature, and their unilateral decision to deviate from the requirements of the Michigan Election Code violates the Electors and Elections Clause of the United States Constitution.

159. Many affiants testified to Defendants' failure to follow the requirements of the Michigan Election Code, as enacted by the Michigan Legislature, MCL §§ 168.730-738, relating to the rights of partisan election challengers to provide transparency and accountability to ensure that all, and only, lawful ballots casts be counted, and that the outcome of the election was honestly and fairly determined by eligible voters casting legal ballots. As detailed in Section II, many of these requirements were either disregarded altogether or applied in a discriminatory manner to Republican poll watchers. Specifically, election officials violated Michigan's Election Code by: (a) disregarding or violating MCL § 168.730 and § 168.733 requiring election challengers to have meaningful access to observe the counting and processing of ballots, *see supra* Paragraphs 59-75; (b) wanton and widespread forgery and alteration, addition or

removal of votes, voters, or other information from ballots, the QVF or other voting records, *see supra* Paragraphs 76-86; and (c) illegal double voting, counting ineligible ballots, failure to check signatures or postmarks, and several other practices in clear violation of the Michigan Election Code (and in some cases at the express direction of supervisors or Wayne County officials). *See supra* Paragraphs 87-98.

160. Plaintiffs have no adequate remedy at law and will suffer serious and irreparable harm unless the injunctive relief requested herein is granted. Defendants have acted and, unless enjoined, will act under color of state law to violate the Elections Clause.

161. Accordingly, the results for President in the November 3, 2020 election must be set aside.

COUNT II

Governor Whitmer, Secretary Benson and Other Defendants Violated TheFourteenth Amendment U.S. Const. Amend. XIV, 42 U.S.C. § 1983

Denial of Equal Protection

Invalid Enactment of Regulations Affecting Observation and Monitoring of the Election

162. Plaintiffs refer to and incorporate by reference each of the prior paragraphs of this Complaint as though the same were repeated at length herein.

163. The Fourteenth Amendment of the United States Constitution provides "nor shall any state deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws. *See also Bush v. Gore*, 531 U.S. 98, 104 (2000)(having once granted the right to vote on equal terms, the State may not, by later arbitrary and disparate treatment, value one person's vote

over the value of another's). *Harper v. Virginia Board of Elections*, 383 U.S. 663, 665 (1966) ("Once the franchise is granted to the electorate, lines may not be drawn which are inconsistent with the Equal Protection Clause of the Fourteenth Amendment."). The Court has held that to ensure equal protection, a problem inheres in the absence of specific standards to ensure its equal application. *Bush*, 531 U.S. at 106 ("The formulation of uniform rules to determine intent based on these recurring circumstances is practicable and, we conclude, necessary.").

164. The equal enforcement of election laws is necessary to preserve our most basic and fundamental rights. The requirement of equal protection is particularly stringently enforced as to laws that affect the exercise of fundamental rights, including the right to vote.

165. In statewide and federal elections conducted in the State of Michigan, including without limitation the November 3, 2020 General Election, all candidates, political parties, and voters, including without limitation Plaintiffs, have a vested interest in being present and having meaningful access to observe and monitor the electoral process in each County to ensure that it is properly administered in every election district and otherwise free, fair, and transparent.

166. Moreover, through its provisions involving watchers and representatives, the Michigan Election Code ensures that all candidates and political parties in each County, including the Trump Campaign, have meaningful access to observe and monitor the electoral process to ensure that it is properly administered in every election district and otherwise free, fair, and transparent. *See, e.g.,*MCL § 168.730 &§ 168.733(1). Further, the Michigan Election Code provides it is a felony punishable by

up to two years in state prison for any person to threaten or intimidate a challenger who is performing any activity described in Michigan law. MCL § 168.734(4). Defendants have a duty to treat the voting citizens in each County in the same manner as the citizens in other Counties in Michigan.

167. As set forth in Count I above, Defendants failed to comply with the requirements of the Michigan Election Code and thereby diluted the lawful ballots of the Plaintiffs and of other Michigan voters and electors in violation of the United States Constitution guarantee of Equal Protection.

168. Specifically, Defendants denied the Trump Campaign equal protection of the law and their equal rights to meaningful access to observe and monitor the electoral process enjoyed by citizens in other Michigan Counties by: (a) denying Republican poll challengers access to the TCF Center or physically removing them or locking them out for pretextual reasons; (b) denied Republican poll watchers meaningful access to, or even physically blocking their view of, ballot handling, processing, or counting; (c) engaged in a systematic pattern of harassment, intimidation, verbal insult, and even physical removal of Republican poll challengers; (d) systematically discriminated against Republican poll watchers and in favor of Democratic poll watchers and activists in enforcing rules (in particular, through abuse of "social distancing" requirements); (e) ignored or refused to record Republican challenges to the violations set forth herein; (f) refusing to permit Republican poll watchers to observe ballot duplication or to check if duplication was accurate; (g) unlawfully coached voters to vote for Biden and other democratic candidates, including at voting stations; and (h) colluded with other Michigan State, Wayne County and City of Detroit employees (including police) and

Democratic poll watchers and activists to engage in the foregoing violations. *See generally supra* Section II.A, Paragraphs 56-75.

169. Defendants further violated Michigan voters' rights to equal protection insofar as it allowed Wayne County and City of Detroit election workers to process and count ballots in a manner that allowed ineligible ballots to be counted, including: (a) fraudulently adding tens of thousands of new ballots and/or new voters to the QVF in two separate batches on November 4, 2020, all or nearly all of which were votes for Joe Biden; (b) systematically forging voter information and fraudulently adding new voters to the QVF (in particular, where a voter's name could not be found, assigning the ballot to a random name already in the QVF to a person who had not voted and recorded these new voters as having a birthdate of 1/1/1900); (c) fraudulently changing dates on absentee ballots received after 8:00 PM Election Day deadline to indicate that such ballots were received before the deadline; (d) changing Votes for Trump and other Republican candidates; (e) adding votes to "undervote" ballots and removing votes from "Over-Votes"; (f) permitting illegal double voting by persons that had voted by absentee ballot and in person; (g) counting ineligible ballots – and in many cases – multiple times; (h) counting ballots without signatures, or without attempting to match signatures, and ballots without postmarks, pursuant to direct instructions from Defendants; (i) counting "spoiled" ballots; (j) systematic violations of ballot secrecy requirements; (k) accepting unsecured ballots arrived at the TCF Center loading garage, not in sealed ballot boxes, without any chain of custody, and without envelopes, after the 8:00 PM Election Day deadline; (l) accepting and counting ballots from deceased voters; and (m) accepting and counting ballots collected from unattended remote drop

boxes. *See generally infra* Section II.B. and II.C, Paragraphs 76-98.

170. Plaintiffs have obtained direct eyewitness testimony confirming that certain of these unlawful practices were at the express direction of Wayne County election officials. With respect to (a) and (b), Affiant Cushman testified that election supervisor Miller informed him that the Wayne County Clerk's office had expressly instructed them to manually to enter thousands of ballots arriving around 9 PM on November 4, 2020, from voters not in the QVF, and to manually enter these unregistered voters in the QVF with the birthdate of 1/1/1900. Exh. 3, GLJC Complaint, Exh. D at¶¶ 14-17. With respect to (c), fraudulently back-dating absentee ballots, City of Detroit election worker Affiant Jacob affirmed that she was instructed by supervisors to "improperly pre-date the absentee ballots receive date … to falsely show that absentee ballots had been received in time to be valid." *Id*. Exh. B at ¶17. With respect to (h) (accepting ballots without signatures or postmarks), affiants testified that election workers did so at the express direction of Wayne County election officials. *See id.* at ¶15.

171. Other Michigan county boards of elections provided watchers and representatives of candidates and political parties, including without limitation watchers and representatives of the Trump Campaign, with appropriate access to view the absentee and mail-in ballots being pre-canvassed and canvassed by those county election boards without the restrictions and discriminatory treatment outline above.Defendants intentionally and/or arbitrarily and capriciously denied Plaintiffs access to and/or obstructed actual observation and monitoring of the absentee and mail-in ballots being pre-canvassed and canvassed by Defendants, depriving them of the

equal protection of those state laws enjoyed by citizens in other Counties.

172. Defendants have acted and will continue to act under color of state law to violate Plaintiffs' right to be present and have actual observation and access to the electoral process as secured by the Equal Protection Clause of the United States Constitution.Defendants thus failed to conduct the general election in a uniform manner as required by the Equal Protection Clause of the Fourteenth Amendment, the corollary provisions of the Michigan Constitution, and the Michigan Election Code.

173. Plaintiffs seek declaratory and injunctive relief requiring Secretary Benson to direct that the Michigan Counties allow a reasonable number of challengers to meaningfully observe the conduct of the Michigan Counties canvassers and board of state canvassers and that these canvassing boards exercise their duty and authority under Michigan law, which forbids certifying a tally that includes any ballots that were not legally cast, or that were switched from Trump to Biden through the unlawful use of Dominion Democracy Suite software and devices.

174. In addition, Plaintiffs ask this Court to order that no ballot processed by a counting board in the Michigan Counties can be included in the final vote tally unless a challenger was allowed to meaningfully observe the process and handling and counting of the ballot, or that were unlawfully switched from Trump to Biden.

175. Plaintiffs have no adequate remedy at law and will suffer serious and irreparable harm unless the declaratory and injunctive relief requested herein is granted. Indeed, the setting aside of an election in which the people have chosen their representative is a drastic remedy that should not be undertaken lightly, but instead should be reserved for cases in which a person challenging an election has clearly

established a violation of election procedures and has demonstrated that the violation has placed the result of the election in doubt. Michigan law allows elections to be contested through litigation, both as a check on the integrity of the election process and as a means of ensuring the fundamental right of citizens to vote and to have their votes counted accurately.

176. In addition to the alternative requests for relief in the preceding paragraphs, hereby restated, Plaintiffs seek a permanent injunction requiring the Wayne County and other Michigan Election Boards to invalidate ballots cast by: (1) any voter added to the QVF after the 8:00 PM Election Day deadline; (3) any absentee or mail-in ballot received without a signature or postmark; (4) any ballot cast by a voter who submitted a mail-in ballot and voted in person; (5) any ballot cast by a voter not in the QVF that was assigned the name of a voter in the QVF; (6) voters whose signatures on their registrations have not been matched with ballot, envelope and voter registration check; and (7) all "dead votes".*See generally supra* Section II.A-II.C.

COUNT III

Fourteenth Amendment, U.S. Const. Art. I § 4, cl. 1; Art. II, § 1, cl. 2; Amend. XIV, 42 U.S.C. § 1983

Denial of Due Process On The Right to Vote

177. Plaintiffs refer to and incorporate by reference each of the prior paragraphs of this Complaint as though the same were repeated at length herein.

178. The right of qualified citizens to vote in a state election involving federal

candidates is recognized as a fundamental right under the Fourteenth Amendment of the United States Constitution. *Harper,* 383 U.S. at 665. *See also Reynolds*, 377 U.S. at 554 (The Fourteenth Amendment protects the "the right of all qualified citizens to vote, in state as well as in federal elections."). Indeed, ever since the Slaughter-House Cases,83 U.S. 36 (1873), the United States Supreme Court has held that the Privileges or Immunities Clause of the Fourteenth Amendment protects certain rights of federal citizenship from state interference, including the right of citizens to directly elect members of Congress. *SeeTwining v. New Jersey*, 211 U.S. 78, 97 (1908) (*citing Ex parte Yarbrough*, 110 U.S. 651, 663-64 (1884)). *See alsoOregon v. Mitchell*,400 U.S. 112, 148-49 (1970) (Douglas, J., concurring) (collecting cases).

179. The fundamental right to vote protected by the Fourteenth Amendment is cherished in our nation because it "is preservative of other basic civil and political rights." *Reynolds*, 377 U.S. at 562. Voters have a "right to cast a ballot in an election free from the taint of intimidation and fraud," *Burson v. Freeman*, 504 U.S. 191, 211 (1992), and "[c]onfidence in the integrity of our electoral processes is essential to the functioning of our participatory democracy." *Purcell v. Gonzalez*, 549 U.S. 1, 4 (2006) (percuriam).

180. "Obviously included within the right to [vote], secured by the Constitution, is the right of qualified voters within a state to cast their ballots and have them counted" if they are validly cast. *United States v. Classic*, 313 U.S. 299,315 (1941). "[T]he right to have the vote counted" means counted "at full value without dilution or discount." *Reynolds*, 377 U.S. at 555, n.29 (*quoting South v. Peters*, 339 U.S. 276, 279 (1950) (Douglas, J., dissenting)).

181. "Every voter in a federal . . . election, whether he votes for a candidate with little chance of winning or for one with little chance of losing, has a right under the Constitution to have his vote fairly counted, without its being distorted by fraudulently cast votes." *Anderson v. United States*, 417 U.S. 211, 227 (1974); *see also Baker v. Carr*, 369 U.S. 186, 208 (1962). Invalid or fraudulent votes "debase[]" and "dilute" the weight of each validly cast vote. *See Anderson*, 417 U.S. at 227.

182. The right to an honest [count] is a right possessed by each voting elector, and to the extent that the importance of his vote is nullified, wholly or in part, he has been injured in the free exercise of a right or privilege secured to him by the laws and Constitution of the United States." *Anderson*, 417 U.S. at 226 (*quoting Prichard v. United States*, 181 F.2d 326, 331 (6th Cir.), *aff'd due to absence of quorum*, 339 U.S. 974 (1950)).

183. Practices that promote the casting of illegal or unreliable ballots or fail to contain basic minimum guarantees against such conduct, can violate the Fourteenth Amendment by leading to the dilution of validly cast ballots. See *Reynolds*, 377 U.S. at 555 ("[T]he right of suffrage can be denied by a debasement or dilution of the weight of a citizen's vote just as effectively as by wholly prohibiting the free exercise of the franchise.").

184. Section II of this Complaint and the exhibits attached hereto describe widespread and systematic violations of the Michigan Election Code and/or the Equal Protection Clause described, namely: (A) Section II.A, Republican poll challengers were denied the opportunity to meaningfully observe the processing and counting of ballots; (B) Section II.B, election workers forged, added, removed or otherwise altered

information on ballots, the QFV and other voting records; and (C) Section II.C, several other Michigan Election Code violations that caused or facilitated the counting of tens of thousands of ineligible, illegal or duplicate ballots.

185. Plaintiffs seek declaratory and injunctive relief requiring Secretary Benson to direct that Secretary Benson and Wayne County are enjoined from certifying the results of the General Election, or in the alternative, conduct a recount or recanvas in which they allow a reasonable number of challengers to meaningfully observe the conduct of the Michigan Counties canvassers and board of state canvassers and that these canvassing boards exercise their duty and authority under Michigan law, which forbids certifying a tally that includes any ballots that were not legally cast, or that were switched from Trump to Biden through the unlawful use of Dominion Democracy Suite software and devices.

COUNT IV

Wide-SpreadBallot Fraud

186. Plaintiffs reallege all preceding paragraphs as if fully set forth herein.

187. The "glitches" in the Dominion system -- that seem to have the uniform effect of hurting Trump and helping Biden -- have been widely reported in the press and confirmed by the analysis of independent experts. *See generally supra* Section IV.

188. And as evidenced by numerous sworn statements, Defendants egregious misconduct has included ignoring legislative mandates concerning mail-in ballots– including the mandate that mail-in ballots be post-marked on or before Election Day, and critically, preventing Plaintiff's poll watchers from observing the receipt, review, opening, and tabulation of mail-in ballots. Those mail-in ballots are evaluated on an entirely parallel track to those ballots cast in person.

189. The right to vote includes not just the right to cast a ballot, but also the right to have it fairly counted if it is legally cast. The right to vote is infringed if a vote is cancelled or diluted by a fraudulent or illegal vote, including without limitation when a single person votes multiple times. The Supreme Court of the United States has made this clear in case after case. *See, e.g., Gray v. Sanders*, 372 U.S. 368, 380 (1963) (every vote must be "protected from the diluting effect of illegal ballots."); *Crawford v. Marion Cnty. Election Bd.*, 553 U.S. 181, 196 (2008) (plurality op. of Stevens, J.) ("There is no question about the legitimacy or importance of the State's interest in counting only the votes of eligible voters."); *accord Reynolds v. Sims*, 377 U.S. 533, 554-55 & n.29 (1964).

190. The disparate treatment of Michigan voters, in subjecting one class of voters to greater burdens or scrutiny than another, violates Equal Protection guarantees because "the right of suffrage can be denied by a debasement or dilution of the weight of a citizen's vote just as effectively as by wholly prohibiting the free exercise of the franchise." *Reynolds*, 377 U.S. at 555. Rice v. McAlister, 268 Ore. 125, 128, 519 P.2d 1263, 1265 (1975); *Heitman v. Brown Grp., Inc.,* 638 S.W.2d 316, 319, 1982 Mo. App. LEXIS 3159, at *4 (Mo. Ct. App. 1982); *Prince v. Bear River Mut. Ins. Co.*, 2002 UT 68, ¶ 41, 56 P.3d 524, 536-37 (Utah 2002).

COUNT V

MICHIGAN STATUTORY ELECTION LAW VIOLATIONS

191. Plaintiffs refer to and incorporate by reference each of the prior paragraphs of this Complaint as though the same were repeated at length herein

Violation of MCL 168.765a.

192. Absent voter ballots must only be counted when "at all times" there is "at least 1 election inspector from each major political party." MCL 168.765a.

193. Per eyewitness accounts described in this Complaint and its attached sworn

affidavits, Defendants habitually and systematically disallowed election inspectors from the Republican party, including Plaintiff, to be present in the voter counting place and refused access to election inspectors from the Republican party, including Plaintiff, to be within a closeenoughdistancefromtheabsentvoterballotstobeabletoseeforwhomtheballotswerecast. *See generally supra* Section II.A., Paragraphs56-75.

194. Defendants refused entry to official election inspectors from the Republican party, including Plaintiff, into the counting place to observe the counting of absentee voter ballots. Defendants even physically blocked and obstructed election inspectors from the Republicanparty,includingPlaintiff,byadheringlargepiecesofcardboardtothetransparent glass doors so the counting of absent voter ballots was notviewable.

Violation of MCL 168.733

195. MCL 168.733requires sets forth the procedures for election challengers and the powers of election inspectors. *See generally supra* Paragraph 39.

196. Per eyewitness accounts described in this Complaint and its attached sworn affidavits, Defendants habitually and systematically failed to provide space for election inspectors from the Republican party, including Plaintiff, to observe election procedure, failed to allow the inspection of poll books, failed to share the names of the electors being entered in the poll books, failed to allow the examination of each ballot as it was being counted, and failed to keep records of obvious and observedfraud.*See generally supra* Section II.A., Paragraphs 56-75.

197. Pollchallengers,includingPlaintiff,observedelectionworkersandsupervisors writing on ballots themselves to alter them, apparently manipulating spoiled ballots by hand and then counting the ballots as valid, counting the same ballot more than once, adding

information to incomplete affidavits accompanying absentee ballots, counting absentee ballots returned late, counting unvalidated and unreliable ballots, and counting the ballots of "voters"whohadnorecordedbirthdatesandwerenotregisteredintheState'sQualifiedVoter File or on any Supplemental voterlists.

Violation of MCL 168.765(5) and 168.764a

198. Michigan election law, MCL 168.765(5), requires Defendants to post the specific absentee voting information anytime an election is conducted which involves a state or federal office, in particular, the number of absentee ballots distributed to absent voters.

199. Upon information and belief, Defendants failed to post by 8:00 a.m. on Election Day the number of absentee ballots distributed to absent voters and failed to post before 9:00 p.m. the number of absent voters returned before on Election Day.

200. Per Michigan Election law, all absentee voter ballots must be returned to the clerk before polls close at 8pm. MCL 168.764a. Any absentee voter ballots received by the clerk after the close of the polls on election day will not be counted.

201. Michigan allows for early counting of absentee votes prior to the closings of the polls for large jurisdictions, such as the City of Detroit and Wayne County.

202. Upon information and belief, receiving tens of thousands additional absentee ballots in the early morning hours after election day and after the counting of the absentee ballots had concluded, without proper oversight, with tens of thousands of ballots attributed to just one candidate, Joe Biden, indicates Defendants failed to follow proper electionprotocol.*See generally supra* Section II.B.1, Paragraphs 77-78.

Violation of MCL 168.730

203. MCL 168.730 sets forth the rights and requirements for election challengers. MCL 168.734 provides, among other things:

> Any officer or election board who shall prevent the presence of any such challenger as above provided, or shall refuse or fail to provide such challenger with conveniences for the performance of the duties expectedof him,shall,uponconviction,bepunishedbyafinenotexceeding$1,000.00, or by imprisonment in the state prison not exceeding 2 years, or by both such fine and imprisonment in the discretion of thecourt.

204. WayneCounty'sandSecretaryBenson'sdenialofRepublicanchallengers' righttoparticipateandobservetheprocessingofballotsviolatesMichigan'sElectionCodeand resulting in the casting and counting of ballots that were ineligible to be counted and diluted or canceled out the lawfully cast ballots of other Michigan voters.

205. Further, Secretary of State Benson and the election officials in Wayne County violatedMCL168.730-168.734bydenyingRepublicanchallengers'rightstomeaningfully observe and participate in the ballot processing and countingprocess.

206. Based upon the above allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to order appropriate relief,including,butnotlimitedto,enjoiningthecertificationoftheelectionresultspendingafull investigation and court hearing, ordering a recount of the election results, or voiding the election and ordering a new election, to remedy thefraud.

PRAYER FOR RELIEF

207. Accordingly, Plaintiffs seek an emergency order instructing Defendants to de-certify the results of the General Election for the Office of President.

208. Alternatively, Plaintiffs seek an order instructing the Defendants to certify the results of the General Election for Office of the President in favor of President Donald Trump.

209. In the alternative, Plaintiffs seek an emergency order prohibiting Defendants from including in any certified results from the General Election the tabulation of absentee and mailing ballots which do not comply with the Michigan Election Code, including, without limitation, the tabulation of absentee and mail-in ballots Trump Campaign's watchers were prevented from observing or based on the tabulation of invalidly cast absentee and mail-in ballots which (i) lack a secrecy envelope, or contain on that envelope any text, mark, or symbol which reveals the elector's identity, political affiliation, or candidate preference, (ii) do not include on the outside envelope a completed declaration that is dated and signed by the elector, (iii) are delivered in-person by third parties for non-disabled voters, or (iv) any of the other Michigan Election Code violations set forth in Section II of this Complaint.

210. Order production of all registration data, ballots, envelopes, etc. required to be maintained by law. When we consider the harm of these uncounted votes, and ballots not ordered by the voters themselves, and the potential that many of these unordered ballots may in fact have been improperly voted and also prevented proper voting at the polls, the mail ballot system has clearly failed in the state of Michigan and did so on a large scale and widespread basis. The size of the voting failures, whether accidental or intentional, are multiples larger than the margin in the state. For these reasons, Michigan cannot reasonably rely on the results of the mail

vote.Relief sought is the elimination of the mail ballots from counting in the 2020 election. Alternatively, the electors for the State of Michigan should be disqualified from counting toward the 2020 election. Alternatively, the electors of the State of Michigan should be directed to vote for President Donald Trump.

211. For these reasons, Plaintiffs ask this Court to enter a judgment in their favor and provide the following emergency relief:

1. An order directing Secretary Benson, Governor Whitmer, the Board of State Canvassers and Wayne County to de-certify the election results;

2. An order enjoining Secretary Benson and Governor Whitmer from transmitting the currently certified election results to the Electoral College;

3. An order requiring Governor Whitmer to transmit certified election results that state that President Donald Trump is the winner of the election;

4. An immediate order to impound all the voting machines and software in Michigan for expert inspection by the Plaintiffs.

5. An order that no votes received or tabulated by machines that were not certified as required by federal and state law be counted.

6. A declaratory judgment declaring that Michigan's failed system of signature verification violates the Electors and Elections Clause by working a de facto abolition of the signature verification requirement;

7. A declaratory judgment declaring that current certified election results violatesthe Due Process Clause, U.S. CONST. Amend. XIV;

8. A declaratory judgment declaring that mail-in and absentee ballot fraud must be remedied with a Full Manual Recount or statistically valid sampling that properly verifies the signatures on absentee ballot envelopes and thatinvalidates the certified results if the recount or sampling analysis shows a sufficient number of ineligible absentee ballots were counted;

9. An emergency declaratory judgment that voting machines be Seized and Impounded immediately for a forensic audit—by Plaintiffs' expects;

10. A declaratory judgment declaring absentee ballot fraud occurred in violation of Constitutional rights, Election laws and under state law;

11. A permanent injunction prohibiting the Governor and Secretary of State from transmitting the currently certified results to the Electoral College based on the overwhelming evidence of election tampering;

12. Immediate production of 48 hours of security camera recording of all rooms used in the voting process at the TCF Center for November 3 and November 4.

13. Plaintiffs further request the Court grant such other relief as is just and proper, including but not limited to, the costs of this action and their reasonable attorney fees and expenses pursuant to 42 U.S.C. 1988.

Respectfully submitted, this 25th day of November, 2020.

/s Sidney Powell*
Sidney Powell PC

Texas Bar No. 16209700

/s/ Scott Hagerstrom
Michigan State Bar No. 57885
222 West Genesee
Lansing, MI 48933
(517) 763-7499
Scotthagerstrom @yahoo.com

/s/ Gregory J. Rohl P39185
The Law Offices of Gregory J. Rohl, P.C.
41850 West 11 Mile Road, Suite 110
Novi, MI 48375
248-380-9404
gregoryrohl@yahoo.com

Of Counsel:
Emily P. Newman (Virginia Bar No. 84265)
Julia Z. Haller (D.C. Bar No. 466921)

2911 Turtle Creek Blvd, Suite 300
Dallas, Texas 75219

*Application for admission pro hac vice
Forthcoming

L. Lin Wood
GA Bar No. 774588
L. LIN WOOD, P.C.
P.O. Box 52584
Atlanta, GA 30305-0584
Telephone: (404) 891-1402

Howard Kleinhendler
New York Bar No. 2657120
Howard Kleinhendler Esquire
369 Lexington Avenue, 12th Floor
New York, New York 10017
(917) 793-1188
howard@kleinhendler.com

DECLARATION OF [redacted]

I, [redacted], hereby state the following:

1. [redacted]

2. I am an adult of sound mine. All statements in this declaration are based on my personal knowledge and are true and correct.

3. I am making this statement voluntarily and on my own initiative. I have not been promised, nor do I expect to receive, anything in exchange for my testimony and giving this statement. I have no expectation of any profit or reward and understand that there are those who may seek to harm me for what I say in this statement. I have not participated in any political process in the United States, have not supported any candidate for office in the United States, am not legally permitted to vote in the United States, and have never attempted to vote in the United States.

4. I want to alert the public and let the world know the truth about the corruption, manipulation, and lies being committed by a conspiracy of people and companies intent upon betraying the honest people of the United States and their legally constituted institutions and fundamental rights as citizens. This conspiracy began more than a decade ago in Venezuela and has spread to countries all over the world. It is a conspiracy to wrongfully gain and keep power and wealth. It involves political leaders, powerful companies, and other persons whose purpose is to gain and keep power by changing the free will of the people and subverting the proper course of governing.

5. [redacted] Over the course of my career, I specialized in the marines [redacted]

6. Due to my training in special operations and my extensive military and academic formations, I was selected for the national security guard detail of the President of Venezuela. [redacted]

[redacted]

7. [redacted] Señor Cabello was a long-time confederate of President Chavez and instrumental in his gaining power. In 2002, Señor Cabello had very briefly taken over the duties of the presidency while Hugo Chavez was imprisoned. Within hours of Señor Cabello taking over the presidency, Hugo Chavez was released from prison and regained the office of President. On December 11, 2011, Cabello was installed as the Vice-President of the United Socialist Party – the party of President Chávez and became the second most powerful figure in the party after Hugo Chávez. Cabello was appointed president of the National Assembly in early 2012 and was re-elected to that post in January 2013. After Hugo Chávez's death, Cabello was next in line for the presidency of the country, but he remained president of the National Assembly and yielded to Nicolás Maduro holding the position of President of Venezuela.

8. [redacted] President Chavez was very precise and exacting in his instructions in the details about meetings he wanted, where the meeting was to occur, who was to attend, what was to be done. [redacted]

9. [redacted] I was witness to the creation and operation of a

sophisticated electronic voting system that permitted the leaders of the Venezuelan government to manipulate the tabulation of votes for national and local elections and select the winner of those elections in order to gain and maintain their power.

10. Importantly, I was a direct witness to the creation and operation of an electronic voting system in a conspiracy between a company known as Smartmatic and the leaders of conspiracy with the Venezuelan government. This conspiracy specifically involved President Hugo Chavez Frias, the person in charge of the National Electoral Council named Jorge Rodriguez, and principals, representatives, and personnel from Smartmatic which included [redacted]. The purpose of this conspiracy was to create and operate a voting system that could change the votes in elections from votes *against* persons running the Venezuelan government to votes *in their favor* in order to maintain control of the government.

11. In mid-February of 2009, there was a national referendum to change the Constitution of Venezuela to end term limits for elected officials, including the President of Venezuela. The referendum passed. This permitted Hugo Chavez to be re-elected an unlimited number of times.

12. After passage of the referendum, President Chavez instructed me to make arrangements for him to meet with Jorge Rodriguez, then President of the National Electoral Council, and three executives from Smartmatic. Among the three Smartmatic representatives were [redacted] President Chavez had multiple meetings with Rodriguez and the Smartmatic team at which I was present. In the first of four meetings, Jorge Rodriguez promoted the idea to create software that would manipulate elections. Chavez was very excited and made it clear that he would provide whatever Smartmatic needed. He wanted them immediately to create a voting system which would ensure that any time anything was going to be voted on the voting system would guarantee results that Chavez wanted. Chavez offered Smartmatic many inducements, including large sums of money, for Smartmatic to create or modify the voting system so that it would guarantee Chavez would win every election cycle. Smartmatic's team agreed to create such a system and did so.

13. I arranged and attended three more meetings between President Chavez and the representatives from Smartmatic at which details of the new

voting system were discussed and agreed upon. For each of these meetings, I communicated directly with [redacted] on details of where and when to meet, where the participants would be picked up and delivered to the meetings, and what was to be accomplished. At these meetings, the participants called their project the "Chavez revolution." From that point on, Chavez never lost any election. In fact, he was able to ensure wins for himself, his party, Congress persons and mayors from townships.

14. Smartmatic's electoral technology was called "Sistema de Gestión Electoral" (the "Electoral Management System"). Smartmatic was a pioneer in this area of computing systems. Their system provided for transmission of voting data over the internet to a computerized central tabulating center. The voting machines themselves had a digital display, fingerprint recognition feature to identify the voter, and printed out the voter's ballot. The voter's thumbprint was linked to a computerized record of that voter's identity. Smartmatic created and operated the entire system.

15. Chavez was most insistent that Smartmatic design the system in a way that the system could change the vote of each voter without being detected. He wanted the software itself to function in such a manner that if the voter were to place their thumb print or fingerprint on a scanner, then the thumbprint would be tied to a record of the voter's name and identity as having voted, but that voter would not tracked to the changed vote. He made it clear that the system would have to be setup to not leave any evidence of the changed vote for a specific voter and that there would be no evidence to show and nothing to contradict that the name or the fingerprint or thumb print was going with a changed vote. Smartmatic agreed to create such a system and produced the software and hardware that accomplished that result for President Chavez.

16. After the Smartmatic Electoral Management System was put in place, I closely observed several elections where the results were manipulated using Smartmatic software. One such election was in December 2006 when Chavez was running against Rosales. Chavez won with a landslide over Manuel Rosales - a margin of nearly 6 million votes for Chavez versus 3.7 million for Rosales.

17. On April 14, 2013, I witnessed another Venezuelan national election in which the Smartmatic Electoral Management System was used to manipulate and change the results for the person to succeed Hugo Chávez

as President. In that election, Nicolás Maduro ran against Capriles Radonsky. [redacted] Inside that location was a control room in which there were multiple digital display screens – TV screens – for results of voting in each state in Venezuela. The actual voting results were fed into that room and onto the displays over an internet feed, which was connected to a sophisticated computer system created by Smartmatic. People in that room were able to see in "real time" whether the vote that came through the electronic voting system was in their favor or against them. If one looked at any particular screen, they could determine that the vote from any specific area or as a national total was going against either candidate. Persons controlling the vote tabulation computer had the ability to change the reporting of votes by moving votes from one candidate to another by using the Smartmatic software.

18. By two o'clock in the afternoon on that election day Capriles Radonsky was ahead of Nicolás Maduro by two million votes. When Maduro and his supporters realized the size of Radonsky's lead they were worried that they were in a crisis mode and would lose the election. The Smartmatic machines used for voting in each state were connected to the internet and reported their information over the internet to the Caracas control center in real-time. So, the decision was made to reset the entire system. Maduro's and his supporters ordered the network controllers to take the internet itself offline in practically all parts in Venezuela and to change the results.

19. It took the voting system operators approximately two hours to make the adjustments in the vote from Radonsky to Maduro. Then, when they turned the internet back on and the on-line reporting was up and running again, they checked each screen state by state to be certain where they could see that each vote was changed in favor of Nicholas Maduro. At that moment the Smartmatic system changed votes that were for Capriles Radonsky to Maduro. By the time the system operators finish, they had achieved a convincing, but narrow victory of 200,000 votes for Maduro.

20. After Smartmatic created the voting system President Chavez wanted, he exported the software and system all over Latin America. It was sent to Bolivia, Nicaragua, Argentina, Ecuador, and Chile – countries that were in alliance with President Chavez. This was a group of leaders who wanted to be able to guarantee they maintained power in their countries. When Chavez died, Smartmatic was in a position of being the only

company that could guarantee results in Venezuelan elections for the party in power.

21. I want to point out that the software and fundamental design of the electronic electoral system and software of Dominion and other election tabulating companies relies upon software that is a descendant of the Smartmatic Electoral Management System. In short, the Smartmatic software is in the DNA of every vote tabulating company's software and system.

22. Dominion is one of three major companies that tabulates votes in the United States. Dominion uses the same methods and fundamentally same software design for the storage, transfer and computation of voter identification data and voting data. Dominion and Smartmatic did business together. The software, hardware and system have the same fundamental flaws which allow multiple opportunities to corrupt the data and mask the process in a way that the average person cannot detect any fraud or manipulation. The fact that the voting machine displays a voting result that the voter intends and then prints out a paper ballot which reflects that change does not matter. It is the software that counts the digitized vote and reports the results. The software itself is the one that changes the information electronically to the result that the operator of the software and vote counting system intends to produce that counts. That's how it is done. So the software, the software itself configures the vote and voting result -- changing the selection made by the voter. The software decides the result regardless of what the voter votes.

23. All of the computer controlled voting tabulation is done in a closed environment so that the voter and any observer cannot detect what is taking place unless there is a malfunction or other event which causes the observer to question the process. I saw first-hand that the manipulation and changing of votes can be done in real-time at the secret counting center which existed in Caracas, Venezuela. For me it was something very surprising and disturbing. I was in awe because I had never been present to actually see it occur and I saw it happen. So, I learned first-hand that it doesn't matter what the voter decides or what the paper ballot says. It's the software operator and the software that decides what counts – not the voter.

24. If one questions the reliability of my observations, they only have to read the words of [redacted] a time period in

which Smartmatic had possession of all the votes and the voting, the votes themselves and the voting information at their disposition in Venezuela. [redacted] he was assuring that the voting system implemented or used by Smartmatic was completely secure, that it could not be compromised, was not able to be altered.

25. But later, in 2017 when there were elections where Maduro was running and elections for legislators in Venezuela, [redacted] and Smartmatic broke their secrecy pact with the government of Venezuela. He made a public announcement through the media in which he stated that all the Smartmatic voting machines used during those elections were totally manipulated and they were manipulated by the electoral council of Venezuela back then. [redacted] stated that all of the votes for Nicholas Maduro and the other persons running for the legislature were manipulated and they actually had lost. So I think that's the greatest proof that the fraud can be carried out and will be denied by the software company that [redacted] admitted publicly that Smartmatic had created, used and still uses vote counting software that can be manipulated or altered.

26. I am alarmed because of what is occurring in plain sight during this 2020 election for President of the United States. The circumstances and events are eerily reminiscent of what happened with Smartmatic software electronically changing votes in the 2013 presidential election in Venezuela. What happened in the United States was that the vote counting was abruptly stopped in five states using Dominion software. At the time that vote counting was stopped, Donald Trump was significantly ahead in the votes. Then during the wee hours of the morning, when there was no voting occurring and the vote count reporting was off-line, something significantly changed. When the vote reporting resumed the very next morning there was a very pronounced change in voting in favor of the opposing candidate, Joe Biden.

27. [redacted] I have worked in gathering information, researching, and working with information technology. That's what I know how to do and the special knowledge that I have. Due to these recent election events, I contacted a number of reliable and intelligent ex-co-workers of mine that are still informants and work with the intelligence community. I asked for them to give me information that was up-to-date information in as far as how all these businesses are acting, what actions they are taking.

I declare under penalty of perjury that the foregoing is true and correct and that this Declaration was prepared in Dallas County, State of Texas, and executed on November 15, 2020.

[redacted]

Ballot-Marking Devices (BMDs) Cannot Assure the Will of the Voters

Andrew W. Appel[†]
Princeton University

Richard A. DeMillo[†]
Georgia Tech

Philip B. Stark[†]
Univ. of California, Berkeley

December 27, 2019

Abstract

The complexity of U.S. elections usually requires computers to count ballots—but computers can be hacked, so election integrity requires a voting system in which paper ballots can be recounted by hand. However, paper ballots provide no assurance unless they accurately record the vote as the voter expresses it.

Voters can express their intent by indelibly hand-marking ballots, or using computers called ballot-marking device (BMDs). Voters can make mistakes in expressing their intent in either technology, but only BMDs are also subject to hacking, bugs, and misconfiguration of the software that prints the marked ballots. Most voters do not review BMD-printed ballots, and those who do often fail to notice when the printed vote is not what they expressed on the touchscreen. Furthermore, there is no action a voter can take to demonstrate to election officials that a BMD altered their expressed votes, nor is there a corrective action that election officials can take if notified by voters—there is no way to deter, contain, or correct computer hacking in BMDs. These are the essential security flaws of

1 Introduction: Criteria for Voting Systems

Elections for public office and on public questions in the United States or any democracy must produce outcomes based on the votes that voters *express* when they indicate their choices on a paper ballot or on a machine. Computers have become indispensable to conducting elections, but computers are vulnerable. They can be hacked—compromised by insiders or external adversaries who can replace their software with fraudulent software that deliberately miscounts votes—and they can contain design errors and bugs—hardware or software flaws or configuration errors that result in mis-recording or mis-tabulating votes. Hence there must be some way, *independent* of any software in any computers, to ensure that reported election outcomes are correct, i.e., consistent with the expressed votes as intended by the voters.

Voting systems should be *software independent*, meaning that "an undetected change or error in its software cannot cause an undetectable change or error in an election outcome" [29, 30, 31]. Software independence is similar to tamper-evident packaging: if somebody opens the container and disturbs the contents, it will leave a trace.

The use of software-independent voting systems is supposed to ensure that if someone fraudulently hacks the voting machines to steal votes, we'll know about it. But we also want to know *the true outcome* in order to avoid a do-over election.[1] A voting system is *strongly software independent* if it is software independent and, moreover, a detected change or error in an election outcome (due to change or error in the software) can be corrected using only the ballots and ballot records of the current election [29, 30]. Strong software independence combines tamper evidence with a kind of resilience: there's a way to tell whether faulty software caused a problem, and a way to recover from the problem if it did.

Software independence and *strong software independence* are now standard terms in the analysis of voting systems, and it is widely accepted that voting systems should be software independent. Indeed, version 2.0 of the Voluntary Voting System Guidelines (VVSG 2.0) incorporates this principle [10].

an error? *What happens* when someone detects an error—does the election outcome remain erroneous? Or conversely: How can an election administrator *prove* that the election outcome not been altered, or prove that the correct outcome was recovered if a software malfunction was detected? The standard definition does not distinguish evidence available to an election official, to the public, or just to a single voter; nor does it consider the possibility of false alarms.

Those questions are not merely academic, as we show with an analysis of ballot-marking devices. Even if some *voters* "detect" that the printed output is not what they expressed to the BMD—even if some of *those* voters report their detection to election officials—there is no mechanism by which the *election official* can "detect" whether a BMD has been hacked to alter election outcomes. The questions of *who detects, and then what happens,* are critical—but unanswered by the standard definitions.

We will define the terms *contestable* and *defensible* to better characterize properties of voting systems that make them acceptable for use in public elections.[2]

A voting system is *contestable* if an undetected change or error in its software that causes a change or error in an election outcome can always produce *public* evidence that the outcome is untrustworthy. For instance, if a voter selected candidate A on the touchscreen of a BMD, but the BMD prints candidate B on the paper ballot, then this A-vs-B evidence is available to the individual voter, but the voter cannot demonstrate this evidence to anyone else, since nobody else saw—nor should have seen—where the voter touched the screen.[3] Thus, the voting system does not provide a way for the voter who observed the misbehavior to prove to anyone else that there was a problem, even if the problems altered the reported outcome. Such a system is therefore not *contestable*.

While the definition of software independence might allow evidence available only to individual voters as "detection," such evidence does not suffice for a system to be contestable. Contestibility is software independence, plus the requirement that "detect" implies "can generate public evidence." "Trust me" does not count as public evidence. If a voting system is not contestable, then problems voters "detect" might never see the light of day, much less be addressed or corrected.[4]

Similarly, while strong software independence demands that a system be able to report the correct outcome even if there was an error or alteration of the software, it does not require *public evidence* that the (reconstructed) reported outcome is correct. We believe, therefore, that voting systems must also be *defensible*. We say that a voting system is defensible if, when the reported electoral outcome is correct, it is possible to generate convincing public evidence that the reported electoral outcome is correct—despite any malfunctions, software errors, or software alterations that might have occurred. If a voting system is not defensible, then it is vulnerable to "crying wolf": malicious actors could claim that the system malfunctioned when in fact it did not, and election officials will have no way to prove otherwise.

By analogy with *strong software independence*, we define: A voting system is *strongly defensible* if it is defensible and, moreover, a detected change or error in an election outcome (due to change or error in the software) can be corrected (with convincing public evidence) using only the ballots and ballot records of the current election.

In short, a system is contestable if it can generate public evidence of a problem whenever a reported outcome is wrong, while a system is defensible if it can generate public evidence whenever a reported outcome is correct—despite any problems that might have occurred. Contestable systems are publicly tamper-evident; defensible systems are publicly, demonstrably resilient.

Defensibility is a key requirement for *evidence-based elections* [38]: defensibility makes it possible in principle for election officials to generate convincing evidence that the reported winners really won—if the reported winners did really win. (We say an election *system* may be defensible, and an *election* may be evidence-based; there's much more *process* to an election than just the choice of system.)

Examples. The only known practical technology for contestable, strongly defensible voting is a system of *hand-marked paper ballots*, kept demonstrably physically secure, counted by machine, audited manually, and recountable by hand.[5] In a hand-

detected and corrected by audits.

That system is *contestable:* if an optical scan voting machine reports the wrong outcome because it miscounted (because it was hacked, misprogrammed, or miscalibrated), the evidence is *public*: the paper ballots, recounted before witnesses, will not match the claimed results, also witnessed. It is *strongly defensible:* a recount before witnesses can demonstrate that the reported outcome is correct, or can find the correct outcome if it was wrong—and provide public evidence that the (reconstructed) outcome is correct.

Some other paper-based systems such as Prêt-à-Voter [32] and Scantegrity [9] are also contestable and strongly defensible (provided the marked ballots are kept demonstrably secure through tabulation and posting). Scantegrity inherits these properties from the fact that it amounts to a cryptographic enhancement of hand-marked paper ballots. Prêt-à-Voter has these properties if the blank ballots are audited appropriately before the election.

Paper-based systems that rely on the "Benaloh challenge"—to ensure that the encryption of the vote printed on the ballot (by an electronic device) is correct—generally are neither contestable nor defensible.[6] The reason is that, while the challenge can produce public evidence that a machine did not accurately encrypt the plaintext vote on the ballot, if the machine prints the wrong plaintext vote and a correct encryption of that incorrect vote, there is no evidence the voter can use to prove that to anyone else. STAR-Vote [5] is an example of such a system.

Over 40 states now use some form of paper ballot for most voters [18]. Most of the remaining states are taking steps to adopt paper ballots. But *not all voting systems that use paper ballots are equally secure*.

Some are not even software independent. Some are software independent, but not strongly software independent, contestable, or defensible. In this report we explain:

- *Hand-marked paper ballot* systems are the only practical technology for contestable, strongly defensible voting systems.

really won. Therefore BMDs should not be used by voters who are able to mark an optical-scan ballot with a pen.

- *All-in-one BMD or DRE+VVPAT voting machines* are not software independent, contestable, or defensible. They should not be used in public elections.

2 Background

We briefly review the kinds of election equipment in use, their vulnerability to computer hacking (or programming error), and in what circumstances risk-limiting audits can mitigate that vulnerability.

Voting equipment

Although a voter may form an intention to vote for a candidate or issue days, minutes, or seconds before actually casting a ballot, that intention is a psychological state that cannot be directly observed by anyone else. Others can have access to that intention through what the voter (privately) *expresses* to the voting technology by interacting with it, e.g., by making selections on a BMD or marking a ballot by hand.[7] Voting systems must accurately record the vote as the voter *expressed* it.

With a *hand-marked paper ballot optical-scan* system, the voter is given a paper ballot on which all choices (candidates) in each contest are listed; next to each candidate is a *target* (typically an oval or other shape) which the voter marks with a pen to indicate a vote. Ballots may be either preprinted or printed (unvoted) at the polling place using *ballot on demand* printers. In either case, the voter creates a tamper-evident record of intent by marking the printed paper ballot with a pen.

Such hand-marked paper ballots may be scanned and tabulated at the polling place using a *precinct-count optical scanner* (PCOS), or may be brought to a central place to

be scanned and tabulated by a *central-count optical scanner* (CCOS). Mail-in ballots are typically counted by CCOS machines.

After scanning a ballot, a PCOS machine deposits the ballot in a secure, sealed ballot box for later use in recounts or audits; this is *ballot retention*. Ballots counted by CCOS are also retained for recounts or audits.[8]

Paper ballots can also be hand counted, but in most jurisdictions (especially where there are many contests on the ballot) this is hard to do quickly; Americans expect election-night reporting of unofficial totals. Hand counting—i.e., manually determining votes directly from the paper ballots—is appropriate for audits and recounts.

A *ballot-marking device* (BMD) provides a computerized user interface that presents the ballot to voters and captures their expressed selections—for instance, a touchscreen interface or an assistive interface that enables voters with disabilities to vote independently. Voter inputs (expressed votes) are recorded electronically. When a voter indicates that the ballot is complete and ready to be cast, the BMD prints a paper version of the electronically marked ballot. We use the term *BMD* for devices that mark ballots but do not tabulate or retain them, and *all-in-one* for devices that combine ballot marking, tabulation, and retention into the same paper path.

The paper ballot printed by a BMD may be in the same format as an optical-scan form (e.g., with ovals filled as if by hand) or it may list just the names of the candidate(s) selected in each contest. The BMD may also encode these selections into barcodes or QR codes for optical scanning. We discuss issues with barcodes later in this report.

An *all-in-one touchscreen voting machine* combines computerized ballot marking, tabulation, and retention in the same paper path. All-in-one machines come in several configurations:

- DRE+VVPAT machines—direct-recording electronic (DRE) voting machines with a voter-verifiable paper audit trail (VVPAT)—provide the voter a touchscreen (or other) interface, then print a paper ballot that is displayed to the voter under glass. The voter is expected to review this ballot and approve it, after which the machine

- BMD+Scanner all-in-one machines[9] provide the voter a touchscreen (or other) interface to input ballot choices and print a paper ballot that is ejected from a slot for the voter to inspect. The voter then reinserts the ballot into the slot, after which the all-in-one BMD+scanner scans it and deposits it into a ballot box. Or, some BMD+Scanner all-in-one machines display the paper ballot behind plexiglass for the voter to inspect, before mechanically depositing it into a ballot box.

Opscan+BMD with separate paper paths. At least one model of voting machine (the Dominion ICP320) contains an optical scanner (opscan) and a BMD in the same cabinet,[10] so that the optical scanner and BMD-printer are not in the same paper path; no possible configuration of the software could cause a BMD-marked ballot to be deposited in the ballot box without human handling of the ballot. We do not classify this as an *all-in-one* machine.

Hacking

There are many forms of computer hacking. In this analysis of voting machines we focus on the alteration of voting machine software so that it miscounts votes or mismarks ballots to alter election outcomes. There are many ways to alter the software of a voting machine: a person with physical access to the computer can open it and directly access the memory; one can plug in a special USB thumbdrive that exploits bugs and vulnerabilities in the computer's USB drivers; one can connect to its WiFi port or Bluetooth port or telephone modem (if any) and exploit bugs in those drivers, or in the operating system.

"Air-gapping" a system (i.e., never connecting it to the Internet nor to any other network) does not automatically protect it. Before each election, election administrators must transfer a *ballot definition* into the voting machine by inserting a *ballot definition cartridge* that was programmed on election-administration computers that may have been connected previously to various networks; it has been demonstrated that vote-changing viruses can propagate via these ballot-definition cartridges [17].

gain remote access to voting-machine manufacturers' computers (and "hack" the firmware installed in new machines, or the firmware updates supplied for existing machines), and so on. Supply-chain hacks are also possible: the hardware installed by a voting system vendor may have malware pre-installed by the vendor's component suppliers.[11]

Computer systems (including voting machines) have so many layers of software that it is impossible to make them perfectly secure [23, pp. 89–91]. When manufacturers of voting machines use the best known security practices, adversaries may find it more difficult to hack a BMD or optical scanner—but not impossible. Every computer in every critical system is vulnerable to compromise through hacking, insider attacks or exploiting design flaws.

Election assurance through risk-limiting audits

To ensure that the reported electoral outcome of each contest corresponds to what the voters expressed, the most practical known technology is a *risk-limiting audit* (RLA) of trustworthy paper ballots [34, 35, 22]. The National Academies of Science, Engineering, and Medicine, recommend routine RLAs after every election [23], as do many other organizations and entities concerned with election integrity.[12]

The *risk limit* of a risk-limiting audit is the maximum chance that the audit will not correct the reported electoral outcome, if the reported outcome is wrong. "Electoral outcome" means the political result—who or what won—not the exact tally. "Wrong" means that the outcome does not correspond to what the voters expressed.

A RLA involves manually inspecting randomly selected paper ballots following a rigorous protocol. The audit stops if and when the sample provides convincing evidence that the reported outcome is correct; otherwise, the audit continues until every ballot has been inspected manually, which reveals the correct electoral outcome if the paper trail is trustworthy. RLAs protect against vote-tabulation errors, whether those errors are caused by failures to follow procedures, misconfiguration, miscalibration, faulty

engineering, bugs, or malicious hacking.[13]

The risk limit should be determined as a matter of policy or law. For instance, a 5% risk limit means that, if a reported outcome is wrong solely because of tabulation errors, there is at least a 95% chance that the audit procedure will correct it. Smaller risk limits give higher confidence in election outcomes, but require inspecting more ballots, other things being equal. RLAs never revise a correct outcome.

RLAs can be very efficient, depending in part on how the voting system is designed and how jurisdictions organize their ballots. If the computer results are accurate, an efficient RLA with a risk limit of 5% requires examining just a few—about 7 divided by the margin—ballots selected randomly from the contest.[14] For instance, if the margin of victory is 10% and the results are correct, the RLA would need to examine about $7/10\% = 70$ ballots to confirm the outcome at 5% risk. For a 1% margin, the RLA would need to examine about $7/1\% = 700$ ballots. The sample size does not depend much on the total number of ballots cast in the contest, only on the margin of the winning candidate's victory.

RLAs assume that a full hand tally of the paper trail would reveal the correct electoral outcomes: the paper trail must be trustworthy. Other kinds of audits, such as *compliance audits* [6, 22, 38, 36] are required to establish whether the paper trail itself is trustworthy. Applying an RLA procedure to an untrustworthy paper trail cannot limit the risk that a wrong reported outcome goes uncorrected.

Properly preserved hand-marked paper ballots ensure that expressed votes are identical to recorded votes. But BMDs might not record expressed votes accurately, for instance, if BMD software has bugs, was misconfigured, or was hacked: BMD printout is not a trustworthy record of the expressed votes. Neither a compliance audit nor a RLA can possibly check whether errors in recording expressed votes altered election outcomes. RLAs that rely on BMD output therefore cannot limit the risk that an incorrect reported election outcome will go uncorrected.

A paper-based voting system (such as one that uses optical scanners) is systematically more secure than a paperless system (such as DREs) *only if the paper trail is*

calibration caused the recorded-on-paper votes to differ from the expressed votes, an RLA or even a full hand recount cannot not provide convincing public evidence that election outcomes are correct: such a system cannot be *defensible*. In short, paper ballots provide little assurance against hacking if they are never examined or if the paper might not accurately reflect the votes expressed by the voters.

3 (Non)Contestability/Defensibility of BMDs

A BMD-generated paper trail is not a reliable record of the vote expressed by the voter. Like any computer, a BMD (or a DRE+VVPAT) is vulnerable to bugs, misconfiguration, hacking, installation of unauthorized (fraudulent) software, and alteration of installed software.

If a hacker sought to steal an election by altering BMD software, what would the hacker program the BMD to do? In cybersecurity practice, we call this the *threat model*.

The simplest threat model is this one: In some contests, not necessarily top-of-the-ticket, change a small percentage of the votes (such as 5%).

In recent national elections, analysts have considered a candidate who received 60% of the vote to have won by a landslide. Many contests are decided by less than a 10% margin. Changing 5% of the votes can change the margin by 10%, because "flipping" a vote for one candidate into a vote for a different candidate changes the difference in their tallies—i.e., the margin—by 2 votes. If hacking or bugs or misconfiguration could change 5% of the votes, that would be a very significant threat.

Although public and media interest often focus on top-of-the-ticket races such as President and Governor, elections for lower offices such as state representatives, who control legislative agendas and redistricting, and county officials, who manage elections and assess taxes, are just as important in our democracy. Altering the outcome of smaller contests requires altering fewer votes, so fewer voters are in a position to notice

spent *an average of 4 seconds* examining it to verify that the eighteen or more choices they made were correctly recorded. That amounts to 222 milliseconds per contest, barely enough time for the human eye to move and refocus under perfect conditions and not nearly enough time for perception, comprehension, and recall [27]. A study by other researchers [7], in a simulated polling place using real BMDs deliberately hacked to alter one vote on each paper ballot, found that only 6.6% of voters told a pollworker something was wrong.[15][16] The same study found that among voters who examined their hand-marked ballots, half were unable to recall key features of ballots cast moments before, a prerequisite step for being able to recall their own ballot choices. This finding is broadly consistent with studies of effects like "change blindness" or "choice blindness," in which human subjects fail to notice changes made to choices made only seconds before [19].

Suppose, then, that 10% of voters examine their paper ballots carefully enough to even *see* the candidate's name recorded as their vote for legislator or county commissioner. Of those, perhaps only half will remember the name of the candidate they intended to vote for.[17]

Of those who notice that the vote printed is not the candidate they intended to vote for, what will they think, and what will they do? Will they think, "Oh, I must have made a mistake on the touchscreen," or will they think, "Hey, the machine is cheating or malfunctioning!" There's no way for the voter to know for sure—voters do make mistakes—and there's *absolutely* no way for the voter to prove to a pollworker or election official that a BMD printed something other than what the voter entered on the

[15]You might think, "the voter really *should* carefully review their BMD-printed ballot." But because the scientific evidence shows that voters *do not* [13] and cognitively *cannot* [16] perform this task well, legislators and election administrators should provide a voting system that counts the votes *as voters express them*.

[16]Studies of voter confidence about their ability to verify their ballots are not relevant: in typical situations, subjective confidence and objective accuracy are at best weakly correlated. The relationship between confidence and accuracy has been studied in contexts ranging from eyewitness accuracy [8, 12, 40] to confidence in psychological clinical assessments [14] and social predictions [15]. The disconnect is particularly severe at high confidence. Indeed, this is known as "the overconfidence effect." For a lay discussion, see *Thinking, Fast and Slow* by Nobel economist Daniel Kahnemann [20].

screen.[18][19]

Either way, polling-place procedures generally advise voters to ask a pollworker for a new ballot if theirs does not show what they intended. Pollworkers should void that BMD-printed ballot, and the voter should get another chance to mark a ballot. Anecdotal evidence suggests that many voters are too timid to ask, or don't know that they have the right to ask, or are not sure whom to ask. Even if a voter asks for a new ballot, training for pollworkers is uneven, and we are aware of no formal procedure for resolving disputes if a request for a new ballot is refused. Moreover, there is no sensible protocol for ensuring that BMDs that misbehave are investigated—nor can there be, as we argue below.

Let's summarize. If a machine alters votes on 5% of the ballots (enabling it to change the margin by 10%), and 10% of voters check their ballots carefully and 50% of the voters who check notice the error, then optimistically we might expect $5\% \times 10\% \times 50\%$ or 0.25% of the voters to request a new ballot and correct their vote.[20] This means that the machine will change the margin by 9.75% and get away with it.

In this scenario, 0.25% of the voters, one in every 400 voters, has requested a new ballot. You might think, "that's a form of *detection* of the hacking." But is isn't, as a practical matter: a few individual voters may have detected that there was a problem, but there's no procedure by which this translates into any action that election administrators can take to correct the outcome of the election. Polling-place procedures *cannot correct or deter hacking, or even reliably detect it*, as we discuss next. This is essentially the distinction between a system that is merely software independent and one that is contestable: a change to the software that alters the outcome might generate evidence for an alert, conscientious, individual voter, but it does not generate public evidence that an election official can rely on to conclude there is a problem.

Even if some voters notice that BMDs are altering votes, there's no way to correct the election outcome. That is, BMD voting systems are *not contestable*, *not defen-*

[18] You might think, "the voter can prove it by showing someone that the vote on the paper doesn't

sible (and therefore *not strongly defensible*), and *not strongly software independent*. Suppose a state election official wanted to detect whether the BMDs are cheating, and correct election results, based on actions by those few alert voters who notice the error. What procedures could possibly work against the manipulation we are considering?

1. How about, "If at least 1 in 400 voters claims that the machine misrepresented their vote, void the entire election."[21] No responsible authority would implement such a procedure. A few dishonest voters could collaborate to invalidate entire elections simply by falsely claiming that BMDs changed their votes.
2. How about, "If at least 1 in 400 voters claims that the machine misrepresented their vote, then investigate." Investigations are fine, but then what? The only way an investigation can ensure that the outcome accurately reflects what voters expressed to the BMDs is to void an election in which the BMDs have altered votes and conduct a new election. But how do you know whether the BMDs have altered votes, except based the claims of the voters?[22] Furthermore, the investigation itself would suffer from the same problem as above: how can one distinguish between voters who detected BMD hacking or bugs from voters who just want to interfere with an election?

This is the essential security flaw of BMDs: few voters will notice and promptly report discrepancies between what they saw on the screen and what is on the BMD printout, and even when they do notice, there's nothing appropriate that can be done. Even if election officials are convinced that BMDs malfunctioned, *there is no way to determine who really won.*

Therefore, BMDs should not be used by most voters.

Why can't we rely on pre-election and post-election logic and accuracy testing, or parallel testing? Most, if not all, jurisdictions perform some kind of *logic and accuracy testing* (LAT) of voting equipment before elections. LAT generally involves voting on the equipment using various combinations of selections, then checking whether the

[21] Note that in many jurisdictions, for fewer than 400 voters use a given machine on election day:

equipment tabulated the votes correctly. As the Volkswagen/Audi "Dieselgate" scandal shows, devices can be programmed to behave properly when they are tested but misbehave in use [11]. Therefore, LAT can never prove that voting machines performed properly in practice.

Parallel or "live" testing involves pollworkers or election officials using some BMDs at random times on election day to mark (but not cast) ballots with test patterns, then check whether the marks match the patterns. The idea is that the testing is not subject to the "Dieselgate" problem, because the machines cannot "know" they are being tested on election day.[23] As a practical matter, the number of tests required to provide a reasonable chance of detecting outcome-changing errors is prohibitive: it would leave no time for actual voting [37]. Moreover, it would require additional staff, infrastructure, and other resources.

Suppose, counterfactually, that it was practical to perform enough parallel testing to guarantee a large chance of detecting a problem if BMD hacking or malfunction altered electoral outcomes. Suppose, counterfactually, that election officials were required to conduct that amount of parallel testing during every election, and that the required equipment, staffing, infrastructure, and other resources were provided. Even then, the system would not be *strongly defensible*; that is, if testing detected a problem, there would be no way to to determine who really won. The only remedy would be a new election.

Don't voters need to check hand-marked ballots, too? It is always a good idea to check one's work, but there is a substantial body of research (e.g., [28]) suggesting that preventing error as a ballot is being marked is a fundamentally different cognitive task than detecting an error on a previously marked ballot. In cognitively similar tasks, such as proof reading for non-spelling errors, ten percent rates of error detection are common [28, pp 167ff], whereas by carefully attending to the task of correctly marking their ballots, voters apparently can largely avoid marking errors.

A fundamental difference between hand-marked paper ballots and ballot-marking

correcting *their own errors*, while if BMDs are used, voters are also responsible for catching *machine errors, bugs, and hacking*. Voters are the *only* people who can detect such problems with BMDs—but, as explained above, if voters do find problems, there's no way they can prove to poll workers or election officials that there were problems and no way to ensure that election officials take appropriate remedial action.

4 Other tradeoffs, BMDs versus hand-marked opscan

Supporters of ballot-marking devices advance several other arguments for their use.

- **Mark legibility.** A common argument is that a properly functioning BMD will generate clean, error-free, unambiguous marks, while hand-marked paper ballots may contain mistakes and stray marks that make it impossible to discern a voter's intent. However appealing this argument seems at first blush, the data are not nearly so compelling. Experience with statewide recounts in Minnesota and elsewhere suggest that truly ambiguous handmade marks are very rare.[24] For instance, 2.9 million hand-marked ballots were cast in the 2008 Minnesota race between Al Franken and Norm Coleman for the U.S. Senate. In a manual recount, between 99.95% and 99.99% of ballots were unambiguously marked.[25] [26] In addition, usability studies of hand-marked bubble ballots—the kind in most common use in U.S. elections—indicate a *voter* error rate of 0.6%, much lower than the 2.5–3.7% error rate for machine-marked ballots [16].[27] Moreover, modern image-based opscan equipment (*digital scan* machinery) is better than older

[24] States do need clear and complete regulations for interpreting voter marks.

[25] "During the recount, the Coleman and Franken campaigns initially challenged a total of 6,655 ballot-interpretation decisions made by the human recounters. The State Canvassing Board asked the campaigns to voluntarily withdraw all but their most serious challenges, and in the end approximately 1,325 challenges remained. That is, approximately 5 ballots in 10,000 were ambiguous enough that one side or the other felt like arguing about it. The State Canvassing Board, in the end, classified all but 248 of these ballots as votes for one candidate or another. That is, approximately 1 ballot in 10,000 was ambiguous enough that the bipartisan recount board could not determine an intent to vote." [1] See also

"marksense" machines at interpreting imperfect marks. Thus, mark legibility is not a good reason to adopt BMDs for all voters.

- **Undervotes, overvotes.** Another argument offered for BMDs is that the machines can alert voters to undervotes and prevent overvotes. That is true, but modern PCOS systems can also alert a voter to overvotes and undervotes, allowing a voter to eject the ballot and correct it.
- **Bad ballot design.** Ill-designed paper ballots, just like ill-designed touchscreen interfaces, may lead to unintentional undervotes [24]. For instance, the 2006 Sarasota, Florida, touchscreen ballot was badly designed. The 2018 Broward County, Florida, opscan ballot was badly designed: it violated three separate guidelines from the EAC's 2007 publication, "Effective Designs for the Administration of Federal Elections, Section 3: Optical scan ballots." [39] In both of these cases (touchscreens in 2006, hand-marked optical-scan in 2018), undervote rates were high. The solution is to follow standard, published ballot-design guidelines and other best practices, both for touchscreens and for hand-marked ballots [3, 24].
- **Low-tech paper-ballot fraud.** All paper ballots, however they are marked, are vulnerable to *loss*, *ballot-box stuffing*, *alteration*, and *substitution* between the time they are cast and the time they are recounted. That's why it is so important to make sure that ballot boxes are always in multiple-person (preferably bipartisan) custody whenever they are handled, and that appropriate physical security measures are in place. Strong, verifiable chain-of-custody protections are essential.

  Hand-marked paper ballots are vulnerable to alteration by anyone with a pen. Both hand-marked and BMD-marked paper ballots are vulnerable to substitution: anyone who has poorly supervised access to a legitimate BMD during election day can create fraudulent ballots, not necessarily to deposit them in the ballot box immediately (in case the ballot box is well supervised on election day) but with the hope of substituting it later in the chain of custody.[28]

  All those attacks (on hand-marked and on BMD-marked paper ballots) are fairly low-tech. There are also higher-tech ways of producing ballots indistinguishable from BMD-marked ballots for substitution into the ballot box if there is inadequate chain-of-custody protection.

is typically a BMD or a DRE. When the accessible voting technology is not the same as what most voters vote on—when it is used by very few voters—it may happen that the accessible technology is ill-maintained or even (in some polling places) not even properly set up by pollworkers. This is a real problem. One proposed solution is to require all voters to use the same BMD or all-in-one technology. But the failure of some election officials to properly maintain their accessible equipment is not a good reason to adopt BMDs for *all* voters. Among other things, it would expose all voters to the security flaws described above.[29] Other advocates object to the idea that disabled voters must use a different method of marking ballots, arguing that their rights are thereby violated. Both HAVA and ADA require reasonable accommodations for voters with physical and cognitive impairments, but neither law requires that those accommodations must be used by all voters. To best enable and facilitate participation by all voters, each voter should be provided with a means of casting a vote best suited to their abilities.

- **Ballot printing costs.** Preprinted optical-scan ballots cost 20–50 cents each.[30] Blank cards for BMDs cost up to 15 cents each, depending on the make and model of BMD.[31] But optical-scan ballots must be preprinted for as many voters as *might* show up, whereas blank BMD cards are consumed in proportion to how many voters *do* show up. The Open Source Election Technology Institute (OSET) conducted an independent study of total life cycle costs[32] for hand-marked paper ballots and BMDs in conjunction with the 2019 Georgia legislative debate regarding BMDs [26]. OSET concluded that, even in the most optimistic (i.e., lowest cost) scenario for BMDs and the most pessimistic (i.e, highest cost) scenario for hand-marked paper ballots and ballot-on-demand (BOD) printers—which can print unmarked ballots as needed—the total lifecycle costs for BMDs would be higher than the corresponding costs for hand-marked paper ballots.[33]
- **Vote centers.** To run a vote center that serves many election districts with different ballot styles, one must be able to provide each voter a ballot containing

[29] Also, some accessibility advocates argue that requiring disabled voters to use BMDs compromises their privacy since hand-marked ballots are easily distinguishable from machine marked ballots. That issue can be addressed without BMDs-for-all: Accessible BMDs are already available and in use that mark ballots with marks that cannot easily be distinguished from hand-marked ballots.

[30] Single-sheet (one- or two-side) ballots cost 20-28 cents; double-sheet ballots needed for elections

the contests that voter is eligible to vote in, possibly in a number of different languages. This is easy with BMDs, which can be programmed with all the appropriate ballot definitions. With preprinted optical-scan ballots, the PCOS can be programmed to *accept* many different ballot styles, but the vote center must still maintain *inventory* of many different ballots. BOD printers are another economical alternative for vote centers.[34]

- **Paper/storage.** BMDs that print summary cards rather than full-face ballots can save paper and storage space. However, many BMDs print full-face ballots—so they do not save storage—while many BMDs that print summary cards (which could save storage) use thermal printers and paper that is fragile and can fade in a few months.[35]

Advocates of hand-marked paper ballot systems advance these additional arguments.

- **Cost.** Using BMDs for all voters substantially increases the cost of acquiring, configuring, and maintaining the voting system. One PCOS can serve 1200 voters in a day, while one BMD can serve only about 260 [33]—though both these numbers vary greatly depending on the length of the ballot and the length of the day. OSET analyzed the relative costs of acquiring BMDs for Georgia's nearly seven million registered voters versus a system of hand-marked paper ballots, scanners, and BOD printers [26]. A BMD solution for Georgia would cost taxpayers between 3 and 5 times more than a system based on hand-marked paper ballots. Open-source systems might eventually shift the economics, but current commercial universal-use BMD systems are more expensive than systems that use hand-marked paper ballots for most voters.
- **Mechanical reliability and capacity.** Pens are likely to have less downtime than BMDs. It is easy and inexpensive to get more pens and privacy screens when additional capacity is needed. If a precinct-count scanner goes down, people can still mark ballots with a pen; if the BMD goes down, voting stops. Thermal

[34] Ballot-on-demand printers *may* require maintenance such as replacement of toner cartridges. This is readily accomplished at a vote center with a professional staff. Ballot-on-demand printers may be a less attractive option for many small precincts on election day, where there is no professional staff—but on

printers used in DREs with VVPAT are prone to jams; those in BMDs might have similar flaws.

These secondary pros and cons of BMDs do not outweigh the primary security and accuracy concern: BMDs, if hacked or erroneously programmed, can change votes in a way that is not correctable. BMD voting systems are not contestable or defensible. Audits that rely on BMD printout cannot make up for this defect in the paper trail: they cannot reliably detect or correct problems that altered election outcomes.

Barcodes

A controversial feature of some BMDs allows them to print 1-dimensional or 2-dimensional barcodes on the paper ballots. A 1-dimensional barcode resembles the pattern of vertical lines used to identify products by their universal product codes. A 2-dimensional barcode or QR code is a rectangular area covered in coded image *modules* that encode more complex patterns and information. BMDs print barcodes on the same paper ballot that contains human-readable ballot choices. Voters using BMDs are expected to verify the human-readable printing on the paper ballot card, but the presence of barcodes with human-readable text poses some significant problems.

- **Barcodes are not human readable.** The whole purpose of a paper ballot is to be able to recount (or audit) the *voters'* votes in a way independent of any (possibly hacked or buggy) computers. If the official vote on the ballot card is the barcode, then it is impossible for the voters to verify that the official vote they cast is the vote they expressed. Therefore, before a state even *considers* using BMDs that print barcodes (and we do not recommend doing so), the State must ensure by statute that recounts and audits are based *only* on the human-readable portion of the paper ballot. Even so, audits based on untrustworthy paper trails suffer from the verifiability the problems outlined above.
- **Ballot cards with barcodes contain two different votes.** Suppose a state does ensure by statute that recounts and audits are based on the human-readable por-

the risk that the input-processing software can be vulnerable to attack via deliberately ill-formed input. Over the past two decades, many such vulnerabilities have been documented on *each* of these channels (including barcode readers) that, in the worst case, give the attacker complete control of a system.[36] If an attacker were able to compromise a BMD, the barcodes are an attack vector for the attacker to take over an optical scanner (PCOS or CCOS), too. Since it is good practice to close down all such unneeded attack vectors into PCOS or CCOS voting machines (e.g., don't connect your PCOS to the Internet!), it is also good practice to avoid unnecessary attack channels such as barcodes.

End-to-End Verifiable BMDs

In all BMD systems currently on the market, and in all BMD systems certified by the EAC, the printed ballot or ballot summary is the only channel by which voters can verify the correct recording of their ballots, independently of the computers. The analysis in this paper applies to all of those BMD systems.

There is a class of voting systems called "end-to-end verifiable" (E2E-V), which provide an alternate mechanism for voters to verify their votes [2]. Some E2E-V systems incorporate BMDs, for instance STAR-Vote[37] [5]. As we discuss above in Section 1, such systems are not contestable, defensible, or strongly software independent. In any event, no E2E-V system is currently certified by the EAC, nor to our knowledge is any such system under review for certification, nor are any of the 5 major voting-machine vendors offering such a system for sale.[38]

[36] An example of a barcode attack is based on the fact that many commercial barcode-scanner components (which system integrators use to build cash registers or voting machines) treat the barcode scanner using the same operating-system interface as if it were a keyboard device; and then some operating systems allow "keyboard escapes" or "keyboard function keys" to perform unexpected operations.

[37] The STAR-Vote system is actually a DRE+VVPAT system with a smart ballot box, rather than a BMD system: voters interact with a device that captures their votes electronically and prints a paper record that voters can inspect, but the electronic votes are held "in limbo" until the paper ballot is deposited in the smart ballot box. The ballot box does not read the votes from the ballot; rather, depositing

5 Insecurity of All-in-One BMDs

Some voting machines incorporate a BMD interface, printer, and optical scanner into the same cabinet. Other DRE+VVPAT voting machines incorporate ballot-marking, tabulation, and paper-printout retention, but without scanning. These are often called "all-in-one" voting machines. To use an all-in-one machine, the voter makes choices on a touchscreen or through a different accessible interface. When the selections are complete, the BMD prints the completed ballot for the voter to review and verify, before depositing the ballot in a ballot box attached to the machine.

Such machines are especially unsafe: like any BMD described in Section 3 they are not contestable or defensible, but in addition, if hacked they can print votes onto the ballot *after* the voter last inspects the ballot.

- The ES&S ExpressVote (in all-in-one mode) allows the voter to mark a ballot by touchscreen or audio interface, then prints a paper ballot card and ejects it from a slot. The voter has the opportunity to review the ballot, then the voter redeposits the ballot into the same slot, where it is scanned and deposited into a ballot box.
- The ES&S ExpressVoteXL allows the voter to mark a ballot by touchscreen or audio interface, then prints a paper ballot and displays it under glass. The voter has the opportunity to review the ballot, then the voter touches the screen to indicate "OK," and the machine pulls paper ballot up (still under glass) and into the integrated ballot box.
- The Dominion ImageCast Evolution (ICE) allows the voter to deposit a hand-marked paper ballot, which it scans and drops into the attached ballot box. *Or*, a voter can use a touchscreen or audio interface to direct the marking of a paper ballot, which the voting machine ejects through a slot for review; then the voter redeposits the ballot into the slot, where it is scanned and dropped into the ballot box.

In all three of these machines, the ballot-marking printer is in the same paper path as the mechanism to deposit marked ballots into an attached ballot box. This opens up a very serious security vulnerability: the voting machine can mark the paper ballot (to

and ExpressVoteXL, the normal software indicates an undervote with the words NO SELECTION MADE on the ballot summary card. Hacked software could simply leave a blank space there (most voters wouldn't notice the difference), and then fill in that space and add a matching bar code after the voter has clicked "cast this ballot."

An even worse feature of the ES&S ExpressVote and the Dominion ICE is the *auto-cast* configuration setting (in the manufacturer's standard software) that allows the voter to indicate, "don't eject the ballot for my review, just print it and cast it without me looking at it." If fraudulent software were installed in the ExpressVote, it could change *all* the votes of any voter who selected this option, because the voting machine software would know *in advance of printing* that the voter had waived the opportunity to inspect the printed ballot. We call this auto-cast feature "permission to cheat" [4].

Regarding these all-in-one machines, we conclude:

- Any machine with ballot printing in the same paper path with ballot deposit is not *software independent*; it is *not* the case that "an error or fault in the voting system software or hardware cannot cause an undetectable change in election results." Therefore such all-in-one machines do not comply with the VVSG 2.0 (the Election Assistance Commission's Voluntary Voting Systems Guidelines). Such machines are not contestable or defensible, either.
- All-in-one machines on which all voters use the BMD interface to mark their ballots (such as the ExpressVote and ExpressVoteXL) *also* suffer from the same serious problem as ordinary BMDs: most voters do not review their ballots effectively, and elections on these machines are not contestable or defensible.
- The auto-cast option for a voter to allow the paper ballot to be cast without human inspection is particularly dangerous, and states must insist that vendors disable or eliminate this mode from the software. However, even disabling the auto-cast feature does not eliminate the risk of undetected vote manipulation.

Remark. The Dominion ImageCast Precinct ICP320 is a precinct-count optical scanner (PCOS) that also contains an audio+buttons ballot-marking interface for disabled

6 Conclusion

Ballot-Marking Devices produce ballots that do not necessarily record the vote expressed by the voter when they enter their selections on the touchscreen: hacking, bugs, and configuration errors can cause the BMDs to print votes that differ from what the voter entered and verified electronically. Because outcome-changing errors in BMD printout do not produce public evidence, BMD systems are not *contestable*. Because there is no way to generate convincing public evidence that reported outcomes are correct despite any BMD malfunctions that might have occurred, BMD systems are not *defensible*. Therefore, BMDs should not be used by voters who can hand mark paper ballots.

All-in-one voting machines, which combine ballot-marking and ballot-box-deposit into the same paper path, are even worse. They have all the disadvantages of BMDs (they are not contestable or defensible), and they can mark the ballot after the voter has inspected it. Therefore they are not even *software independent*, and should not be used by those voters who are capable of marking, handling, and visually inspecting a paper ballot.

When computers are used to record votes, the original transaction (the voter's expression of the votes) is not documented in a verifiable way.[39] When pen-and-paper is used to record the vote, the original expression of the vote *is* documented in a verifiable way (if demonstrably secure chain of custody of the paper ballots is maintained). Audits of elections conducted with hand-marked paper ballots, counted by optical scanners, can ensure that reported election outcomes are correct. Audits of elections conducted with BMDs *cannot* ensure that reported outcomes are correct.

References

[1] A.W. Appel. Optical-scan voting extremely accurate in Minnesota. *Freedom*

[2] A.W. Appel. End-to-end verifiable elections. *Freedom to Tinker*, November 2018. https://freedom-to-tinker.com/2018/11/05/end-to-end-verifiable-elections/.

[3] A.W. Appel. Florida is the Florida of ballot-design mistakes. *Freedom to Tinker*, November 2018. https://freedom-to-tinker.com/2018/11/14/florida-is-the-florida-of-ballot-design-mistakes/.

[4] A.W. Appel. Serious design flaw in ESS ExpressVote touchscreen: "permission to cheat". *Freedom to Tinker*, September 2018. https://freedom-to-tinker.com/2018/09/14/serious-design-flaw-in-ess-expressvote-touchscreen-permission-to-cheat/.

[5] J. Benaloh, M. Byrne, B. Eakin, P. Kortum, N. McBurnett, O. Pereira, P.B. Stark, , and D.S. Wallach. Star-vote: A secure, transparent, auditable, and reliable voting system. *JETS: USENIX Journal of Election Technology and Systems*, 1:18–37, 2013.

[6] J. Benaloh, D. Jones, E. Lazarus, M. Lindeman, and P.B. Stark. SOBA: Secrecy-preserving observable ballot-level audits. In *Proceedings of the 2011 Electronic Voting Technology Workshop / Workshop on Trustworthy Elections (EVT/WOTE '11)*. USENIX, 2011.

[7] Matthew Bernhard, Allison McDonald, Henry Meng, Jensen Hwa, Nakul Bajaj, Kevin Chang, and J. Alex Halderman. Can voters detect malicious manipulation of ballot marking devices? In *41st IEEE Symposium on Security and Privacy*, page (to appear). IEEE, 2020.

[8] R. K. Bothwell, K.A. Deffenbacher, and J.C. Brigham. Correlation of eyewitness accuracy and confidence: Optimality hypothesis revisited. *Journal of Applied Psychology*, 72:691–695, 1987.

[9] D. Chaum, A. Essex, R.T. Carback III, J. Clark, S. Popoveniuc, A.T. Sherman, and P. Vora. Scantegrity: End-to-end voter verifiable optical-scan voting. *IEEE Security & Privacy*, 6:40–46, 2008.

[12] K. Deffenbacher. Eyewitness accuracy and confidence: Can we infer anything about their relation? *Law and Human Behavior*, 4:243–260, 1980.

[13] R. DeMillo, R. Kadel, and M. Marks. What voters are asked to verify affects ballot verification: A quantitative analysis of voters' memories of their ballots, November 2018. https://ssrn.com/abstract=3292208.

[14] S.L. Desmarais, T.L. Nicholls, J. D. Read, and J. Brink. Confidence and accuracy in assessments of short-term risks presented by forensic psychiatric patients. *The Journal of Forensic Psychiatry & Psychology*, 21(1):1–22, 2010.

[15] D. Dunning, D.W. Griffin, J.D. Milojkovic, and L. Ross. The overconfidence effect in social prediction. *Journal of Personality and Social Psychology*, 58:568–581, 1990.

[16] S.P. Everett. *The Usability of Electronic Voting Machines and How Votes Can Be Changed Without Detection*. PhD thesis, Rice University, 2007.

[17] A.J. Feldman, J.A. Halderman, and E.W. Felten. Security analysis of the Diebold AccuVote-TS voting machine. In *2007 USENIX/ACCURATE Electronic Voting Technology Workshop (EVT 2007)*, August 2007.

[18] Verified Voting Foundation. The verifier – polling place equipment – november 2018, November 2018. https://www.verifiedvoting.org/verifier/.

[19] P. Johansson, L. Hall, and S. Sikstrom. From change blindness to choice blindness. *Psychologia*, 51:142–155, 2008.

[20] D. Kahnemann. *Thinking, fast and slow*. Farrar, Straus and Giroux, 2011.

[21] S. J. Lewis, O. Pereira, and V. Teague. Ceci n'est pas une preuve: The use of trapdoor commitments in Bayer-Groth proofs and the implications for the verifiabilty of the Scytl-SwissPost Internet voting system, 2019. https://people.eng.unimelb.edu.au/vjteague/UniversalVerifiabilitySwissPost.pdf.

[24] L. Norden, M. Chen, D. Kimball, and W. Quesenbery. Better Ballots, 2008. Brennan Center for Justice, http://www.brennancenter.org/publication/better-ballots.

[25] Office of the Minnesota Secretary of State. Minnesota's historic 2008 election, 2009. https://www.sos.state.mn.us/media/3078/minnesotas-historic-2008-election.pdf.

[26] E. Perez. Georgia state election technology acquisition: A reality check. OSET Institute Briefing, March 2019. https://trustthevote.org/wp-content/uploads/2019/03/06Mar19-OSETBriefing_GeorgiaSystemsCostAnalysis.pdf.

[27] K. Rayner and M.S. Castelhano. Eye movements during reading, scene perception, and visual search, 2009. Q J Experimental Psychology, 2009, August 62(8), 1457-1506.

[28] J. Reason. *Human Error (20th Printing)*. Cambridge University Press, New York, 2009.

[29] R.L. Rivest and J.P. Wack. On the notion of software independence in voting systems, July 2006. http://vote.nist.gov/SI-in-voting.pdf.

[30] Ronald L Rivest. On the notion of 'software independence' in voting systems. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 366(1881):3759–3767, 2008.

[31] Ronald L Rivest and Madars Virza. Software independence revisited. In *Real-World Electronic Voting*, pages 19–34. Auerbach Publications, 2016.

[32] P.Y.A. Ryan, D. Bismark amnd J. Heather, and S. Schneiderand Z. Xia. The prêt à voter verifiable election system. *IEEE Transactions on Information Forensics and Security*, 4:662–673, 2009.

[33] Election Systems and Software. State of Georgia Electronic Request

[35] P.B. Stark. Risk-limiting post-election audits: P-values from common probability inequalities. *IEEE Transactions on Information Forensics and Security*, 4:1005–1014, 2009.

[36] P.B. Stark. An introduction to risk-limiting audits and evidence-based elections, 2018. Testimony prepared for the California Little Hoover Commission, https://www.stat.berkeley.edu/~stark/Preprints/lhc18.pdf.

[37] P.B. Stark. There is no reliable way to detect hacked ballot-marking devices. https://arxiv.org/abs/1908.08144, 2019.

[38] P.B. Stark and D.A. Wagner. Evidence-based elections. *IEEE Security and Privacy*, 10:33–41, 2012.

[39] U. S. Election Assistance Commission. Effective designs for the administration of federal elections, June 2007. https://www.eac.gov/assets/1/1/EAC_Effective_Election_Design.pdf.

[40] J.T. Wixted and G.L. Wells. The relationship between eyewitness confidence and identification accuracy: A new synthesis. *Psychological Science in the Public Interest*, 2017.

EXHIBIT 3

Alexandra Seely, being Sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan
3. I was a ~~vote~~ POLL challenger for wayne county MI at TCF Center on November 4th 2020, ~~at~~ from 10am-3:30pm
4. I challenged 10 votes at table 23, they would not take out the log to record my challenges. I had to write names and ballot numbers on my own.
5. I ~~wanted~~ asked to make incident reports they would not allow me and said they will make a note in the computer, they did not and proceeded to keep counting
6. I was harassed and threatened to be thrown out multiple times. Accused of taking photos when I never did and told I would be thrown out. No one had name tag except GOP challengers.
7. They told everyone to go to lunch if they haven't ate. Only the ballot counters could stay in the room to eat. Challengers and others had to leave the room to eat. Then they would not allow them back in and said they were at max capacity. Prior to this the room was packed after it was almost less than half.
8. After they ejected them it was half full
8. They wouldn't let anyone in for almost 2 hours after.

9. People started to notice and became upset. They were banging on the ~~[illegible]~~ windows and doors. Then President Trump released the ~~lawsuit~~ statement and they covered up the windows and doors.

10. I had 6 ballots that were sent to the wrong precint. They made duplicate ballots on spot and had everyone witness then took the originals to go to the correct "precint".

11. 5 ballots wouldn't scan into the computer and the officiator said to keep scanning them then took them from the table I don't know where they went from there. They also would not put them in the spoiled ballot bin

12. They wouldn't let any other GOP people near the table to be an observer of my challenges. They would threaten to throw me and GOP lawyers out that would come up to me to ask how I was doing.

13. I was called a bigot and a cunt. She covered her name tag.

14. There was backpacks and suitcases that were scan wrapped. In the back of the counting room over by escalators.

15. The ballot numbers did not match the envelop ballot number I would challenge they would not record it or allow me to make an incident report they would put a piece of tape over the ballot number attached to ballot and write the number on envelope. Then would cont it. I would get yelled at for challenging and saying I cant speak out. Then they would try to hide the ballot numbers

from me. I had a man scream in my face to back up and be 6 ft away when I already was or he'd throw me out.

16. Two GOP lawyers were thrown out trying to help me and they said because they weren't wearing masks ~~correctly~~ correctly.

17. Before I started challenging at my table there was a man who took a photo of the monitor with the birthdays 1/1/1900. They ejected him after and would not document his challenges. Everyone was cheering and yelling. I personally witnessed this including the picture

18. I was ~~to~~ trying to leave at 3:30 pm because I had to be out work by 4. They locked us in, had the windows all covered and my table at that moment in time said they had 5,000 votes left to count and no one in the room had started military votes yet. Fifteen minutes later they called for Joe Biden winning Michigan.

19. They made all GOP challengers wear their credentials on a long ~~#~~ narrow white piece of paper when democrats challengers only had a single lime green circle sticker. Then democrats pretended to be GOP so there would be less GOP and more democrats. It was visible that there was people with more green circle stickers than white lanyards.

20. In refrence to #14 I was standing with my father and my father asked a security guard

about the Saran wrapped bags and the security guard said Dont worry about it and that we needed to walk away. my dad asked again what are those? Security guard said if we did not walk away he would call the Police over to arrest us.

21. I had a persons ~~ballot~~ who~~se~~ had two different ballots and they counted both would not let me document. They said they documented in the computer

22. There was coolers, Back packs, duffle bags every where even at the counting tables.

23. When the miltary ballots came in they came through back double doors of the counting room then I left the room. They were bringing in ballots to the tables in squared shapped ~~the~~ bags ~~24~~. with an open top on wheels and navy color. The did not match suitcases in the back but unsure if they were pulled from there

24. When ~~the~~ people were trying to leave they tried to make us go out a different door & not sign the book to sign out by the main door. I signed the signout book and when I exited the main doors and people were screaming and asking me questions & cameras in my face.

X Alexandra Seely Nov/8/2020

Alexandra Seely
Print

Barbara Harrell
Notary Public

BARBARA A. HARRELL
NOTARY PUBLIC, STATE OF MI
COUNTY OF OAKLAND
MY COMMISSION EXPIRES Aug 4, 2025
ACTING IN COUNTY OF Wayne

Abbie Helminen, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan

3. On Wednesday November 4th 2020 from 10am to 330pm I was at the TCF center in Detroit, MI. When I arrived, we were not denied access, signed in at a table and indicated that I was a republican. Upon returning from lunch, Most people were being denied, but I was allowed back in because they recognized myself & two friends.

4. I witnessed at table 88 were many indications of duplicate ballots on the computer screen. The ballots were then passed to the next person at the table. When I questioned this many times, I was told they have their own process and dont interrupt it. I then proceeded to write down the number of the ballot. Each time the

4continued.

Computer indicated this, the worker would quickly scan the next ballot. Several times I would try to move a little closer to the computer to read better I was shooed & even physically pushed by a poll worker once. The democrat standing there was also telling me the ballots had matched. During these same instances I had a democrat over my shoulder and intimidating where-ever I went.

5. I noticed while also watching this table was the passing of ballots that didnt come up on the computer. They were passed to another worker at the table who was checking the pile of papers for the name. The worker would seperate into 3 different piles. Since they were seperated, the names didnt match the list. When I asked to verify and why there were seperate piles, the woman screamed at me to "Get away and don't worry, we have a different process than other tables". I then asked the woman in the black shirt (officiator)

told me I wasnt allowed to challenge the process. I simply told her I wanted to observe where they were being passed and she again told me to step away from the table. Not one of these ballots were put in the spoiled ballots box. ~~Table 88 had a different order of passing ballots and opening them than the other tables.~~ The ballots were then picked up and carried around the table to be taken out of the envelopes.

6. I thought signatures were supposed to be matched from the ballot to the applications, however I never saw any applications at any station.

7. There were a lot of coolers & suitcases throughout the room. A few times I tried to take pictures I was threatened to be kicked out. I have pictures that I emailed to mied@donaldtrump.com.

8. When I was moving from a couple tables to another area, I noticed several

tables that were empty with ballots sitting there. At other times, all the Poll Workers at the tables were on their phones. It seemed odd since we were getting yelled at all the time for phones.

9. Around 2pm, the room began to get very intimidating. There was a large police presence that moved into the room. At this point, people began to put cardboard on the windows to prevent others from seeing in. It felt closed in and the room also began to get loud. All the sudden, there was a loud roar from a table where a man was using his phone. I did not witness him taking a picture, but he was hauled away by police with no trouble. The alarming thing was that the whole room erupted in claps & cheers. This included the poll workers.

10. There was a break from the time most tables were done and the time the military ballots arrived. It seemed quite chaotic at this point and people

were everywhere. People walked into the room from the back doors with mail trays full of ballots. People were pulling ballots from the bins and just carried here & there.

11. I observed suitcases & boxes saran wrapped in the rear of the room. It was not indicated what they were, but there was a couple times that I was asked to get away from them.

12. At the point that boxes were over the windows, no one was being allowed In. Democrats outnumbered republicans by at least 2:1. We were all trying to stay and cover many tables because we didnt have enough watchers.

13. At 345, Myself & a friend tried to leave at the doors we came in from. The police were lined up and said to go out the side doors. It was very intimidating & uneasy. No one was

at that door, so there was no place to check out.

14. From the time they stopped allowing people in the room, the amount of occupants was a lot less than there were earlier in the day. It did not seem like capacity was ~~reached~~ at ~~[illegible]~~ any more to reach a room capacity.

Abbie Helminen
Abbie Helminen
11/8/2020

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

Sworn before me on:
11/8/2020
Kimberly J Matson
Acting in the state of Michigan, County of Wayne. Commission expires 9/2/2024

AFFIDAVIT OF ANDREW JOHN MILLER

Andrew John Miller, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was a poll challenger on Tuesday, November 3, 2020 and Wednesday, November 4, 2020.
4. The table I was at was duplicating ballots and had about 25 ballots to duplicate.
5. One poll worker held the original ballot and a second poll worker duplicated the ballot.
6. The poll worker who duplicated the ballot hovered over the ballot and blocked me from being able to see the duplication process.
7. A third worker was blocking anyone from being able to see this duplication process.
8. I informed a supervisor that I was denied access to see the duplication process and need to review the ballots for accuracy. I was informed that I "couldn't because the duplication process was personal like voting."
9. I watched them duplicate 3 or 4 ballots and this happened on each ballot I watched.
10. I challenged these 3 or 4 ballots and the table worker refused to acknowledge my challenge.
11. Additionally, the poll workers refused to enter my challenge into the computer and also refused to enter my challenge into the poll log.
12. On both November 3, 2020 and November 4, 2020, I was instructed to back up 6 feet from the table and I was unable to see what was happening with the ballots from 6 feet away from the table.

1. At one point on November 4, 2020, a democrat challenger was standing between myself and the table where the poll worker was processing the ballots
2. I was instructed to back up 6 feet from the table, however, the democrat challenger, who stood in between where I was standing and the poll worker at the table, was not told they needed to back up.
3. I saw roughly 24 computers on November 3, 2020 and every computer I saw had a red error messages in the lower right-hand corner saying "update overdue." Additionally, not all of the computers indicated the correct time, with some being off by approximately 5 hours. All computers with the incorrect time were synchronized to show the same incorrect time.

Andrew J. Miller

Dated: November 8, 2020

Andrew John Miller 11/8/20

Subscribed and sworn to before me on:
/s/ Kimberly Matson 11/8/2020
Notary public, State of Michigan, County of:
My commission expires: 9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF ANNA PENNALA

Anna Pennala, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well

2. I am a registered voter in the State of Michigan and in the Township of Brighton

3. I observed several irregularities including an unattended ballot box, unidentified people coming in and out of the TCF Center, and a chaotic ballot counting process.

4. There were several instances in which the poll workers used their bodies to prevent me from watching and observing the ballot counting process.

5. Throughout the day, I witnessed a pattern of chaos, intimidation, secrecy, and hostility by the poll workers. Poll workers would cheer, jeer and clap when poll challengers were escorted out of the TCF Center. There seemed to be collaboration between the democratic poll challengers and the City of Detroit poll workers.

Dated: November 8, 2020

Anna Pennala

Anna Pennala

Subscribed and sworn to before me on:

/s/ Leslie M Persin

Notary public, State of Michigan, County of:

My commission expires: 9-9-2026

LESLIE M PERSIN
Notary Public, State of Michigan
County of Oakland
My Commission Expires Sep. 09, 2026
Acting in the County of Wayne

AFFIDAVIT OF ARTICIA BOMER

Articia Bomer, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On November 3, 2020 I was a Republican challenger at the TCF Center in Detroit, Michigan. I arrived at approximately 9:30pm and left the next morning at approximately 6:30am.

4. When I arrived I, along with other Republican challengers, were told we needed to remain standing in one place and be six feet away from everyone. Eventually we were told we could move around the counting room.

5. I observed tables 123 and 120. At both table 123 and 120 I noticed USPS boxes of ballots beneath the table. I was able to observe that many of these ballots in the boxes were either straight ticket Republican or had votes for Donald Trump. These ballots seems to be separated from the rest of the ballots being counted.

6. I witnessed a meeting between election worker "team leads" where they gathered together and spoke, this meeting ended in a cheer. Many of these team leads wore mask or other materials supporting "Black Lives Matter" or other political causes.

7. At approximately 11:43pm I heard one of the team leads yell "this is our house tonight!" At approximately midnight, I heard this same man say racist remarks about black people who support Donald Trump. I believe these remarks were directed at me.

8. I witnessed election workers open ballots with Donald Trump votes and respond by rolling their eyes and showing it to other poll workers. I believe some of these ballots may not have been properly counted.

9. I observed a station where election workers were working on scanned ballots that had issues that needed to be manually corrected. I believe some of these workers were changing votes that had been cast for Donald Trump and other Republican candidates.

10. I observed ballots with cursive writing notes at the top right hand corner. I observed approximately 500 ballots with this writing. These ballots did not have ballot codes on them.

11. At approximately 4:03am a poll worker announced that 50 boxes of ballots were coming in. Election workers loudly cheered this announcement.

12. At approximately 4:50am I witnessed a man spraying a chemical on a ballot counting machine. He then placed twenty-seven ballots into the machine and I noticed tape on the top of the ballot where a ballot number would normally be. Throughout the night I witnessed him insert these same 27 ballots at least five times.

13. At approximately 5:15am an announcement came in for counters to clean their tables. Ballots were still throughout the counting room.

14. In between the announcing at 4:03am of 50 new boxes and the announcement at 5:15am for workers to clean their tables, I did not observe the 50 new boxes coming in or counted.

15. There were no "bag checks" for anyone taking or bringing ballots into the TCF Center.

16. On November 4, 2020 I returned to the TCF Center at approximately 10:30am. I was not allowed in.

17. I took notes documenting these issues while I was at the TCF Center.

Dated: November 8, 2020

Bomer

Articia Bomer
Articia Bomer

Subscribed and sworn to before me on:
/s/ 08 November, 2020
Notary public, State of Michigan, County of: Wayne
My commission expires: 06-14-2022

Florence Dattenzio Giummo

Affadavit of

Betty Tyson being sworn, declares under penalty of law

1. I am personally familiar with the facts stated in this affadavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan
3. Arrived 9:30 PM at TCF/COBO to work as Challenger 11/3/20 for 10:30PM-3AM shift
4. Passed thru tables for Covid Testing
5. At escaltors they took our temperatures ~~[illegible]~~ and checked credentials - no id required
6. Went down escalator & entered doors to inspection counting area
7. They checked credential
8. Got instructions from GOP regarding what we would be checking
9. No ballots were currently at any tables
10. Some time later ballots arrived at tables
11. We weren't allowed by the area of the table where envelopes were scanned nor could we hear ~~there~~ conversations
12. We only were allowed at a corner of the table where a computer screen was located with their poll workers at least 6 ft from the screen and we were 6ft behind screen with workers coming between us and the screen blocking our view

Betty Tyson

13. We could not get close enough to view signature or date on ballot envelope or any pertinent information

14. Kept track of # of ballots processed before they were taken to tabulator machine

15. Poll worker said he wouldn't take ballots to be tabulated until he had 200, but surprised us when he then got up to take 50 - my partner followed him then to machines

16. I also tried to watch area where ballots that kicked out were being reviewed, again at least 6 ft ~~bhi~~ behind those viewing ballots on computer screen with being constantly blocked by workers going between me + poll workers at computer screens

17. Poll workers reviewing these ballots went over X's & V's to make ballot vote valid and some added votes where there was no X or V

18. I previously sent an email with statement to Shawn Flynn reporting irregularities on November 6

November 8, 2020

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Margaret Lear Erle

Betty Tyson
Betty Tyson

AFFIDAVIT OF BEVERLY BALLEW

Beverly Ballew, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan and the City of St. Clair Shores.

3. I was a Republican Poll Challenger on November 4, 2020.

4. I began observing on November 4, 2020 at approximately 8:30 am.

5. While observing at Table 50, I witnessed several irregularities where ballot numbers did not match what was in the voter files. I was approximately six feet away from the table except when I needed to get closer to observe.

6. I proceeded to take down my own personal notes when a floor supervisor immediately approached me and in an authoritative manner and told me I was not social distancing. I responded that he was also not social distancing.

7. With little explanation, the floor supervisor proceeded to threaten me with ejection if I did not follow his rules. I backed away and continued to observe.

8. There were several instances in which the poll workers used their bodies to prevent me from watching and observing the ballot counting process.

9. Throughout the day, I witnessed a pattern of intimidation, secrecy, and hostility by the poll workers. Poll workers would cheer, jeer and clap when poll challengers were escorted out of the TCF Center. There seemed to be collaboration between the democratic poll challengers and the City of Detroit poll workers.

Dated: November 8, 2020

Beverly Ballew

Beverly Ballew

Subscribed and sworn to before me on:

/s/ 08 November, 2020

Notary public, State of Michigan, County of:

My commission expires: 06-14-2022

Florence Dortenzio Giummo

State of Michigan

Affidavit

#23-1:10

1) I, Bonnie Pettibone, am a Michigan Voter registered at 1933 Downham Dr Wixom

2) I have been serving November 3, 2020 as an Poll Challenger for the Trump for President campaign commitee + the Michigan Republican Party at the TCF, Detroit Canvass

3) at approx. 1:10P I observed a ballot being duplicated at AVCB 43 + I approached the supervisor and asked if there was a republican there to witness this duplication? He said he didn't know. The inspectors continued to duplicate the ballot.

signed by: Bonnie Pettibone Printed name: Bonnie Pettibone

date 11-3-20

Susan L. Mills, Public Notary
Susan L. Mills
exp. October 27, 2025

AFFIDAVIT OF BRADEN GAICOBAZZI

Braden Gaicobazzi being sworn, declares under penalty of perjury:

I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

1.I am a registered voter in the State of Michigan.

2. I had the following experiences at TCF (COBO) Hall on 11/4/2020

3.I experienced: Intimidation countless times, persistent lies from some table supervisors and managers regarding rules that prohibited me from doing my job, and threats of assault. I was escorted from the room by police after about 9 or 10 hours of peacefully doing my job for simply standing my ground at a table with people who were denying me access to see ballots and threatening me. I did not resist police in any way and left peacefully.

4. I saw an online note from someone within my GOP network of friends that 35,000 ballots had been received in the middle of the night and that they needed poll watchers on November 4th. I arrived in the late morning to be trained.

5.The first thing I noticed was that at least one person outside the ballot room entrance had a BLM mask on. She appeared to be doing temperature checks. Once inside, it was apparent that many and probably most tables in the room were hostile towards people with GOP lanyards.

6.I initially worked with an honest table, but after a few hours, I moved to another table because we were low on GOP Challengers. This is because they kept kicking out GOP challengers, using the police in the room to physically remove them. In fact, early in the afternoon or later morning, someone came into the room, made an announcement, and several people appeared to be

removed from the room as the doors were locked and the windows were boarded up with cardboard. I was informed that no GOP people were allowed in and that, if we left, we could not get back in. I asked several of the 'independent' lawyers and law students who were acting as challengers and none of them seemed to believe this to be an issue.

7.I talked with several of these 'independent' lawyers/law students at length in casual, friendly conversation and, based upon their answers to basic questions about the news, it was evident that EVERY single one of the lawyers/law students that I talked to was ideologically far-left, supporting things like CHAZ/CHOP in Seattle and condoning the crime skyrocketing around the country or wanting to work in Brooklyn because they support 'progressive' changes to law to 'not prosecute rioters,' etc. Yet, they all claimed to be independent. Anyway, every time a GOP staffer was removed from the room, most of the entire room would erupt in cheers and laughter and oftentimes derogatory insults as GOP Challengers were walked out by police.

8.Throughout the day, I was on numerous occasions told that I was not allowed within 6 feet of the tables. I told them I had to step in for a moment for each ballot to ensure that numbers or names matched and assured them that it would be brief and that the lawyers said this was by lawful, but table supervisors and their broader supervisors would often step in the way and prevent me from seeing ballots while claiming I was trying to kill or endanger their ballot counters with Covid. This was obviously incorrect and even when lawyers would tell the whole table this, they would often argue with the lawyer. After the lawyer would leave, sometimes the behavior would continue.

9.For much of the day I was with one good table. However, as the night drew long I was bouncing between several tables, mostly near the back of the room, because there were not enough GOP challengers remaining in the room and many tables had no challengers watching them at all. At around 8pm at one of the tables in the second-to-last row near the right corner, a specifically egregious moment occurred.

10.The table was counting a stack of about 35 ballots that all appeared to have pink challenge stickers on them. None of these ballots appeared to be in the digital database of voters, so the people at the table were simply entering names and addresses into the computer with birthdates of 1/1/1900. I personally was able to observe the 1/1/1900 birthdates on the computer. There were also addresses and names which I could not verify because I wasn't allowed close enough to the table for long enough to compare anything. I told the table I was challenging every one of these ballots. They laughed and said I can't just do that. I then noticed that at least one of the ballots and envelopes was mismatched based on the numbers. I waited to see if the table checker (at I believe station 2) would catch this and he did not, so I spoke up requested that the ballot be reviewed/challenged. I could not see any political affiliation information on the ballot, including voting; just the numbers on the envelope and ballot.

11.At some point, another GOP volunteer went to grab a lawyer for me because a debate ensued over this. There weren't nearly enough lawyers in the room to act on our behalf. When I would try to verify the names on the envelope or check the ballot number against the envelope number to ensure everything was okay, I was given the Covid runaround and separated from the table. (I cannot tell you by whom because, throughout the day, I recall very few people at these tables were ever willing to give me their name and party affiliation or even their job title. Everyone else stonewalled and said I wasn't allowed to talk with anyone at the table and that no one at those tables was required to tell me anything, often including the table supervisors and their managers.

12.The table supervisor came over and began giving me the same speech and, while I was politely telling him I was just doing my job, another GOP staffer went to find a lawyer for me. In this time, the table swarmed with, I assume, Democrat operatives getting very close to me and then yelling at me to back off 6 feet from him for Covid and complaining about the way I was wearing my mask moving because I was being forced to talk to him so much. The

supervisors and table had no problem with these people being close to the table and seemed to be familiar with one another, as though they were all on the same team. The antagonistic staffers invented any kind of reason to prevent me from doing my job and get me agitated. Finally, a lawyer showed up who told them I was allowed to do my job; like other tables, they simply argued with him as well. Having missed several ballots due to the arguing, I stepped in for a moment to verify the next ballot number matched its envelope.

13.The table supervisor, his supervisor and several other operatives (none of them would give their names or credentials) swarmed in and began intimidating me. I was separated from the table at one point by the table supervisor's supervisor and told to stand back. He stepped closer and closer to me as I backed further away to the other side of the table. I asked him what his name and job title was and he, along with the rest of the intimidators, refused to give me any information. He made some kind of innuendo about 'playing with' him that made me uncomfortable and he then told me something to the effect that he would either 'kick my ass or kick me out'.

14.In disbelief, I asked him if he was truly threatening me because I was just doing my job. He repeated his mantras multiple times and called the cops over and had me forcibly removed. The police questioned nothing and I didn't fight them at all and left peacefully. However, I had to grab my coat and gave my unfinished notes to another GOP volunteer, Andrew, so I do not have them as I write this affidavit and don't recall if I was able to write down the table number of this final event of my evening. Once escorted out of the building, I held the door for a brief moment to ask the police how to get to my car because I had no idea where I was in relationship to the parking deck, and they said they had no idea.

15.As a final note, I did find it odd that, throughout the day/night, I saw a few dozen military ballots be counted. Although I cannot provide specific numbers or names, I can estimate that at least 80% of the military ballots I saw were straight ticket democrat or simply had Joe Biden's name filled in on them. I had always been told that military personnel tended to be more conservative, so this stuck out to me as the day went on.

Dated: November 8, 2020

Braden Gaicobazzi

Subscribed and sworn to before me on:

/s/ 08 November, 2020

Notary public, State of Michigan, County of: Wayne

My commission expires: 06-14-2022

Florence Dortenzio Guarino

State of Michigan
Affidavit

I, Brett Kinney am a Michigan registered voter at 15845 Knurlwoode, Romulus, MI 48174

I have been serving on Nov. 3, 2020 as a poll challenger for the Trump for President campaign committee and Michigan Republican Party at the TCF center in Detroit canvass

At approximately 1:20pm I observed a ballot being duplicated at AVCB 37 and I approached Elections supervisor I asked him "Is there a Republican supervisor present to witness this ballot duplication. He said" It's not required and he does not have to look for one. The supervisor continued to duplicate the ballot I was challenging

I have witnessed this at approximately 1:20 on Nov. 3 2020
Signed by Brett Kinney 11-3-2020

Susan L. Mills
Susan L. Mills, Notary Public

I am a registered voter at 2421 S. Hacker Rd in Brighton Michigan - 48114

I am working as an official election challenger approved by the Michigan Republican party at the TCF center in Detroit

Today, November 3, 2020, I witnessed a duplication of voter ballots in ICC # AVCB #112 at 13:50 hrs without a republican present. When I asked to validate they asked to stop boxes. When supervisor came, the reason given ~~what~~ was the ballots 46 in total were rejected. They were processed at AVCB 121 instead of 112. They processed 9 ballots, realized they did it wrong and started to reprocess 46 ballots. Some appeared to be dupes already because of initials. Original numbers are missing.

No electronic record keeping was done.

Respectfully,

Cheryl Wasilewski
2421 S. Hacker Rd
Brighton, MI 48114
Cheryl Wasilewski

Susan L. Mills
SUSAN L. Mills
Notary Public
Exp. October 27, 2025

AFFIDAVIT OF CHRISTOPHER SCHORNAK

Christopher Schornak, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I went to the TCF Center in Detroit to be a poll challenger, Election Integrity Fund, Non Partisan Participant on November 4, 2020. I arrived at approximately 10:30am.
4. At each counting board, the poll workers attempted to block me from observing. I was verbally abused and intimidated by not only the Democratic poll challengers but the ACLU and other organizations.
5. I primarily attempted to observe counting board 88 and 89.
6. I observed ballots that were not in the electronic log or the paper poll log. These would be considered spoiled ballots . I observed these ballots be counted.
7. I observed a poll worker attempt to match the voter to the paper log. When she was unable to make the match, she would put the spoiled ballots into a separate pile and go away from the counting board for a while. She would return approximately 20-30 minutes later and return the spoiled ballots to the pile of ballots to be counted.
8. I observed this same poll worker do this same process over many tables and over many hours.
9. I attempted to challenge these ballots to a supervisor and was told "We are not talking to you, you cannot challenge this".

10. I went back and spoke to the attorney of the Election Integrity Fund and was instructed to challenge. After much opposition, I was finally able to log challenges.

11. Ballot #7909 was reassigned to Ballot #0976 at counting board 88 @ 11:35 am, the ballot number did not match the electronic record. The voter's name was

12. Another poll challenger Abbie Heilmanen also observed this challenge.

13. Ballot # 5748, reassigned to ballot #505 Board #89, the ballot number did not match the ballot book or electronic record. The voter's name was ;.

14. Another poll challenger Abbie Heilmanen also observed this challenge.

15. I attempted to make other challenges but was denied access to ballot numbers or names.

16. There was a stack of at least 40 ballots that could not be authenticated with the ballot book or electronic record, but was told they would not be challenged because they just had to be counted.

17. This was similar amongst the eight tables that I observed.

18. I observed that the military ballot duplication process was only performed by two Democrats rather than one Democrat and one Republican.

19. I also observed that none of the poll workers had any identification as to their name or party affiliation as required by regulation. I asked if there were any Republicans present and was told "no".

20. When I asked for the number of ballots that had been counted or processed at each counting board, I was denied information. I was told I had to get it online. I requested a print out and was told to access it online. Therefore, I was unable to get a total vote count from each counting board.

Dated: November 8, 2020

Christopher Schornak

Subscribed and sworn to before me on 11/8/20

/s/

Notary public, State of Michigan, County of:

My commission expires:

Kimberly A. Moin
NOTARY PUBLIC - STATE OF MICHIGAN
County of Wayne
My Commission Expires 10/23/2024
Acting in the County of _____

AFFIDAVIT OF Colleen Schneider

Colleen Schneider, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.

I was down at TCF building to help with the absentee ballot counting. When I arrived, they said they could not allow any republicans in due to it being their maximum count. I don't know how many republicans vs democrats there were because we didn't get in. We waited upstairs and eventually just said we'd all just go down together and go in, which we did. When we got in there, I walked over to the people I thought were in charge and asked what I should be doing. I was assigned a table to monitor but they were not doing anything so I went to the table across from it because no one was there. In fact I didn't see any republicans around me at all. I raised my hand to challenge and get an attorney over there and the woman who I assume is in charge of the table started yelling at me and telling me I can only challenge something that is on the computer screen. They were finding several ballots that were scanned but they wouldn't allow me to see the pages they were looking through to confirm the name was on there.

After being called several derogatory names by the entire table (there was a girl video taping it even though video was not allowed) a man came over to me and told them he was my attorney. Then they started screaming that two republicans cannot be at the same table, called the police and the police escorted him out to loud cheers from ALL of the workers. Then she told me she was calling the police on me because I "told them they had to stop the count". I told her that I did not say that, but only told HER, the supervisor, to have them stop the count because I was

challenging. She told her table to continue counting the votes. Then she said that I didn't intimidate her, to which I replied that she didn't intimidate me either.

Eventually I moved away from the table. There was not one republican that I could see and at this time the doors were locked to all republicans coming in. We could not leave to go get food or drink in our assigned room because we were told we would not be let back in. (The people employed in the room had food and water available to them).

I also witnessed the people putting ballots into the scanning machine and they would get jammed and they would run them through again. I asked the first set of women if they were getting counted twice and they said no. I moved down the line and asked again and I was told to pretty much mind my own business. I cannot remember the exact words. I did tell someone about it though and they said they would look in to it.

We finally gave up and left the building because we could see that we were not able to challenge anything that we saw.

Dated: November 7, 2020

Colleen Schneider
Colleen Schneider

Sandy Rashed
Subscribed and sworn to before me on:
/s/ November 7, 2020
Notary public, State of Michigan, County of: Oakland
My commission expires: 3/26/2024

AFFIDAVIT OF CYNTHIA BRUNELL

CYNTHIA BRUNELL, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was a Republican Party poll challenger for the November 3rd presidential election.
4. Prior to election day, I volunteered and participated in on-line training through the Republican Party.
5. On election day, I was assigned as a Republican poll challenger to a late-night shift (9pm to 5am) at the TCF Center in Detroit.
6. I arrived at the TCF Center a few minutes before 9pm on Tuesday November 3, 2020 with my husband, David Brunell, an attorney volunteer for the Republican Party.
7. I was assigned to table 21.
8. Table 21 consisted of a circle of separate work tables, staffed by five (5) individuals who performed designated functions for the opening and reviewing of absentee ballots.
9. There was also supervisor who oversaw the ballot review for Table 21 and a number of others Tables.
10. When I arrived, I was directed by the election official supervisor to sit in the center of the aisleway, 6 to 8 feet away from the circle of tables where the absentee ballots were being reviewed.

11. The election workers sitting at the circle of tables for Table 21, refused to speak to me, only occasionally stating that I should move away, that I was too close or that they weren't allowed to talk to me.

12. No one would tell me their names. One of them invited me to sit near him at his work station but the other workers quickly admonished him – leaving me sitting in the aisleway.

13. Election worker in position #1, slit open the envelope. Position #2 verified the ballot number against the voter registration data base using a lap top computer. Position #3 would pull out the inner envelope containing the ballot and re-verify the name and ballot number. Position #4 opened the ballot, removed the perforated top of the ballot and reviewed the ballot. Position #5 flattened the reviewed ballots and assembled them in bundles of 50 for actual processing.

14. Over the course of time, I was trying to keep track of ballot issues that were identified, but I couldn't see what was going on so I eventually left my aisle seat and started walking around the election workers performing their jobs in the circle of tables.

15. The ballot issues that were identified by the election workers, included ballot numbers not matching, lack of signatures, unregistered voters and ballots which indicated straight ticket selection for both political parties.

16. When I heard of an irregularity, I would write down the issue in order to keep track. As the night wore on, I started writing down names and ballot numbers.

17. Some of the irregularities that I recorded were as follows:

    a. Voter Denise Brooks didn't sign the envelope or ballot. Her ballot was processed through the electronic ballot counter.

b. Voter Dervorna Wilson didn't sign the envelope or ballot. Her ballot was processed through the electronic ballot counter.

c. Voter Kevin Douglas Merriweather II ballot numbers didn't match. His ballot was processed through the electronic ballot counter.

d. Voter Miles Whitfield numbers on envelope and ballot did not match. White tape was placed on his ballot. His ballot was processed through the electronic ballot counter.

e. Voter Stacy Denise Prichart didn't sign envelope or ballot . Her ballot was processed through the electronic ballot counter.

f. Voter Steven Alante Ousley Scott born in 1929 was not a registered voter. His ballot was processed through the electronic ballot counter.

18. I was never afforded an opportunity to look at any of the ballots at any point in the process, in order to ascertain for myself, if there were irregularities. I was forced to keep a distance. When the election workers identified a problem with a ballot, I would try to observe it, but was constantly told to keep a distance and if I asked to see something, they told me that were not permitted to talk to me.

19. On eleven (11) occasions, irregularities were identified. Those ballots were not segregated. On a number of occasions, the supervisor directed that some of the flagged ballots be returned to the election worker in position #3 who was instructed to place white tape over some portion of the flagged ballot. I could not identify what specific information was covered by the tape. I assumed that the white tape indicated that the ballot was flagged and would not be processed. The ballots with white tape were not separated or segregated but were bundled with the other ballots for processing and counting.

20. There was a box for rejected ballots on one of the tables, but no ballots were ever placed into the box. The supervisor instructed the worker at position #3 not

to use the rejection box because the process for dealing with flagged or irregular ballots had changed.

21. Twice during my shift, the supervisor removed a stack of ballots from Table 21 after they were opened at position #1 but before they were verified at position #2. I don't know what she did with those ballots but I know they were not verified or reviewed by Table 21.

22. To my surprise, all of the 268 ballots reviewed by the workers at Table 21 were electronically processed and only 4 were rejected. Based on the irregularities that were identified by the election workers, I had expected that at least eleven ballots would have been rejected.

Dated: November 8, 2020

CYNTHIA BRUNELL
29251 Broadmoor
Livonia, MI 48154

Subscribed and sworn to before me on: November 8, 2020.
/s/ Philip Needham
Notary public, State of Michigan, County of: Macomb
My commission expires: June 12, 2026
Acting in County of Wayne

PHILIP NEEDHAM
NOTARY PUBLIC, STATE OF MI
COUNTY OF MACOMB
MY COMMISSION EXPIRES Jun 12, 2026
ACTING IN COUNTY OF WAYNE

AFFIDAVIT OF DAVID LANGER

DAVID LANGER being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. AT TCF on Wednesday arrived at approx. 12:30 pm prohibited entry to the counting floor. Told to wait. Kept door closed. Waited until approx. 10:30 pm when returned home.

Dated: November 8, 2020

David Langer
DAVID LANGER
586 214-5507
11/08/2020

Subscribed and sworn to before me on: 11/8/2020
Kimberly Matson
Notary public, State of Michigan, County of: Wayne
My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF DAVID PIONTEK

David, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan, in the city of Livonia.
3. I was a Republican Poll Challenger on November 4, 2020 at the TCF Center in Detroit Michigan.
4. I began observing at approximately 10:30 am at table 51.
5. There was a bin marked "problem ballots" and I asked the table captain where those ballots were going. The table captain stated those ballots were going to be further looked at. I asked if I could get the numbers of those ballots, and the table captain stated that he would only allow me to get the number of the top ballots, because he wasn't going to allow me to slow the process down. I followed the "problem ballots" and observed a poll worker drop them on the central processing table with no supervision.
6. The table captain, George, stated there were 32 "problem ballots." I stated that I wanted to challenge those ballots that they refused to allow me to inspect. I further stated that I would like the challenged ballots to be recorded in the poll back, but George refused and said "we will put it in the computer."
7. I proceeded to write an incident report and handed it off to the Michigan Republican Party at the TCF Center.
8. After a lengthy break, the poll workers returned to begin counting the overseas military absentee ballots.

9. On two separate occasions, I witnessed a poll worker make a mistake while duplicating a ballot. The poll worker set the invalid ballots aside. The table captain George brought two new ballot and the poll workers began duplicating the ballots, but did not properly secure the two spoiled ones. I repeatedly asked where those spoiled ballots would go, and George had no answer.

10. At approximately 7:52 pm, the problem ballots that were sent to the central processing table came back to table 51, where I was a poll challenger. The poll worker began scanning a problem ballot and a computer prompt with the words "unlisted person" came up. I witnessed the poll worker manually enter six of these ballots into the system and assign each one a fictitious birth date of 01-01-1900. Since, the poll workers were moving so quickly, I was able to capture just one name, " ." Her ballot number was 5430.

11. Throughout the day, I witnessed a pattern of intimidation, secrecy, and hostility by the poll workers. Poll workers would cheer, jeer and clap when poll challengers were escorted out of the TCF Center. There seemed to be collaboration between the democratic poll challengers and the City of Detroit poll workers.

12. Dated: November ~~7~~ 8, 2020

David Piontek

Subscribed and sworn to before me on: 11/8/20

Notary public, State of Michigan, County of:

My commission expires:

Kimberly A. Moin
NOTARY PUBLIC - STATE OF MICHIGAN
County of Wayne
My Commission Expires 10/23/2024
Acting in the County of _____

AFFIDAVIT OF

Dyanna Papsdorf, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. November 4 - TCF center around 2-10pm

- no republican representation for poll workers during transfering military ballots
- differences between numbers on the ballot as on the envelope
- a number of people / ballots entered in the system that were not on the computer system or the paper list.
- denied assess to the ~~room~~ processing room
- processing a ballot that had tabs ripped off
- a vast difference between the treatment of the dems/non partisan vs GOP
- many of my friends that wanted to help were locked out of the building
- Entire room erupting in applause when a GOP ~~in~~ kicked out

Dated: November 8, 2020

Dyanna Papsdorf
914-294-9513
Nov. 8, 2020
Dyanna Papsdorf

Subscribed and sworn to before me on: 11/8/2020
Kimberly Matson
Notary public, State of Michigan, County of: Wayne
My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

- Military ballots 24 out of 26 ballots were ~~were~~ were for Biden RP

AFFIDAVIT OF Elizabeth Williamson

Elizabeth Williamson, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.

3.
1. On the morning of Wednesday, November 5, 2020 I went to TCF in Detroit to assist with the mail-in ballots being counted. After a brief training, I was sent into a large room. I stood by a table of ballot counters. I was told I could not stand next to another Republican and we were to stand next to a democrat.

2. It took me about 20 minutes to understand the process of scanning the ballots. I realized many of the ballots did not register on the computer screen. I asked about the process. A ballot counter, the supervisor, explained these people were not in the system but were on the paper generated list.

3. I could not see anything that was on the envelope or the paper generated list as we were told to stand back 6 feet. I asked if I could see it. The scanner at the table yelled at me and told me I could NOT talk with her, only the supervisor. So another Republican came with me and we challenged the ballot we could not see. The person scanning stood up immediately and told us to get back so she could talk to the supervisor privately without all us staring at her.

4. We walked away. Finally we were given the ballot number. I wrote it down to challenge it. I am not certain where the ballot went after the challenge. There were many, many more like that. Names of people not in the system, checked off from the paper generated list, and moved on.

5. I was not allowed to stand within 6 feet to see what was on the list, the envelope or the ballot. It was all very mysterious. There was a high level of intimidation and it was evident they did not want anyone to witness the way they counted the ballots.

Elizabeth Williamson

Dated: November 7, 2020
Elizabeth Williamson

Subscribed and sworn to before me on: 11/7/2020
/s/_____
Notary Public, State of Michigan, County of:
My commission expires:

Patricia G Groezinger
Notary Public of Michigan
Wayne County,
Expires 04/13/2024
Acting in the County of Wayne

AFFIDAVIT OF EMILY A. STEFFANS

EMILY A. STEFFANS, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 4, 2020, I volunteered as a poll challenger for the GOP.
4. I arrived at the TCF convention center between 8 and 8:30 am.
5. After a temperature check at the entrance, I was given directions to room 260 which is the room where GOP volunteers went to become credentialed as a challenger.
6. After about 20 minutes of training I received my credentials and paperwork and wristband for entry.
7. I entered the ABC board room.
8. A gentleman with the GOP walked me around the room and explained the process and what to look for.
9. There were not enough GOP volunteers present to have one at each table.
10. I went table to table witnessing the process.
11. I was told during my training that only one volunteer per party was allowed to observe a table at any given time.
12. In many instances there were more than one democrat volunteer challenger at a table.
13. When I moved from table to table I was followed by two to three democrat volunteers.
14. I know they were democrat volunteers because they had green dot stickers on their clothing.
15. Within the first hour I observed poll workers duplicate a ballot.

16. During the process two workers used their bodies to block seeing the duplication process.

17. On numerous occasions I was told by poll workers that I needed to stay six feet from them. When I asked if I could come closer because I could not see the screen to verify whether the voter and ballot numbers matched I was told I could not.

18. On numerous occasions, I was told I could only stand at the screen while democrat observers were permitted to move freely around the table.

19. When I asked a question about why a ballot was being placed in a particular box I was told I was not allowed to talk to the poll worker and did not receive an answer.

20. Democrat volunteers were verbally aggressive with me.

21. I was accused by a democrat volunteer of being part of a "cult" for my support of Trump.

22. I witnessed this individual putting large pieces of cardboard over the window so people trying to get in could not see what was happening on the inside where I was.

23. I observed a republican contender being prevented from watching during a duplication. He tried to get closer to the table and move around so he could see, but when he did, three people swarmed him to block his view. The table leader told him to move back and that he was close enough. He said repeatedly that he needed to see the duplication but they would not let him. A man with an election watcher badge told the poll workers they needed to let him see it and the poll workers responded by telling the man with the badge that he needed to go away.

24. A worker arrived at the table and joined the group of people pushing the GOP challenger back. At that point, I intervened and said to the poll workers that they

needed to let the GOP challenger see the duplication. In response, that worker went and got the police. When he returned with them he said I needed to stop talking and that if I did not I would be escorted out.

25. At that point I had watched two GOP people escorted out by the police. When they were escorted out democrat volunteers and poll workers at the table cheered.

26. This made me afraid to further pursue the issue with the duplication any further and to challenge any ballots.

Dated: November 7, 2020

Emily Steffans

Emily Steffans

Subscribed and sworn to before me on:

/s/ Leslie M Persin

Notary public, State of Michigan, County of:

My commission expires: 9-9-2026

LESLIE M PERSIN
Notary Public, State of Michigan
County of Oakland
My Commission Expires Sep. 09, 2026
Acting in the County of Wayne

State of MI

EUGENE G. DIXON

Assidavit

I, Eugene Dixon, a registered voter at 3572 Halla Ln., Bloomfield Hills MI.

At Appx. 1pm. I observed two ballots being duplicated at TCC#11, 51 Inspector did not know party affiliation at table and the two ballots were duplicated by 3 people who initialed the 2 original ballots and placed them in the manila envelope. The new ballots were then placed in the tray for tabulating.

Eugene Dixon
Nov. 3, 2020

Susan L. Mills, Notary Public
Susan L Mills
Exp. October 27, 2025

11/08/2020 Francis Cizmar, being sworn under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit, and if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On November 4, 2020, I went to the TCF Center as a poll challenger. I was issued credentials when I signed into work.

4. I arrived at 6:00am and left at approx 8:30pm.

5. While I was in the counting area, I personally observed the following:

A) Provisional ballots were put into a box labeled "votes to be tabulated." I filed an incident report and turned it into the supervisor in the Republican poll challenger office. This incident took place at table 1CC12, Absentee Voter Counting Board 58 at 12:30pm.

B) "Problem ballot" boxes containing ballots were left unattended at tables 46, 48, 61, and 62. No election supervisors or poll workers were present.

c) At approximately 3pm, at table 55, a poll worker was seated at inspector station 5. I personally observed this poll worker shuffling and re-arranging the ballots to be tabulated. This went on for at least 5 minutes. I did not understand why this was needed, and I did not see the ballots being put into the box labeled "votes to be tabulated."

D) I was present when poll challengers were forcibly removed from the counting room. I recall this taking place about an hour after I was informed that ~~the~~ President Trump requested that the counting be stopped when he learned that poll challengers were being denied entry. When these ejections took place, there was a lot of shouting of approval and applause ~~in the~~ from the poll workers and election supervisors in the room.

E) At approximately 1pm, I was standing near the entrance to the counting room. About 15 feet in front of me was a group of three men, one of whom had a crutch. The men were about 6 feet tall. The man with the crutch took out his phone, held it up above his head, and began videotaping the area where the tabulating machines were located.

E) continued. The man took a video of about 10 seconds, then put the phone in his pocket. The group of three men turned to face me. I did not see any type of identification or party affiliation on any of them. I walked swiftly to an election worker and reported what I saw, which was the video taping in the area where pictures and videos were forbidden. When the threemen came close to this election worker and me, the election worker told the men that videos and pictures were not allowed in the counting room. One of the men replied in a harsh tone "we didn't take any pictures or videos." The election worker replied "don't do it again" but did not ask the man to delete the video.

F) I witnesed a poll worker at inspection station 2 locating the record of an absentee voter using the Electronic Poll Book on a laptop computer. I was standing approximately 3 feet behind her to her right. After she scanned the envelope, no record came up. She then started typing the voter's name into the electronic poll book. The date of birth field was blank. The poll worker

F) Continued: typed 01/01/1900 into the date of birth field. This would indicate that the voter would be 120 years old. Certainly possible, but improbable. I challenged this record. The Election Supervisor came to the table and told the poll worker to delete the record. I could not confirm if the record had been deleted. The ballot number was 06366.

G) When the military ballots were starting to be transcribed, it was about 7pm. I was at a table where a military ballot was being tabulated. There was one person speaking the vote choice on the military ballot to another poll worker to her right who was copying the vote choices onto a standard ballot. There was a person without any identification and dressed as a regular person without a department of elections shirt/blouse on. One of the table poll workers came to my right and told me to maintain a 6 foot distance. I replied that the 6 foot order was relaxed. She insisted that I back away. I asked who this person standing between the reader and copier was. I was told she is a poll worker who needed to monitor the process. The person without poll worker credentials had both

G) Continued: elbows out to her side, preventing me from observing the ballot copying. The person who told me to keep a six foot distance said that if I did not comply I would be evicted. I left the table to find another one so I could remain in the counting room. I felt very intimidated.

H) When the military ballots began to be distributed to the counting tables, Election Supervisors would grab 2, 3, maybe 4 at a time, which made it impossible for us to cover all of the ballot transcribing. I believe that this was done on purpose.

I) The counting room supervisor would announce over the PA system that he needed to meet with Election Supervisors and Table Leads many times during the time I was in the counting room. This was very distracting to those of us trying to concentrate on what was going on at the tables we were trying to monitor.

Francis J. Cizmar
248 989 3013
francisjcizmar@gmail.com

Subscribed and sworn to before me on
11/8/2020 Frances Cizmar

Diana Beard, Esq (P62626)
Donna Beard
notary public
State of Michigan
County of Wayne
Act in Wayne
Expires 9/16/25

GEORGE L. BOLLER, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On Wednesday Nov. 4 I was present inside the TCF Center as a challenger for the MiGOP.

4. I identified myself to a Robert who was issuing credentials for challengers.

5. I was issued a credential and after a wait of about one hour, went with a group of GOP challengers to an entrance of the vote counting area.

6. ~~We were not admit to the counting area~~ I stood outside the counting area for about 15-20 minutes waiting to be admitted. ~~admitted for about what is 20 minutes~~.

7. Finally a lady opened the door in the presence of a female poll worker.

8. I heard the lady tell the poll worker that she was a challenger for MiGOP and was leaving the counting area for an extended time.

9. I mentioned to the lady and the poll worker, that I was a challenger for the MiGOP.

10. The poll worker said that as soon as the lady left the counting area, I would be let in to replace her.

11. The lady left the counting area but held the door open for me to enter.

12. I entered the counting area and was directed by the poll worker to a table where I would be registered.

13. I stood in front of the table when another female poll worker came over and in the presence of the first poll worker ~~was told~~ said that I would have to leave the counting area.

14. I explained to this other pollworker that I was simply replacing a challenger who had left the counting ~~[illegible]~~ area.

15. This other poll worker ~~[illegible]~~ repeated that I would have to leave.

16. I AM A MEMBER IN GOOD STANDING OF THE STATE BAR OF MICHIGAN, ATTORNEY NO. P10971.

17. I DID LEAVE THE COUNTING AREA, AND OBSERVED POLL WORKERS COVERING AREAS ~~[illegible]~~ OF THE COUNTING AREA WITH GLASS TO BLOCK VIEWS OF THE INSIDE

18. I HAVE PHOTOS, which I ~~[illegible]~~ took from outside the counting area, and I forwarded them to Ryan ~~[illegible]~~ Leppert.

George L. Boller

GEORGE L. BOLLER
rellob@prodigy.net
248-476-3290
734-432-7900

DATED. NOV. 8, 2020

Subscribed and sworn to before me on 11/8/2020
George L. Boller.

Donna Beard Esq (P67626)
Notary Public
State of Michigan
County of Wayne
Acting in Wayne County.

AFFIDAVIT OF Gina Paschke

Gina Paschke, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I arrived at the TCF Center at approximately 12:30pm on November 4, 2020. I was assigned table numbers 110 and 111. Two precincts. I was told that I was not allowed to come closer than 6 feet from the tables or the screens. I was also told that I could not walk between the tables, only around them. This made viewing the screens that were supposed to be available to me impossible to view.
4. I was told that I could not speak to the poll workers at any time. The only question I could ask is what their party affiliation was. I did ask one of my tables this question and was promptly told that I was in violation by speaking to them. I cordially told them I was told I was in in accordance with the rules and they responded by saying that they refused to answer my question.
5. Upon exiting and signing out of the TCF Center, I and two other Republican poll watchers asked that 3 other Republican representatives be allowed access upon our departure and they refused to allow that access based on they're count of number of watchers in the room at the time. I contend that the Republican poll watchers were understaffed in the TCF Center poll room.

Dated: November 7, 2020

Gina Paschke

Subscribed and sworn to before me on: 11/7/2020

/s/

Notary public, State of Michigan, County of:

My commission expires:

Patricia G Groezinger
Notary Public of Michigan
Wayne County
Expires 04/12/2023
Acting in the County of Wayne

AFFIDAVIT OF HEIDI KIILUNEN

Heidi Kiilunen, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I went to the TCF Center in Detroit to be a GOP poll challenger. I arrived at approximately 11:30am.
4. I reported to the GOP room to obtain my credentials.
5. I entered the Center where the counting was occurring. I observed GOP poll challengers being escorted out of the room to the cheers and clapping of all the poll workers.
6. I was only in the room 2 hours.
7. When I left, I inquired as to signing out and was told we I not need to sign out and to exit through a side door. This prevented replacement workers due to there being no record of the number of GOP poll challengers signed in versus the number of GOP poll challengers signed out.

Dated: November 8, 2020

Heidi Kiilunen

Heidi Kiilunen

Subscribed and sworn to before me on: 11/8/2020

Kimberly Matson

Notary public, State of Michigan, County of:

Kimberly J. Matson

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

State of Michigan
Affidavit

My name is Hima Kolanagireddy. I am a Michigan Voter and am serving as a poll challenger at ACVB @ Cobo Hall. I witnessed a ballot duplication at counting board #51. I asked the supervisor if there is a Republican present during the duplication process and he refused to answer and the two democrats tried to argue with me.

I am a registered Michigan voter living @ 18152 Shagbark Drive, Northville, MI 48168.

Signed by: [signature] Print name: Hima Kolanagireddy
Date 11/03/20

Susan L. Mills, Notary Public
Susan L. Mills
expires: October 27, 2025

AFFIDAVIT OF HOLLY SPALDING

Holly Spalding, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was credentialed as a GOP poll watcher for the November 3 and November 4, 2020.
4. I was a poll challenger in Milford at precinct 2 from 7am to 1pm on November 3, 2020.
5. I then went to the TCF Center in Detroit.
6. While at the TCF Center, I observed several violations of voting law.
7. I observed the counting board for precinct 29. I observed a "spoiled" ballot that should have stayed at the clerk's office at the precinct. The poll workers attempted to process this ballot, but the supervisor saw that it was spoiled and put it in the problem bin.
8. I observed that the ballot numbers were not being verified with the E-poll. I asked the supervisor why the correct procedure was not being followed and the supervisor stated that they were "not following that procedure this year". This procedure was violated on all the ballots at this table from 10:30pm to 5am. I did go to lunch from 1:00 to 1:45, otherwise I can confirm that the procedure was not followed.
9. While I was at lunch, votes were tabulated so I was not able to observe the tabulation.
10. I observed ballots that should have been duplicated due to being torn, stained or damaged. A supervisor instructed the workers to run damaged ballots through the tabulator and only to duplicate rejected ballots.
11. I observed ballots numbers that did not match from the outside of the envelope with the ballot number on the inside envelope. I observe the poll worker cover the number on

the outside envelope with white post it tape and re-write the number on the outside envelope to match the inside envelope. I observed this on several occasions.

12. At 2:00am on November 4, two groups of Democrat poll challengers came in, but they had no credentials, only BLM masks and other political message markings. I attempted to apprise them of the irregularities that I observed. They did not appear interested in my report; it was clear they were only there to observe me.

13. I observed a ballot that had a signature on the outside of the envelope, but did not have a signature on the inside envelope. So for one ballot there were 2 outside envelopes.

14. From approximately 4am on, a majority of the ballots that were being tabulated were not on the E-poll, but they were on the AV list. Earlier in the evening if a ballot was not on the E-poll, but was on the AV list, it would be noted on the E-poll message. Later however, as more and more ballots appeared, these ballots that were not listed on the E-poll, was not noted on the E-poll message. Thus they abandoned the recording of these ballots.

15. I observed ballots that had already been opened and then stored in a bin under the table to not be processed and merely stored for the next shift. I believe these ballots were supposed to go to a secure location.

16. I observed ballots processed that had already been opened at an earlier time.

17. I observed that the table behind me had two poll workers at the table. There was a third person at the table that had a patch identifying him as an Election Board Member. I understood this official to be a supervisor of many tables. He was wearing black and white shirts with embroidered identification. The two workers at the table were not participating in any ballot processing. The third person scanned the ballots and put them

in piles. It is unclear what happened to these piles. Earlier in the evening, this table was processing ballots according to the processing procedure and had an observer. There was no observer when the supervisor was singly scanning ballots and putting them in piles.

18. Later, I observed at this same table, a female with the embroidered credential, scanning ballots and putting them in piles, while the two poll workers sat at the table doing nothing. There was no observer.

Dated: November 8, 2020

Holly Spalding
Holly Spalding

11/08/2020

Subscribed and sworn to before me on: 11/8/2020
/s/ Kimberly Matson
Notary public, State of Michigan, County of: Wayne
My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF ILIE ANTONIE

ILIE ANTONIE, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. AT TCF on Monday 6-8 pm, Tuesday from 6:00 am until Wednesday 2:00 am. Acting as a poll challenger. Submitted challenge reports at the TCF which will provide details.

Incidents:

Name on the envelop and the name on the poll sheet did not match more than once.

Persistent issue even after moving to alternate counting tables.

Scanning envelope number also did not match per observations on the screen

Moved to the adjuster area, supposed to both parties represented, many lacked a GOP representative. Observed ballot on screen if mismarked person determined voter intent.

Persistent hostility from workers.

Witnessed duplication with only 1 person, not both parties.

Dated: November 8, 2020

ILIE ANTONIE

Printed Name:

Nov-8-2020

Subscribed and sworn to before me on:

/s/ November 8, 2020

Notary public, State of Michigan, County of:

My commission expires: 07-22-2026

Margaret Lear Erle

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

AFFIDAVIT OF JACQUELINE ZAPLITNY

Jacqueline Zaplitny, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was credentialed as a Ballot Box Inspector and a poll challenger. I was assigned to Precinct 205 at Mason Elementary School in Detroit as the Ballot Box Inspector.
4. I arrived at approximately 5:45 am on November 3, 2020.
5. I observed multiple voters inquire about straight party voting. The Precinct Chairperson instructed these voters on how to vote straight ticket Democrat, but did not mention straight ticket Republican and directed the voters to the Democratic straight ticket box on the ballot.
6. I attempted to intervene, however it was clear that the Precinct Chairperson was directing the voters to the straight ticket Democrat option.
7. At the end of the voting, I printed out the tabulator tapes. I attempted to electronically send the tabulator record to 2 locations, the Department of Elections and Wayne County.
8. The electronic record was successfully sent to the Department of Elections.
9. The electronic record to Wayne County was unsuccessful and I received a message "unable to connect to server". The Precinct co-chair instructed me to resend the electronic record, but the same "unable to connect to server" message was received again. It is unclear if the records were ever received or if they were duplicated.

10. It is unclear how many votes were recorded from this precinct that day, but I can attest that there were only 111 ballots processed.

11. There were 7 voters that appeared to vote in person even though they had requested absentee ballots. These voters were permitted to vote in person. I called the Department of Elections to report this, it is unclear if these absentee ballots were spoiled.

12. I left the precinct at 9:30pm and went to the TCF Center in Detroit as a poll challenger.

13. I was told to observe the computers that were identifying ballots that showed "error". I was told the view the people that were "determining the intent of the voter". There were multiple ballots that were "corrected" on ballots that should have been overvoted and not counted.

14. I tried to determine the identity or party affiliation of the people changing the votes on these ballots. I was told I could not speak with them. They wore no credentials or any identifying badges.

15. When I spoke to a supervisor about my concerns, I was summarily dismissed and the supervisor motioned me to stand back. She then stood in front of me, blocking me from further observation and unable to hear what she was saying to the people changing the ballots.

16. This occurred on several occasions.

17. I was able to observe closely for only a couple of minutes. An AP reporter then took my photograph and confirmed that I was with the GOP. I was then asked to leave the area.

18. A Democratic poll challenger then approached me and told me I could not observe this process or speak with the poll workers changing the votes.

19. I observed many counting boards throughout the evening. There did not seem to be any uniformity amongst the poll workers as to how they were processing the ballots. There did not appear to be any compliance with ballot verification.

20. I experienced intimidation by poll workers wearing BLM face masks and another man of intimidating size with a BLM shirt on, very closely following challengers, including myself, even though there was supposed to be social distancing going on.

21. At 2:30am November 4, 2020, all of the ballots appeared to have been processed. There were no ballots on counting board tables and no more ballots appeared to be in circulation. I asked if counting was concluded. The supervisor then stated that a big door would open for a new delivery.

22. I then left the TCF Center.

Dated: November 8, 2020

11/8/2020

Jacqueline Zaplitny

JACQUELINE ZAPLITNY 11/8/2020

Subscribed and sworn to before me on: 11/8/2020

/s/ Kimberly J Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF JAMES P. FREGO

JAMES P. FREGO, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I am an attorney, licensed to practice in the State of Michigan, with a valid and active Michigan Bar number of P55727. I am also admitted to practice in the Federal Court for the Eastern District of Michigan.
4. I was a credentialed Poll Challenger of the GOP for the 2020 election.
5. On November 4, 2020 I was called to Cobo Hall (TCF Center) to act as a challenger on behalf of the Republican Party, and arrived at approximately 2:30 p.m. I was to replace someone else who had been there since the early morning hours.
6. I was inside the Atrium of Cobo/TCF, and the doors were locked to the larger area of vote counting, where I was to report.
7. There were approximately 50 other people in the atrium area, all indicating they were credentialed poll challengers as well.
8. Uniformed Detroit Police Officers were being used as security for the room.
9. An individual stepped out and announced to the crowd that each political party had been allotted a certain number of "spots" as challengers, and both parties had met their maximum number. As a result, no persons would be allowed inside.

10. While this individual was speaking, a woman next to me yelled out "I was INSIDE, and when I briefly stepped out, you refused me re-entry!!". Another individual yelled out "I am an INDEPENDENT poll challenger, and you are not letting me in either!".

11. While we were in the Atrium area, people inside began taping cardboard and paper to the inside of the windows, which kept us all from seeing inside the room itself. These papers included used pizza boxes and anything they could find, which further agitated the crowd.

12. After they had opened the doors to let members of the Press Corps inside the counting room, and as the Police were closing the locking security door to that large counting room, I put my foot in the doorway, which kept it from closing. The officer asked me to remove it. I said "Sir, I will remove it as soon as you tell me HOW MANY challengers are inside". He insisted I remove my foot, and I insisted I would do it as soon as I was given an exact COUNT of the number of challengers inside the room itself.

13. The Officer trying to close the door insisted "Sir, the number of challengers are MAXED OUT in there". I persisted asking for a specific number before I removed my foot. Finally, he said to me in a frustrated tone: "I don't KNOW how many people challengers are in there", to which I replied "If you don't know the number, then you are NOT 'maxed out'".

14. At this point, an officer in charge pointed at me and indicated the other officers should pull me inside, which they did. Two police officers then escorted me across the counting area to a side hallway, where they handcuffed me and led me to the back of a patrol car.

15. After about 20 minutes in the back of the patrol car, I was driven approximately ¼ mile away to a staging area for the police, where I was issued a Misdemeanor Citation for Disturbing the Peace, and released to walk back to Cobo.

16. At no time did I swear at the officers, and up to this point had never been arrested in my life (I am 57 years old).

17. I was consistently respectful, but insistent on receiving information, as I was acting in my Official Capacity as a Poll Challenger, and an Officer of the Court in the State of Michigan.

Dated: November 7, 2020

James P. Frego

Subscribed and sworn to before me on:
/s/ Leslie M Persin
Notary public, State of Michigan, County of:

My commission expires: 9-9-2026

LESLIE M PERSIN
Notary Public, State of Michigan
County of Oakland
My Commission Expires Sep. 09, 2026
Acting in the County of Wayne

State of Michigan

JEAN KORDENBROCK

Affidavit

1. I, JEAN KORDENBROCK, AM A Michigan Voter registered at 2520 Lake Lansing, Apt. 5, Lansing Michigan.

2. I have been serving on Nov. 3, 2020 as an attorney for the Trump for President campaign committee and the Michigan Republican Party at the TCF Center, Detroit Canvass.

3. At approximately 12:30 p.m. I observed a ballot being duplicated at AVCB 47 (IC #10) and I approached the Supervisor. I asked him "Is there a Republican present to witness this duplication?" He answered, "I have no idea." The inspectors continued reproducing the duplicate ballot.

4. I have witnessed this since approximately 8:00 am, and multiple poll challengers have indicated they have witnessed duplicate ballots being prepared without a

Republican President.

signed: Jean E. Kordenbrock JEAN KORDENBROCK
date: 11/3/2020
Susan L. Mills, Notary Public
Susan L. Mills
exp. October 27, 2025

AFFIDAVIT OF
JEFFREY A. GORMAN

JEFFREY A. GORMAN, BEING SWORN, DECLARES UNDER PENALTY OF PERJURY:

1. I AM PERSONALLY FAMILIAR WITH THE FACTS STATED IN THIS AFFIDAVIT AND, IF SWORN AS A WITNESS, AM COMPETENT TO TESTIFY TO THEM AS WELL

2. I AM A REGISTERED VOTER IN THE STATE OF MICHIGAN.

3. I WAS ON FACEBOOK AND OBSERVED THAT FRIENDS REGARDING CALL AFTER ELECTION WERE LOOKING FOR VOLUNTEERS. I AGREED TO VOLUNTEER

4. I WENT TO THE TCF CENTER ON WEDNESDAY, NOVEMBER 4, 2020 AT 12:30 PM

5. THERE WAS ABOUT A TEN MINUTE INSTRUCTION GIVEN FOR ALL VOLUNTEERS:

1) THERE HAD TO BE A REGISTERED VOTER IN EITHER THE ELECTRONIC BOOK OR WRITTEN BOOK, IF NOT CHALLENGE IT; and

2) IF THERE WERE DUPLICATE BALLOTS OR XEROX'D / COPIED BALLOTS (i.e., IF MILITARY FAX VERSION), THERE MUST BE TWO PAID WITNESSES (DEMOCRAT AND REPUBLICAN), IF NOT CHALLENGE IT.

6. I TRIED TO ENTER AROUND 2:00 PM / 2:30 PM. I WAS IN THE SECOND GROUP OF ABOUT TEN PEOPLE.

7. I KNEW THAT PEOPLE HAD LEFT, BUT THEY WOULD NOT LET REPLACEMENT POLL CHALLENGERS IN.

8. THAT OUR GROUP WAS TOLD THAT IT WAS DUE TO COVID-19 WHY PEOPLE WERE NOT BEING LET IN. THIS WAS TOLD BY THE PEOPLE AT THE DOOR.

9. THERE WAS A REPRESENTATIVE THAT IDENTIFIED HIMSELF AS A HEALTH OFFICIAL AND SAID NO ONE COULD GO IN DUE TO COVID-19 RESTRICTIONS.

10. I FINALLY SIGNED IN AT 6:06 PM ON NOVEMBER 4, 2020 TO GO IN. I WAS PUT IN BOOK 1.

11. I WAS AT TCF CENTER UNTIL APPROXIMATELY 8:30 PM ON NOVEMBER 4, 2020.

12. I WAS WORKING BETWEEN TWO (2) TABLES.

13. I WOULD FOLLOW THE MILITARY BALLOTS TO THE TABLE AND WATCHED HOW IT WAS PROCESSED.

14. AT BOTH TABLES I OBSERVED NO WITNESSES AS REQUIRED.

15. I CHALLENGED THE FIRST BATCH OF BALLOTS AND THEN MORE BALLOTS CAME TO THE SECOND TABLE.

16. THERE WAS A FEMALE AT THE SECOND TABLE AND WHEN I QUESTIONED THE WITNESS ISSUE, SHE STATED SHE DID NOT KNOW WHAT THEIR AFFILIATION WAS AND I SHOULD GO ASK.

17. BASED UPON THE REQUEST, I WENT TO ASK THE AFFILIATION OF THE ONE WOMAN CLAIMING TO BE A WITNESS AND SHE WOULD NOT TELL ME.

18. I THEN SPOKE TO A WOMAN IDENTIFIED AS A DEMOCRAT LAWYER AND TOLD ME THAT I DID NOT KNOW WHAT I WAS TALKING ABOUT WHEN I QUESTIONED THE BALLOTS. THIS WOMAN REFUSED TO GIVE ME HER NAME.

19. I HAD CHALLENGED THE FIRST BATCH OF ABOUT TWO TO THREE BALLOTS AS WELL AS CHALLENGED THE SECOND BATCH OF ABOUT SIX TO EIGHT BALLOTS THESE WERE ALL MILITARY ABSENTEE BALLOTS.

20. I HAD FILED AN INCIDENT REPORT IMMEDIATELY FOLLOWING MY TIME ON THE FLOOR, WHICH WAS AROUND 8:30 PM.

21. WHILE I WAS CHALLENGING BALLOTS, I OBSERVED BALLOTS BEING BROUGHT BY A SUPERVISOR.

22. AFTER THE SUPERVISOR BROUGHT THESE BALLOTS OVER, A RED FLAG WAS RAISED DUE TO THE ISSUES WITH THE BALLOTS.

23. THEREAFTER, A WOMAN CAME IN FROM SOME OTHER LOCATION AND TOLD THE DATA WORKER, "I MADE SURE THEY WERE REGISTERED" EVEN THOUGH THE NAMES WERE NOT IN EITHER ELECTRONIC OR WRITTEN BOOK.

24. I THEN OBSERVED THEY WERE INPUTTING IN THE SYSTEM THESE NAMES AS REGISTERED (ALTHOUGH NOT IN EITHER ELECTRONIC OR WRITTEN BOOK) OR AS APPEARED ON THE PAPERWORK FOR THE BALLOT.

25. THESE AFOREMENTIONED ACTIONS WERE AGAINST THE RULES.

26. ADDITIONALLY, THEY WERE INPUTTING FICTITIOUS BIRTH DATES WITH THE NAMES ON THE PAPERWORK FOR THE BALLOT AND I OBSERVED THIS OCCUR.

DATED: NOVEMBER 8, 2020

JEFFREY A. GORMAN

JEFFREY A. GORMAN

SUBSCRIBED AND SWORN TO BEFORE ME ON: 11/8/2020

NOTARY PUBLIC, Kimberly J Matson
STATE OF MICHIGAN;
COUNTY OF Wayne
MY COMMISSION EXPIRES: 9/2/2024
ACTING IN THE COUNTY OF: Wayne

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF JEFFERY MOSS

Jeffery Moss, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On Monday November 2, 2020 from 10:00am to 8:00pm I was a Republican challenger at the TCF Center in Detroit, Michigan. I was a challenger at Table 68. I was told by election workers to back away from the table and stay six feet away from the table. I was able to move closer at times, but was told to stay six feet away.

4. On Tuesday November 3, 2020 from 10:00pm to 5:00am on Wednesday November 4, 2020 I was a Republican Challenger at the TCF Center in Detroit, Michigan. I observed a group of men walking around and intimidating Republican challengers and observers.

5. At approximately 4:00am on Wednesday November 4, I overheard that there only 16,000 outstanding ballots to count at the TCF Center.

Dated: November 8, 2020

JEFFERY MOSS
[Print name]

Subscribed and sworn to before me on:
/s/ Julie Ann McEvoy
Notary public, State of Michigan, County of:
My commission expires:

JULIE ANN MCEVOY
Notary Public - State of Michigan
County of Wayne
My Commission Expires Mar 26, 2027
Acting in the County of Wayne

I am a registered voter at this address in Michigan - 22453 Maple Avenue Farmington, MI 48336

I am working as an official election challenger approved by the Michigan Republican Party at the TCF Center in Detroit.

Today, November 3, 2020, I witnessed a duplication of a voter ballot in ICC #6. AVCB #26 at 1455 hrs without a Republican present. I asked if the table had requested Republican witness and they answered "no". The reason given for duplicate ballot was that it was returned from the scanner as being unreadable. The ballot number from the new ballot was 02038, and the number had already been removed from the old ballot. I was only able to witness the non-partisan side duplication.

Respectfully,

Susan L. Mills
SUSAN L. MILLS
Notary Public
Exp. October 27, 2025

Jennifer L. Seidl
Jennifer L. Seidl
22453 Maple Avenue
Farmington, MI 48336

State of New Jersey)
County of Monmouth) ss:

John M. Downing, Jr. being duly sworn, deposes and says:

1.I am a volunteer with Lawyers for Trump. I was in Detroit on November 3 and 4, 2020. I called about 60 volunteer poll challengers on November 4, 2020 to ask them to go to Cobo Convention Center to act as vote-count watchers, known as "poll challengers."

2. At about 2:30 p.m. Eric Torrison, another Republican volunteer and I went to Cobo Convention Hall because one of the poll challengers, Karen, had called me several times from 10:30 am to 2:00 p.m. to say that about 20 poll challengers were on the rooftop waiting go in, but were being denied access to the building. Karen was upset. They were all on the roof top parking deck (where they parked because there was free parking) of the Convention Center, and were not being allowed into the building.

3.At 3:20 pm on Nov. 4, 2020 Mr. Torrison and I went to the rooftop of the Convention Center via elevator that was manned by a security guard on the main floor. There were at least 19 Republican challengers waiting on the roof and asking to be let in to the building.

4.I spoke to a security guard, Daniel Sims, who was guarding the door.

5.I asked Mr. Sims three times to allow the people on the roof in. Each time he refused. I video-taped the requests in a 10- minute video that I have on my cell phone.

6. Mr. Sims said that he could not let the volunteers in because his bosses had told him that they could not come in due to "Covid regulations." I asked what Covid regulations, and he said "no comment."

7.The people on the roof all wore masks and all said that they had no symptoms and had not been near anyone with Covid symptoms in the past several days.

8. I suggested to Mr. Sims that if Covid restrictions were the reason that the Republicans were not allowed in, then Mr. Sims should allow Republicans in alternately with Democrats coming out. Mr. Sims did not respond to this request.

9.Mr. Sims said that he was instructed by his supervisors, the Cobo Convention Center general manager, Claude Molinari, and building public safety manger, Bruce Smith, that he was not to allow people in because of Covid restrictions.

10.We went to the main floor and asked security guard Bridgit Sewell if we could see Mr. Molinari. She called Mr. Molinari's assistant, Ms. Leece, who told Ms. Sewell that Mr. Molinari was not available. Officer Sewell called Mr. Smith. In about 30 minutes Mr. Smith arrived on a Segway machine.

11. When we asked to Mr. Smith why the people on the roof were not being admitted. Mr. Smith first said they were not allowed in because they did not use the Level A, Washington Street basement parking garage. He provided no reason why they should use the basement parking garage. Neither Mr. Smith nor Mr. Sims had tried to re-direct the people to the Level A, Washington Street parking area, despite the volunteers' repeated requests to come in from 10:30 to about 3:21 p.m.

12. We asked Mr. Smith whether the people on the rooftop would be admitted to the building if they used the Washington Street entrance. He said they would be let in.

13. Mr. Smith did not say anything about any Covid restrictions, as Mr. Sims kept repeating to the people on the roof from about 10:30 a.m to 3:21 p.m.

14. Mr. Torrison and I went to the Level A Parking garage through an elevator and spoke and spoke to security guard Mr. Bryce (a slim black male, about 30 years old, who had been there at about 3:15 pm).

15. Mr. Bryce said that no one was allowed in through the Garage A, Washington Street entrance. We said that Mr. Smith said they could enter through Garage A. Mr. Bryce then said that if Mr. Smith said it was OK, then it was OK with Mr. Bryce.

16. At about 4:45 Mr. Torrison and I returned to the rooftop to tell the volunteers on the roof that they should come in through the Garage A, Washington Street. But the volunteers were gone. Only two people were on the rooftop-- Officer Pryde, a black female officer and officer Van Sickle a white male officer who were then stationed on the rooftop. (They had not been there at 3:20 pm.)

17. Officer Pryde and Van Sickle were uncooperative and refused to tell us when the challengers had left the roof, despite our persistent questioning

18. We spoke again to Daniel Sims to pinpoint exactly when the police arrived on the roof-top.

19. Officer Pryde said that it was actually Mr. Bruce Smith who locked the door to the roof.

20. At about 5:00 p.m on November 4, 2020 were told in the staging room that they were letting lawyers into the counting room via Garage A. We tried to find a garage but could not find it.

21. We returned to the main door of the counting room. Three or four heavily armed Detroit police were guarding the front door. Approximately 4 large windows had cardboard on the inside of the windows to block the view into the counting room.

22. I advised the white female and two black males in heavily armed gear that I was an attorney and wanted to observe the counting and asked if I could go in. They refused. They said that it was that their sergeant who told them not to admit anyone.

GAIL A EARLY
Notary Public - State of New Jersey
My Commission Expires Feb 13, 2024

John M. Downing, Jr. Nov. 7, 2020

On 11/7/2020 JOHN M DOWNING JR appeared & PWORN to the Document in my presence.

AFFIDAVIT OF JOYCE SANKEY

Joyce Sankey, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I went to TCF Center in Detroit, MI at approximately 1:30 pm on November 4, 2020.
4. I was directed to room 260 to get trained to be a poll challenger.
5. I was denied access to the room where the votes being counted.
6. I was denied access for 5 hours.
7. I observed that as a group of GOP observers would approach the room, the doors were closed and access was denied.
8. I observed Democratic observers approach the room and permitted access.
9. The GOP observers were forced to wait in room 260 up the stairs from the room far from the room where the votes were being counted.
10. The Democratic observers were allowed to remain at a table just outside the room where the votes were being counted.
11. At 4:00pm, I was informed to take off the green band that identified me as a GOP observer because those of us with the green bands were being harrassed. I was also told the Democratic challengers were putting on green bands posing as GOP.
12. I was informed that the only way I would get in to observe would be as an "independent".
13. I never gained access.

14. A "health inspector" claimed the room was at capacity. This was disputed and that is when the people inside blocked the windows.

Dated: November 8, 2020

Joyce M Sankey
Joyce M. Sankey
Joyce Sankey 11/8/20

Subscribed and sworn to before me on: 11/8/2020
Kimberly J Matson
Notary public, State of Michigan, County of: Wayne
My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF KAREN OSTIN

Karen Ostin, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On November 2, 2020 I was a challenger at the TCF Center in Detroit, Michigan for the Republican Party. I was there from 9:00am until 9:00pm.

4. I was at table 20 and challenged a ballot and was told the ballot number was all 0's and then ending with 212. Approximately fifteen minutes later I challenged another ballot and was given the same ballot number. The names on these two ballots were different. I was given no explanation for this duplicate number.

5. On Wednesday November 4, 2020 I returned to the TCF Center at approximately 11:00am. I was told, along with other Republican challengers, that we could not enter the counting room. The election workers stated that the room was full.

6. After being told the room was full, I observed people leaving the room. When asked about this, election workers would not explain why more Republican challengers

could not enter. The election workers would not show us the sign-in book to be able to determine how many Republican challengers were in the counting room.

7. I stayed at TCF Center from until 3:00pm on November 4, 2020 and was never allowed to enter the counting room.

Dated: November 8, 2020

[Print name]
KAREN OSTIN

Subscribed and sworn to before me on:
/s/ Julie Ann McEvoy 11-8-2020
Notary public, State of Michigan, County of:

My commission expires:
JULIE ANN MCEVOY
Notary Public - State of Michigan
County of Wayne
My Commission Expires Mar 26, 2027
Acting in the County of Wayne

AFFIDAVIT OF Kathleen Daavettila

I, Kathleen Daavettila , being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On September 23, 2020 my husband and I filled out and sent in applications to work in the Detroit election for the November 3, 2020 presidential election. On the application we specified that we are not flexible to work at any polling site and would like to work at the TCF center absentee voter count board.

   On October 1, 2020 both my husband and I received a voicemail from Will Griffin at the City of Detroit Elections Department, calling to let us know that our training was scheduled for October 6, 2020 at 1:30pm, and that the location of the training was the northwest Wayne County Community College Campus located at 8200 West Outer Drive, Southfield, MI and that I would be in room 101G.

   On October 1, 2020 I arrived for the training at said location. Upon arrival I was told that the training was moved to a different building, which it was. When I got to the training location, I was asked where I was told to go, and I told them room 101G, so I was sent to the coordinating room at the new location. At the introduction of the training the instructor informed us that we will be working as Electronic Poll Inspectors. I raised my hand, and I asked, "What about absentee ballot counting at the TCF center, that is what I signed up for." The instructor then told me that they needed 1,100 people to work at the absentee counting board TCF center and they filled them right away, so there is no need for them right now. But that I could call 313-876-0227 and tell them when I signed up and ask where I am on the list. After this I left the training. As soon as I got out to my car, I called the number, and it rang and rang and

rang with no answer. I called multiple more times that day, and the next day, each time with no answer, and no going to voicemail.

On Wednesday November 4, 2020 my husband and I went down to the TCF absentee counter board in response to the call for more Republican poll watchers/challengers. After getting our credentials we went into the absentee counter board room. The room was larger than a football field with people everywhere. While I was in line in to check-in in the counting room, I started talking to someone in a group that was wearing our yellow GOP wristband. They had a packet of instructions with the heading relating to, "Tactics to Distract GOP Challengers", which he let me borrow to read, unfortunately I didn't get time to read anything else on it. Another man in the group started telling me, "our main job is to distract and disrupt the GOP challengers," then a woman in the group grabbed the packet of papers from my hands and said, "no, no, no, she's a republican, she doesn't need that, bye, bye."

When we checked in, we had to write our party affiliation, our name, and the time that we checked in, looking at the sign in sheet, there were over 10 times the amount of democrats than there were republicans (this was verified as we checked out later, when the person working at the table had to flip through many pages to find my name to check me out.)

The atmosphere in the room was very hostile towards me. Numerous times I had poll workers and democrat challengers screaming at me, if I took a step closer to the table to get a better view of the ballot, if another republican walked by the table or stopped to ask me a question, if my mask started to slip and show the top part of my nostril, multiple times I was told I was going to get kicked out if any of those things happened again. At one point when I was challenging a ballot where the ballot number in the computer did not match the ballot number on the ballot and envelope, the poll worker did not write that I challenged the ballot in the remarks, so I kindly asked if they needed to write my name that I challenged the ballot, as they had previously. When I

asked, about 4 or 5 democrats that happened to be right next to the table (remember I was hollered at if even one other republican even walked close to the table while I was standing next to it) started screaming at me that I am not allowed to talk to the workers at the table. A couple of minutes later a male supervisor came to our table and started hollering at me that I am not allowed to talk to the workers or interfere with the process, and that I am going to be kicked out if I do that again. I kindly apologized to him and I did not say a single word nor even make eye contact with anyone at the table for the remainder of the time that I was there.

On the contrary, multiple other democrats stopped to visit with the democrat challenger at the table, one even stood right next to her as they both watched the screen together and talked about the ballot. Nothing was said by ANYONE to them about having more than one democrat at the table. I did not say anything as I did not feel safe to (I am a small (5'3" 130lb) pregnant white woman), for fear of getting screamed and hollered at if I opened my mouth. Also, about a half an hour after the supervisor stopped to holler at me about saying something to the table worker, both the "non-partisan" and democrat challengers huddled next to the worker at the computer who was scanning the ballots, and talked to them for at least a minute. Again, I did not say anything for fear of being screamed at.

I found it interesting that every ballot that I challenged where the computer ballot number and the ballot and envelope number did not match up, the partisan challenger nor the democrat challenger ever challenged the ballot.

Each ballot that I challenged, a remark was noted in the computer that the numbers did not match up, and then the ballot was processed anyway.

Also, the entire time that I was at the TCF center, I did not see a single signature verified by any registration document.

Around 3pm more and more police officers started to show up. Around this time the doors

to the room were closed and they would not let anyone else into the room, and the windows into the room started getting covered with cardboard and paper. It was also around this time that the GOP issued a lawsuit to stop counting ballots. It started to feel more unsafe in the room, people started chanting, "stop the count!" while others chanted, "keep the count!". They continued to count ballots, I let the supervisor know that every ballot counted past the time of the lawsuit I am challenging. The supervisor said that after the process all of the ballots, they will make a blanket remark stating that all ballots after that time are being challenged.

I was not treated with respect by a single person that I had interaction with (whether I wanted that interaction or not, with random democrat challengers hollering at me) except for one male supervisor, that I spoke with when I was challenging every ballot after the lawsuit was filed.

Let it be known, that I did not respond to a single person who hollered or screamed at me except for when I kindly apologized to the supervisor after I had spoken to the poll worker who had not written that I challenged the ballot.

Between 3pm and 3:57pm I witnessed three white males being thrown out by the police (all on separate occasions,) each time it happened, the entire room burst out into cheering and clapping. The outbursts that I heard around me when this happened was, "must be a Trump supporter!"

My husband and I checked out at 3:57pm, as I was in fear of safety for myself and my unborn baby. We wanted to leave before the hostility escalated any further. After we checking out, we had to leave through a back exit, directed by police.

Dated: November 8, 2020

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

Subscribed and sworn to before me on: 11/8/2020

/s/ Kimberly J Matson

Notary public, State of Michigan, County of:

My commission expires:

9/2/2024

Kathleen Daavettila 11/8/20

Kathleen Daavettila

906 281-1635

PHONE:

NAME:
KIM TOCCO

ISSUE:

- Was a Poll challenger at TCF on Wed. 11/4 from 9AM - @3pm

- Significant intimidation by Poll Worker
  - insults, political bias comments, intimidation when Kim approached the table to survey
  - Poll worker verbally combative and (i.e profanity) open admitted she would be "sneaky".

1.) To resolve she spoke w/ 1 female dept. of Election Supervisor and she advised that everyone had to be respectful of the poll workers and blew the incident off

- Intimidation continued

2.) A second DOE Supervisor was approached and advised of the intimidation + harassment and he also repeated the importance of everyone being respectful. He advised someone was ~~being~~ talking to the poll worker about it. Kim witnessed laughter between the two.

→

* See Wynetta for any add'l details.

Poll worker continued to intimidate, harass, curse, etc.. until she took a break. Upon her return she stared at Kim with disdainful looks. She didn't speak to Kim any further.

— Kim then went to leave ~~and realized~~ assuming add'l GOP challengers would be coming in.

Same table — DOE Supervisor and a unidentified poll challenger questioned Kim ~~multiple~~ tim. on what she was doing there, grilling her w/ questions.

Kim Tocco

Kim Tocco

11-8-2020

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Margaret Lear Erle
November 8, 2020

AFFIDAVIT OF [insert name] Kimberly Valice

Kimberly Valice, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. See Below

Dated: November 7, 2020

[signature]

Kimberly Valice

Subscribed and sworn to before me on: 11/7/2020

/s/

Notary public, State of Michigan, County of

My commission expires:

Patricia G Groezinger
Notary Public of Michigan
Wayne County
Expires 04/12/2023
Acting in the County of

1. On November 4, 2020 at TCF Convention Center, Detroit, I was assigned to observe two tables, table 111 and 113. The monitors weren't on and the ballots weren't at the tables, poll workers were sitting at their tables reading, napping and just waiting in their seats. At one point, an announcement came on asking pollsters who were counting ballots to raise their red flag, in the entire room of hundreds of pollster tables, I only saw three flags raise and they weren't at the tables I was assigned to. The table next to my assigned table that didn't raise a flag had a group of young men at it and on the table was a green sign marked as 11. On occasion, my friend and I would catch these men looking up at us and stopping what they were doing if they saw us watching them. We would randomly see them shuffling through what we assumed to be a list of names and stack of ballots that they kept in front of them. They two young men looked suspicious because they kept looking our way. The monitors weren't on for us to observe. I went to bring this attention to the attention of a Supervisor. The Supervisor told us they were just prepping before the count began and that it was okay.
2. About two hours later, after standing around waiting for the observation, we noticed the men were passing a stack of the orangey-yellow ballot envelopes over to the pollster's table lead. The lead then passed the stack on to a woman who took them and walked off. At this point we had been briefed that we could challenge things because of pending litigation. When I challenged the person walking with the ballots, she ignored my request to challenge her and kept walking, I called over a supervisor. At that moment a Civil Rights person came over and said I have no right to challenge and asked on what basis I was challenging. I explained that it was allowed and he said I was wrong, meanwhile the ballots were walked

off to the podium - unobserved. I was told we couldn't do a thing about it other than write it down on a piece of paper.

AFFIDAVIT OF Linda Cavaliere

Linda Cavaliere, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On Wednesday, November 4th, I arrived at 11:30 am to work as a Republican Poll approximately 50 people that were being instruction on being a Poll Challenger. The last direction given by the leader "was to make sure the Republicans were following the rules and not nit picking, harassing and interrogating us" I soon realized that "us" were the DEMOCRATS. They were all escorted in freely without any inference. I was told to report to room 260, which was located on the other side of the building. Nowhere near the auditorium where the ballets were being counted. Upon arriving to room 260, I was given instruction again in a very civilized manner. I waited about 30 minutes in room 260 with about another 50 Republican Poll Challengers. Our leader instructed us that we needed to wait to be called in because the room was at capacity. How could this be when I just witnessed at least 50 Democratic Poll Challengers go in without any hesitation??? This is when I took it upon myself to go down and attempt to get into the ballet area. I was allowed in. This is where I realized what was happening. I notified several leaders that there was many other GOP's waiting to be admitted. I kept seeing more and more Democrat workers arrive. I felt outnumbered and intimidated. There were many more Democratic Poll Challengers in the arena than Republican Poll Challengers. I was assigned 2 stations to watch over. The stations were to have 5 Poll workers at each table, this was rarely the case. At times there was only 2 people there.

There were loose ballots everywhere, on tables even on the floor. No organization whatsoever. When I questioned this, I was basically shut down. I witnessed questionable ballots being entered, instead of being held for review. I tried to get a reporter to let me explain what I was seeing, but she told me that I needed to step aside. People from my party were being escorted out for no good reason, while the Democrats applauded and cheered. After 6 hours, I decided to leave. The environment was very unprofessional, unorganized and frankly very disappointing. I can honestly say that there was nothing right about what was going on there.

Dated: November 7, 2020

Subscribed and sworn to before me on:

/s/

Notary public, State of Michigan, County of:

My commission expires:

Patricia G Groezinger
Notary Public of Michigan
Wayne County
Expires 04/12/2023
Acting in the County of Wayne

AFFIDAVIT OF LINDA SAWYER

LINDA SAWYER being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. PRECINCT 144 operating as a poll challenger. Two poll workers were both democrats. As a challenger not 6' table to made to sit on a couch. Requested printout refused to provide.

4. Two voters in front of me did not surrender their absentee ballots. There were given regular ballots and not challenged ballots which I had questioned as I was surrendering mine. Only made to sign an affidavit.

5. Attended TCF from 10:00pm until approx. 6:00 am. Table challenger felt persistent intimidation by workers at counting table #123. Initially attempted to follow a ballot around table, supervisor restricted access and ordered you to occupy a distance space that obscured my ability to properly observe. A second election official kept stepping between me and the monitor to further obscure her ability to observe. Inspector #1 scanned label so quick I was unable to observe the numbers. Inspector #2 yelled at table #120 to not talk to me during a downtime, came to threatening removal.

6. At TCF table #118, single ballot returned to the table after processing, official examined ballot then placed it into a secrecy envelope in front of inspectors 3 & 4, until I left. #3 opened the secrecy envelops for processing. Then given to #4 to roll and flatten to be run through tabulator. This was an attempt to re-run this ballot. It should have been entered into the problem balloting for re-processing and I question why it was brought back to the table.

7. Also TCF counting #123 I challenged a name not on the supplemental list, table supervisor took the suppl list to the command center, came back a told me the particular voter had registered the day prior and I was told I could not challenge. I questioned that was the purpose of the supplemental list and she said they may still not show. I disagreed. She still refused my challenged.

8. Also TCF counting table #118, A bin of ballots that were never handed to Inspector #5 to tabulate they remained on the table for hours and not sent to tabulation. Still there when I left.

9. Also at TCF counting table # 123 I was observing counting table noticed box of ballots on table to be processed, left for 15 minutes upon return to table #123 notice the box of ballots were gone as well as inspector #4. Inspector 5 was still present who normally takes them to be tabulated. Went to tabulation 123 to look for inspector #4 with ballots, she was not present. Return to counting table #123 noticed earlier procedure had changed. Inspector #2 would remove ballot from secrecy envelope to verify the number, but now inspector #3 did the exact same thing and did not tear off the number, the ballot went to inspector #4 who did same thing as inspector #2, no one was visually removing ballot to process for tabulation. Ballots were stacked in their secrecy sleeves after inspector #4. Unsure of what happened to stacked ballots, as they could not be tabulated as stacked.

Dated: November 8, 2020

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

Linda Sawyer

LINDA SAWYER

702 449-5915

Linda Sawyer
11.08.2020

Subscribed and sworn to before me on: 11/8/2020

/s/ Kimberly J Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

AFFIDAVIT OF MARK KERSTEIN

MARK KERSTEIN, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan

3. ICC#23 Supervisors did not allow a challenge to open bin of approx. a dozen problem ballots and would not allow me to document any ballot numbers (AV-116. Ballots were not in EPollbook - I believe that is why they were putting them in the problem ballot bin. I was surrounded by 4-5 Dem challengers and intimidated when attempting to get the name of the supervisor who denied me the challenge. Supervisor refused to give him his name. Attempted to deflect him to a different person. That is when the D-challengers swarmed him. Supervisor then directed him to a female supervisor, who would not give him her name either and also refused to accept his challenge. D's were making a concerted effort to distract him and his fellow Republican challengers and fellow challengers were reporting the same thing.

4. At a separate table ICC#24, CB #25, I also saw two poll workers recording a duplicate ballot possibly without including a GOP counterpart. (Ballots I was able to notice #02168 and 02170)

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Mark Kerstein

Mark KERSTEIN
Mark Kerstein

Subscribed and sworn to before me on:
/s/ 11-08-2020
Notary public, State of Michigan, County of:
My commission expires:
Margaret Lear Erle

AFFIDAVIT OF MARK MODLIN

Mark Modlin, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On Tuesday November 3, 2020 I was a Republican challenger at the TCF Center in Detroit, Michigan.

4. While acting as a challenger, I observed a ballot that I wanted to challenge and told an election worker. The election worker told me not to talk to her and to get her supervisor. Her supervisor was not nearby. I wanted to ensure that I had the ballot number and information in order to challenge the ballot. I walked closer to the station the election worker as working at. At that time, a male election worker stepped in my way and physically blocked me. The male election worker pushed me backwards. This impeded by ability to observe and challenge. The ballot I wished to challenge was processed.

5. I then spoke to a supervisor about the challenging process. There was an option on the election computer system to "quarantine" ballots, but the supervisor told me that this

option did not work. The supervisor told me there was no way to separate a challenged ballot and stop it from being processed.

6. The male election worker who physically blocked me was later assigned to walk around the room. He attempted to walk in front of me and block me view. He blocked the view of other challengers as well. This impeded by ability to properly observe and challenge. This election worker continued to attempt to block my view and others for approximately two hours until an announcement was made for election workers to not block the view of challengers.

Dated: November 8, 2020

Mark Modlin

[Print name] MARK MODLIN

Subscribed and sworn to before me on:
/s/ 11-08-2020
Notary public, State of Michigan, County of:
My commission expires: 07/22/2026

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Margaret Lear Erle

AFFIDAVIT OF Mercedes Wirsing, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

When the GOP challenger (I) left the counting board room I asked if my husband and I could replace them with the two GOP challengers by the outside door and the police officer said "No". They were not letting GOP challenger replace GOP challenger despite numerous tables without GOP challengers. On Nov. 4th, there were more Democrat challengers in the counting board.

On Nov. 3rd the supervisor announced "Are there any Republican workers here working today?" I couldn't see anyone raise their hand. However the Supervisor (on stage) then announced "We have two Republican workers here."

Then the next day I asked the table supervisor "Are they any Republican workers here at this table?" The table supervisor responded "I don't know their political party." I didn't see the ladies there in front of me they never responded. Then I said aloud "There should be one Republican worker at this table."

One supervisor was very aggressive and hostile, would not let me get close enough to see ballots or monitor. I witnessed numerous bins unsupervised and unloaded even until 2:00 AM (Thurs. Nov 5th) when we left.

On Nov 3rd I witnessed opened ballot envelopes without sleeves.

Dated: November 8, 2020

Mercedes Wirsing

Printed Name:

Mercedes Wirsing

11-8-2020

Subscribed and sworn to before me on:

/s/_____

Notary public, State of Michigan, County of:

My commission expires:

MERCEDES WIRSING

All of the military ballots were opened before they arrived at counting board. Several birthdates were listed as 1900. I asked the supervisor "Why 1900?" She said it was because they were in the wrong precincts. At one point #46 monitor (at their table) showed the wrong time and some of dates of military citizens had the wrong birthdates 1900 and some had 1940 at table #3.

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Margaret Lear Erle

Mercedes Wirsing

Mercedes Wirsing
11-8-2020

Subscribed and sworn to before me on:
/s/ November 8, 2020
Notary public, State of Michigan, County of:
My commission expires:
07-22-2026

AFFIDAVIT OF MICHAEL CASSIN

Michael Cassin, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. I was credentialed as an independent challenger at Cobo Hall on Wednesday, November 4.

4. I was outside the ballot counting door for approximately 4 to 5 hours, Wednesday afternoon. At one point during this time, I was told 10 people could get into the counting area. Nine were let in. The 10th person in line, Adam Chesney, said he was number 10 and was told by the gatekeeper: "[o]h, you're a mathematician, and you're not getting in". The gatekeeper closed the door and refused access to Mr. Chesney.

5. I was later allowed into the counting area.

6. I made approximately 6 documented challenges. There was no Republican assisting with duplicating ballots. The poll workers would not accept any of these challenges and would not write them in the book. I asked a poll worker if there was a Republican available. The poll worker said they did not know. I said: "[d]you ask for one?" The poll worker said: '[n]o, you can ask if you want.." Because I didn't want to be put into a compromising position and risk being ejected from the counting area, I said '[n]o, how about if you ask, I cannot ask." I believe the poll worker was trying to get me kicked out from the counting area.

7. I observed poll workers entering birthdates of 1-1-1900 while manually entering voters into the system.The computer screen displayed a voter not in precinct alert. The poll worker entered the name anyway.

8. I believe none of my challenges were accepted while I was in the counting area.

9. I observed a Republican military ballot transfer. Poll workers refused to allow an Election Integrity Fund (EIF) challenger and me to view this transfer. All 5 poll workers were crowded around the ballot, blocking our access and refused the challenge. One of the poll workers, very irate, summoned the police to have the EIF challenger ejected. The officer said the EIF challenger was not doing anything wrong. I took the EIF challenger's place and the poll workers deliberately blocked me from viewing. Three poll workers, shoulder to shoulder, had their hands on the ballot at all times. I finally asked supervisor Yolanda to look at the ballot and transfer, and she grudgingly showed it to me.

10. Every time a challenger got ejected from the counting area (as a result of poll workers getting under the challenger's skin, for example), many poll workers cheered, waved, yelled obscenities, etc. Supervisors were waving a red flag as a taunting device and were extending the middle finger to these challengers who were being ejected. The

only challengers I witnessed getting ejected were Republicans and Independents.

Dated: November 8, 2020

n.

Michael J. Cassin

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Margaret Lear Erle

Subscribed and sworn to before me on:
/s/ November 8, 2020

Notary public, State of Michigan, County of:

My commission expires: 07-22-2026

Michael J. Cassin

MICHAEL CASSIN

11/08/2020

AFFIDAVIT OF MORDECHAI MANDELBAUM

Mordy Mandelbaum, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was a credentialed Republican challenger at Cobo Hall Tuesday night, November 3 and Wednesday, November 4.
4. I observed a poll worker completing a ballot without a spoiled ballot present. I asked: "[w]hat are you doing?" The poll worker did not respond.
5. I believe poll workers were duplicating ballots to incorrect precincts in order to run two ballots through for the same person. This was very common throughout the night. I observed this approximately 20-30 times at the table I was watching.
6. Duplicate of ballot #00239 at Table AVCB 8 (ballot # 01570) was duplicated to the wrong ballot. The poll worker brought a precinct #6 ballot instead of the correct precinct. The new duplicate ballot was # 01571. Because of this suspected mismatch, I asked to see these ballots side by side and was denied access to view these ballots.

7. I spoke to a fellow challenger, who overheard poll workers talking about ganging up on her by strongly discouraging her to challenge.

8. An absentee ballot challenger representing the Democratic party approached me and asked if I wanted her to relieve me since "we are here for the same job" and then proceeded to tell me that she was going to go back to watching me. I replied that we were here to watch the ballots and not the other challengers.

Dated: November 8, 2020

Mordechai Mandelbaum

Mordechai Manzelbaum

Subscribed and sworn to before me on: November 8, 2020

/s/ Philip Needham

Notary public, State of Michigan, County of: Macomb

My commission expires: 06/12/2026

PHILIP NEEDHAM
NOTARY PUBLIC, STATE OF MI
COUNTY OF MACOMB
MY COMMISSION EXPIRES Jun 12, 2026
ACTING IN COUNTY OF WAYNE

Affidavit of Patricia Rose

State of Michigan

County of Oakland

The undersigned, Patricia Rose, being duly sworn, hereby deposes and says:

1. I am over the age of 18, and am a resident and registered voter of the State of Michigan, and
2. I suffer no legal disabilities and have personal knowledge of the facts set forth below.
3. On November 4th, 2020, in response to a request from the Michigan Republican Party, I, along with my husband, Gary T. Rose, volunteered to become Official Election Challengers at the TCF Center in Downtown Detroit to watch the process of handling and counting Absentee Voter Ballots in the 2020 Presidential Race.
4. While randomly observing the Tabulation area, where ballots from the various Precinct Pre-Processing Counting Boards were sent to be tallied, we noticed a female election worker feeding ballots in stacks of about 50, into one of the many Canon scanner tabulators in the area.
5. **The ballot stack she was feeding in kept getting jammed. Rather than stop and go seek the assistance of a supervisor or technical support person, she removed the remaining ballots in the in-feed tray, and kept taking the scanned ballots off the top feed and adding them back to the stack, reinserting the whole stack again, and scanning them in again.**
6. **That process happened 3 times in a row at that one scanner. My husband raised his hand at about the same time as I observed some other Challengers around me raising their hand as well.**
7. **No supervisor came to our aid. We observed her feeding in the same stack a fourth time.**
8. At that point, my husband and I walked down to the center of the long Tabulation area to an elevated platform where the supervisor was likely to be. We located the area supervisor and told him of the problem.
9. **He then summoned a "tech guy" who came and stood next to him. I started describing the problem to the tech guy who stopped me and said he couldn't talk to me. So, I turned a few degrees and addressed these concerns to the supervisor who then repeated those same concerns to the tech guy.**
10. The supervisor asked which tabulator was involved. We walked back down to the area and identified Tabulator ICC#8.
11. Many moments later, the tech guy opened up the top of her tabulator, apparently cleaned or adjusted some parts, closed the top and walked away, as did the Supervisor, with no more words to us. They just walked away.
12. After the batch was tallied by the tabulator, the scanned ballots were rubber banded together with an identifying sheet on the top of the stack and placed into a precinct steel box with a lid on top.
13. I asked the woman if I could have some identifying numbers for that batch because I was concerned about how many times that batch had been put through the tabulator. The numbers

involved were: ICC#8, Batch #50 into Box 38. She showed me the identifying numbers. Then she placed the stack into the box.

14. I observed other batches being rerun at ICC#4: Batch#48, into Box#18; Also, at ICC#4, Batch #44 going into Box #18 and Batch#39 going into Box #18.
15. No technical or supervisory assistance was offered to the election worker at ICC#4, despite the fact that multiple batches had to be re-run through the tabulator.
16. While trying to observe the numbers attached to the batches at ICC#4, I asked the election worker is she could read the numbers to me. At that point, another election worker and 2 Democrat Challengers yelled that I cannot talk to the election worker. So, I took one step forward into the work space to collect the data I needed to identify the batches, the same 3 women pounced on me again verbally and said I was not allowed to get near the election worked either. At that point, other GOP Challengers surrounded me and informed me that I was within my rights to obtain that identifying data. I followed the rules by taking one step into the restricted area, and stepped back out all within one minute's time. I found the comments made by the other election worker and the Democratic challengers to be very hostile and threatening. They were speaking loudly and moving aggressively toward me. I believe they were trying to intimidate me, and mislead me into believing that I could not legally obtain this data. A GOP attorney came to my assistance and told me that I was allowed to do this and that I should fill out an incident report and file it with the Michigan GOP, which I did at about 2:30 pm and left at Room 260 upon my departure.
17. The reasons for re-running the batches of ballots through the tabulator remains unknown to me.
18. At around 2:30, I saw some police officers gathered in front of the entrance door, where other Election Challengers were attempting to get inside to observe the absentee ballot counting process, but they were not let in due to having reached excess capacity from a Covid-19 formula, we were told by police.
19. I asked the police captain that, if my husband and I were allowed to go out, whether they would allow 2 more GOP Challengers to come in, and he said no.
20. We waited until the commotion died down a little bit, signed out, and then left for return home.
21. Both my husband and I could not figure out why the Tabulator operators would rerun the entire batch if there was a jam, instead of immediately calling a technician or supervisor for assistance. They did not request assistance and did not receive any until I requested it for them.

Executed this 6th day of November, 2020.

By: P.S. Rose

Patricia Rose

11/8/2020

NOTARY ACKNOWLEDGEMENT

State of Michigan

County of Wayne

Kimberly J Matson 11/8/2020

Notary Public

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

Kimberly J. Matson, Notary

Title and Rank

My commission expires: 9/2/2024

AFFIDAVIT OF PAULINE MONTIE

Pauline Montie, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 3, 2020 I was working as a poll challenger and was standing at a table in the room where ballots were being processed.
4. I was instructed that I needed to be back form the table at least 6 feet.
5. Each table had a computer monitor on the corner for poll challengers to watch.
6. Slowly the table workers kept moving the computer monitor further back away from the edge.
7. I told the table supervisor that I couldn't see the monitor from where it was sitting in its pushed back position.
8. The supervisor said, "too bad." She then informed me that I needed to get back 6 feet from the table.

Dated: November 8, 2020

Pauline F Montie

Pauline Montie

Pauline F Montie

Subscribed and sworn to before me on: 11/8/2020

/s/ Kimberly Matson

Notary public, State of Michigan, County of:

My commission expires:

Kimberly J. Matson

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of

AFFIDAVIT OF RICHARD B. ATKINS JR.

RICHARD B. ATKINS JR, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. Attended TCF on 11/03/20 from 10:00 pm to 8:00 am. I submitted several written reports at the TCF center that will provide specific details. Collectively, main complaints include: Name on ballot envelope did not match name in poll book, I challenged and received push back from supervisor. Counting table #26 continued to aggressively obscure my view. Specifically seat #1 obscured his view by moving the ballot envelopes from where I could see them to in front of her body so that I could not see the names on them. Believed to be Table #122 Computer went down, but all 5 workers continued through opening ballots while the system was worked on. Continued to process with disregard for permitted process. Additional tried to observe the duplication process received push back consistently.

Dated: November 8, 2020

RBA 11-8-2020

RICHARD B. ATKINS JR

Richard B Atkins Jr.

Subscribed and sworn to before me on: 11/8/2020

/s/ Kimberly Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF [Robert Zimmerman]

[Robert Zimmerman], being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was a poll challenger on November 2nd and the 4th 2020 at Wayne county TCF center. Monday I was there from 3:15 pm till around 10:30 pm. I was an election worker on Tuesday the 3rd of November at precincts 360, 361, and 362. I was there from 8:15 am till around 9:30 pm.
4. The only things I felt or noticed wrong were at TCF. Thus, from here forward only deals with TCF.
5. I witnessed challengers being harassed to back away from the ballot counting tables because of covid reasons on Monday at TCF center.
6. I observed multiple spoiled ballots never seemed to get resolved.
7. Sticky notes were used in two different regards for procedures to flag the first ballot in a batch or to note discrepancies, which became confusing because they served two purposes.
8. On November 4th at TCF center as a poll challenger, I was denied access into the counting room for a reason that they were at capacity.
9. It was apparent to me that I was not allowed access so I left the immediate area on Wednesday.
10. I observed the windows were covered and people could not see through.
11. I personally believe there was more evidence that suggest that what people voted on did not match the voted count.

Dated: November 8, 2020

Robert Zimmerman

734-735-1101

Robzimfam@gmail.com

Robert F. Zimmerman
11/08/2020

Subscribed and sworn to before me on: 11/8/2020

/s/ Kimberly J Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF RUTH LANGER

RUTH LANGER being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. Attended TCF on Wednesday approx. 1:00 pm as a poll challenger. Observed Democratic challengers by credentials being allowed entry. Stood at entry door until approx. 4:00pm to be let in. Observed counting table inspectors sitting idle. Waited for another hour Followed ballots to the counting table. Observed several ballots on computer with birth years of 1900. Told she would be removed for too many challenges. Also observed a few military ballots that were opened prior to arriving at the counting table. Witnessed several challengers being escorted out with cheering. Consistently told to step back/ remained vigilent in spite of obviously hostility.

Dated: November 8, 2020

Ruth Langer

RUTH LANGER
Ruth Langer
586 441-8832
Nov. 8, 2020

Subscribed and sworn to before me on: 11/8/2020
/s/ Kimberly J Matson
Notary public, State of Michigan, County of: Wayne
My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF RYAN ARNOLDY

RYAN ARNOLDY, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter and credentialed Poll Challenger in the State of Michigan.
3. On November 4, 2020, I arrived at the TCF Center in Detroit Michigan to volunteer as a Poll Challenger for the GOP. I was told that the Absentee Voter Counting Board was heavily populated by Democrat challengers and was in need of GOP challengers.
4. I arrived at approximately 5:00 p.m. As I approached the entrance to the Counting Hall there was a crowd of people outside who appeared to be waiting to enter but were being denied access by Detroit Police officers.
5. I walked up to the main entryway to the Counting Hall and showed my poll challenger credentials to the Police Officer at the entrance. He told me that only media was allowed in.
6. During the time I was there, from about 5:00 pm to 6:00 pm, I saw about 15-20 people exiting the Counting Hall and about 10 people entering the same Counting Hall while I was there waiting outside the door.
7. Of those people entering, some held cameras and appeared to be media, but others who were allowed entry did not have any visible sign that they were media, no credentials or badges around their necks that I could see.
8. My second attempt to gain entry was at about 5:30 pm and again I was told I was not allowed entry into the Counting Hall.

9. I asked the Police Officer at the door why they were allowing the media in and why I was not allowed in as I have Poll Challenger credentials and the counting is continuing to go on. He again said only the media was allowed entry.

10. I asked him who had given him these instructions. The Police Officer replied that they were orders from above and that he, the Police Officer, was just there to enforce the orders from above.

11. At 6:00 pm I left TCF Hall wondering why they allowed the media in but barred Poll Challengers while the counting was continuing.

Dated: November 8, 2020

Ryan Arnoldy
[Ryan Arnoldy]
11/8/2020

Subscribed and sworn to before me on: 11/8/2020
/s/ Kimberly J Matson
Notary public, State of Michigan, County of: Wayne
My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF:

SAMUEL I HARRIS

4391 Forest Ave., Waterford, MI 48328

Ph# 248-819-9939

Samuel I Harris, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. Description: Intimidation of MIGOP Poll Challengers, systemic suppression of GOP participation and ability to view ballots by multiple election workers and Supervisor David Nathan.

   The 6' distance rule was applied to all GOP Poll Challengers, but relaxed for other party Poll Challengers. Additional issues and ballot duplication efforts were discussed in whispers between poll workers instead of sharing the information with all of those observing. Numerous issues that were identified: date of birth errors (multiple voter birth dates of Jan. 1, 1900, ballots not matching envelop numbers, voters not in the district, every military ballot was not duplicated.

   Meetings held by Daniel Baxter and David Nathan were held multiple times in a shoulder to shoulder manner, again in soft whispers to prevent Poll Challengers from hearing the discussion. A few points captured included – not sharing duplication efforts with GOP members, policy changes and management of GOP Poll Challengers. Several poll workers shouted at me that I was not supposed to be present at their meetings. Good GOP Challengers were targeted by Democrats and followed around by two or more. IBEW members collaborated with Democrat Poll Challengers

and Poll workers to stand shoulder to shoulder to block GOP Poll Challengers view. EOD Supervisors made no attempts to correct this when the issue was brought to them. I was verbally assaulted with racial slurs at table ICC 10 and 48.

Dated: November 8, 2020

Samuel I Harris

11-8-2020

Subscribed and sworn to before me on:

/s/ November 11, 2020

Notary public, State of Michigan, County of:

My commission expires:

07-22-2026

Margaret Lear Erle

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

AFFIDAVIT OF SCOTT BRIGMON

Scott Brigmon, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On Wednesday November 4, 2020 I arrived at the TFC Center in Detroit, Wayne County, Michigan at approximately 12:30pm. Upon arriving I received credentials as a non-partisan challenger for the counting of ballots. At that time I was told by an attorney for the City of Detroit that no more challengers could be admitted to observe counting tables until other challengers left. It was not clear to me how they determined the number of challengers present and I believe their count included Republican challengers who had already left.

4. At approximately 7:30pm I was informed by an employee of the City of Detroit that I would be admitted in a group of four non-partisan challengers. I then went to a counting table that was also being monitored by a Democrat and a Republican challenger. An envelope containing absentee ballots came to this table that had been mailed to Mount Clemons, Michigan. I challenged this ballot because it was mailed to an address outside of Detroit, but was returned to Detroit.

5. At approximately 8:30pm I went to another counting table. At this second table there was a Republican and Democrat challenger. The election workers at this table began scanning envelopes containing absentee ballots into a computer. The computer would display a profile with the voter's information after the envelope was scanned. While at this table I witnessed an envelope being scanned and the computer displayed "unlisted

voter." The election workers manually entered information into the profile for this envelope into the computer system. I witnessed the election worker enter in a birthdate of 1/1/1900 for this envelope. The Republican challenger challenged this ballot. I witnessed a similar situation occur thirteen more times and I challenged these thirteen ballots. In all of these situations the ballot was scanned and came up as "unlisted voter," the election worker then manually entered information into the computer including the 1/1/1900 birthdate. The Republican challenger challenged other additional ballots for the same reason. At this table I also noticed election workers manually input the same name into two separate profiles in the computer system for envelopes that scanned as "unlisted voters."

Dated: November 7, 2020

[Print name] Scott Brigman

Subscribed and sworn to before me on:
/s/ Leslie M Persin
Notary public, State of Michigan, County of:
My commission expires: 9-9-2026

LESLIE M PERSIN
Notary Public, State of Michigan
County of Oakland
My Commission Expires Sep. 09, 2026
Acting in the County of Wayne

AFFIDAVIT OF STEPHANIE KRAUSE

Stephanie Krause, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was a Republican Poll Challenger on November 4, 2020 at TCF Center in Detroit Michigan.
4. I experienced intimidation the entire time from 8:30 am to 12:00pm., that I was on the floor attempting to observe.
5. Any time I would approach a table to observe, Democratic poll challengers would block the viewing; the Democratic challengers would try to distract us from observing the information on the monitor.
6. I did attempt to speak with other Republican poll challengers to discuss how to effectively observe, but we were told we could not converse amongst ourselves.
7. If masks of Republican poll challengers slipped off their noses, they were escorted from the premesis, but if a Democratic poll challenger's masked slipped, they were allowed to stay.
8. As I was speaking with another Republican poll challenger, a woman suddenly appeared and claimed the other Republican poll challenger was "harrassing" her. He was not, he was speaking to me. The police however came and escorted him away.

9. I left for lunch and was denied re-entry. I was never permitted re-entry. Democratic poll watchers were permitted re-entry, but Republican poll challengers were told the building was "at capacity".

10. After I was denied re-entry, I stayed in the lobby in case we could relieve other Republican poll challengers.

11. No new Republican poll challengers were permitted to enter, but Democratic poll challengers were permitted to enter, as well as ACLU and press.

12. Around 2:30 or 2:40 in the afternoon, the poll workers took used pizza boxes and taped them to the windows so no one could see what was occurring on the floor.

13. I was effectively prevented to poll watch or challenge. It was literally impossible to observe or make challenges. When I inquired as to why my challenges were not accepted, I was told the rules "no longer applied".

14. I left the TCF Center at approximately 6:30pm on November 4, 2020

15. Dated: November 8, 2020

Stephanie Krause

Stephanie Krause

Subscribed and sworn to before me on:
/s/ 08 November, 2020
Notary public, State of Michigan, County of:
My commission expires: 06-14-2022

Florence Dorenzio Giummo

AFFIDAVIT OF TERRY POPLAWSKI

TERRY POPLAWSKI being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. At TCF on Wednesday arrived at approx. 12:00 pm as poll challenger. I was prohibited from entry to the counting floor. Told to wait as they were already over capacity. Kept door closed. Waited until approx. 4:45 pm when returned home.

Dated: November 8, 2020

Terry L. Poplawski

TERRY POPLAWSKI

248 661-5141 Terry L. Poplawski

11/8/20

Subscribed and sworn to before me on: 11/8/2020

/s/ Kimberly J Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF ULRIKE SHERER

Ulrike Sherer, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was a Republican Poll Challenger on November 3, and November 4, 2020.
4. On November 3, 2020 I was observing at TCF Center in Detroit Michigan.
5. I began observing @ 7:00 am on November 3, 2020
6. I observed several irregularities.
7. There was no signature comparison being conducted on absentee ballots. There were stacks of ballots in "post office" bins in their envelopes, on tables identified by precinct number.
8. The person that was at the e-poll computer would scan the envelope and pass it to another person who separated the envelope from the secrecy envelope that contained the ballot.
9. The next person would take the ballot out, roll it to flatten it, tear off the perforated stub with the ballot number and then put the ballot into a box identified as the "tabulation box" that was then taken to a tabulator. The tables had 5 poll workers at each table. Each poll worker was supposed to have a separate job in the verification process. This did not happen. Each of the 5 poll workers just opened the ballots and put them in the tabulation box.
10. The first ballot I observed was scanned, but had no corresponding name on the data base, but he had a voter number. However, his date of birth was 1921 but he registered

to vote in 1900. When I challenged the ballot, the poll worker said it does not matter. When I asked the supervisor , the supervisor refused to take action. I then wanted to fill out an incident report and requested a ballot number and name and the supervisor refused me the information and told me "we don't do that here".

11. The next ballot I observed was allegedly the wife of the previous voter born 1924, registered to vote in 1900. Same denied process to challenge. They flipped the ballots over so I was unable to retrieve the information for my challenge report.

12. A poll worker told me that they had ballots on Tuesday that they had "partially processed on Monday". With these repeat ballots, they were divvied up amongst poll workers , they each individually processed the ballots without going through the 5 step process that each ballot was supposed to be confirmed. Therefore, the separation of the ballot envelope and the ballot number eliminated any traceability.

13. Specifically, there was no post mark verification ; there was no ballot review for stray marks; there was no verification of the voter existing in the data base; there was no signature comparison or authentication.

14. These non-verified ballots were then placed in a box and then a separate worker took the box to the tabulator, without any review.

15. As a challenger I was prohibited from observing the postmarks.

16. As a challenger I was prohibited from observing the ballot duplication process by poll workers moving in front of me to block me from watching the duplication process. During duplication the poll workers duplicating the ballots hovered over the ballots blocking observation.

17. Once the duplicate was made, they deposited the original into an envelope and we were not able to see what happened to the envelope. Upon inquiry as to the disposition of the originals, it was clear that too much inquiry would result into dismissal from the site.

18. On November 4, 2020, I returned to TCF at 6:30am.

19. I observed incomplete and inconsistent E-poll documentation.

20. The E-poll system allowed ballot acceptance even when date of birth and/or voter registration dates were suspect.

21. Ballots were processed on November 4, 2020 without being verified as being in E-poll or the absentee voter list. It can be observed that these ballots were sequential, highly suggestive of fraud.

22. I also experienced attempts at intimidation. When the voting stopped, Republican poll watchers arrived and the poll workers blocked the windows so it could not be seen what was occurring inside. We were also told we could not speak to press.

23. The newly arrived poll workers called us on the phone informing us that they were present, but were barricaded onto the roof and being denied entry. When I attempted to inquire about their entry, I was told they were "rioters"

24. Other forms of intimidation were body blocking, deprivation of chairs to sit in. Then when Republican poll challengers left to get food or drink, they were denied re-entry. I was also told a SWAT team was there to make sure we did not "argue too much".

25. Dated: November 7, 2020

ULRIKE SHERER

Ulrike Sherer

Subscribed and sworn to before me on: 11-8-2020

/s/ Julie Ann McEvoy

Notary public, State of Michigan, County of:

My commission expires:

JULIE ANN MCEVOY
Notary Public - State of Michigan
County of Wayne
My Commission Expires Mar 26, 2027
Acting in the County of Wayne

AFFIDAVIT OF WHITNEY MEYERS

Whitney Meyers, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. On November 3, 2020 I was stationed as a volunteer for the Republican Party outside of the Detroit Department of Elections at 2978 W. Grand Blvd. I was there three times throughout the day. To the best of my recollection I was there from approximately 7:30am to 9:00am, from approximately 11:00am to 2:00pm and from approximately 6:45pm to 8:20pm.

3. On the street in front of the Department I witnessed workers with "Detroit Elections" aprons on collecting ballots from cars. I witnessed multiple drivers in cars drop off multiple ballots, including more ballots than people in the car.

4. I also witnessed workers with "Detroit Elections" aprons handing t-shirts and food into cars dropping off ballots. The t-shirts appeared to be from a non-profit voting advocacy group.

5. At 8:00pm workers from the Detroit Department of Elections locked the front door of the office, said they were accepting no more ballots and ceased to collect ballots from cars.

6. There was a ballot drop box in front of the Department of Elections office. After 8:00pm and after workers of the Detroit Department of Elections announced they were accepting no more ballots I witnessed an individual place ballots into the drop box before workers from the Detroit Department of Elections had a chance to place a lock on it. Nothing was done to find or separate these ballots.

7. As workers from the Detroit Department of Elections were retrieving ballots from the drop box after 8pm and after it was announced that they were no longer accepting ballots, I witnessed a worker from the Detroit Department of Elections named "Travis" accept a ballot from a woman on the street and place it with the other ballots. I confronted him about this, but he did not remove the ballot.

Dated: November 7, 2020

Whitney Meyers

[Print name]

Whitney Meyers

Subscribed and sworn to before me on:

/s/ Leslie M Persin

Notary public, State of Michigan, County of:

My commission expires: 9-9-2026

LESLIE M PERSIN
Notary Public, State of Michigan
County of Oakland
My Commission Expires Sep. 09, 2026
Acting in the County of Wayne

AFFIDAVIT OF WILLIAM GEORGE HENDERSON

William George Henderson, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. I was in the TCF Center, Detroit, Michigan as a GOP poll challenger. I was in the vote tally area from approximately 1141 to 1945 local on 04Nov20.

4. When I entered the tally area I signed in at the desk and was told that I could come into and leave the tally area whenever I wanted to but once I left, expecting not to return, then I should sign out.

5. I left the tally area between approximately 1200 and 1228 for a few minutes and returned again. I was in the tally area from approximately 1228 until I signed out around 1945 local.

6. I was initially monitoring ICC#25 Tables 133 and 134 and then later started monitoring other tables in that area.

7. I was inside the ballot processing area when the doors were locked and Republican challengers were not allowed into the tally area. I witnessed the challengers attempt to get in. Around 1730 I walked around and noticed very few Republican challengers watching tables. I was only able to identify about 10 Republican challengers in the area.

8. At 1753 local I observed the Supervisor for Tables 133/134 say "Let's go over and help them". She took Inspector 1 from Table 134 with her to Table 131. The problem at ICC#25-Table 131 was that they had lost 8 ballot envelopes. The table was counting the ballot envelopes and could only account for 13 of the 21 envelopes that they should have had. They counted out envelopes 112 through 125 but could not find envelopes 126 to 133. After much discussion Table 131 Inspectors, both supervisors and Inspector 1 from Table 134 all agreed that the ballot envelopes were sent back without having been opened to the ballot holding area via the Problem Ballot Box. Inspector 1 said he would make a note in the computer. Nobody was assigned to go to the holding area to confirm that those ballots were processed somewhere else. The envelope numbers and names were in the system assigned to Table 131 for processing.

9. Around 1925 local Supervisor for ICC#25-Tables 133 and 134 hand delivered 4 ballots for processing. She told Inspector 1 that the four ballots have already been certified and that Inspector 1 will type the voter information into the computer and process the ballots. She then gave two ballots to Inspector 1 for Table 134 and went to Table 133 with the other two ballots. About 1927, I watched Inspector 1, Table 134 input the following information into the computer – Detroit Michigan 48228, Date of Birth 01/01/1900. Initially the inspector input 01011900 without the slashes but the system would not accept the info. The table then processed the ballot, number 858. I then went over to and watched Table 133 process ballot number 837 via hand input at 1932 local. I went back to table 134 and watched them finish processing the third ballot. Then at 1935 I watched them hand input the fourth ballot, number 807 at table 133. I watched both tables walk the ballots over to the ballot counting area and watched that the ballots were counted and stored in the ballot storage boxes. At 1937 I watched Ballot 603 hand input and processed at ICC#25, Table 130.

10. Around 1945 I asked the entrance area personnel to leave and come back. I was told that I could not be guaranteed re-entry as they were over capacity for republican and democrat challengers. I had recently walked down to column 3 or so and found only around 10 republican challengers watching the tables. The room overall was less crowded than when I had arrived at 1141. I signed out around 1945 local and was told to exit through a different set of doors on the opposite side of the hall from where I had been monitoring tables 131 thru 134. As I went out the doors, I observed one Detroit police officer monitoring the doors. As I exited the hall, two people, one walking and one in a wheel chair were approaching the doors from outside the hall. They caught the door before it closed and entered the hall.

Dated: November 8, 2020

William George Henderson

Subscribed and sworn to before me on:
/s/ 08 November, 2020
Notary public, State of Michigan, County of:
My commission expires: 06-14-22

AFFIDAVIT OF ZACHARY BASLER

Zachary Basler, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On November 3, 2020 I was a poll challenger for the Republican Party of Michigan.

4. At approximately 6:30pm I was at Detroit Precinct 229 at the Greater Emmanuel Church in Detroit Michigan.

5. I did not observe any voters filling out applications. I asked an election worker about this and he showed me a stack of applications that had been filled out. But I never observed anyone fill one out while I was there.

6. I was told by election workers that I had to stand six feet away from everyone, but the Democrat poll challenger and election workers were not being required to follow this rule.

7. I asked to stand behind the table, where poll challengers are supposed to be stationed, and was told I could not do so unless I was actively challenging a vote. I could not

observe the process in order to be able to actively challenge votes without being behind the table. This impaired my ability to properly monitor and challenge.

8. Election workers physically stood in front of me to block my movements and yelled at me in a way designed to intimidate. These actions interfered with my ability to effectively observe and challenge.

Dated: November 8, 2020

Zachary K. Basler
[Print name]

Subscribed and sworn to before me on:
/s/ Julie Ann McEvoy 11-8-2020
Notary public, State of Michigan, County of:

My commission expires:

JULIE ANN MCEVOY
Notary Public - State of Michigan
County of Wayne
My Commission Expires Mar 26, 2027
Acting in the County of Wayne

AFFIDAVIT OF ZACHARY VAUPEL

Zachary Vaupel, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On Wednesday November 4, 2020 I was a Republican challenger at the TCF Center in Detroit, Michigan.

4. I monitored table 62 in the TCF Center. While at table 62, I observed an election worker stacking ballots that could not be identified in the E-poll system. I asked that election worker a question regarding these ballots. A Democrat challenger objected to me asking a question. The Democrat challenger brought over an election supervisor who insisted I not ask questions. I ask this election supervisor his name and he told me he was "Dwayne Montcrief." Mr. Montcreif then called me an obscene name and called over another supervisor. I believe this second supervisor was one of the highest ranking officials at the TCF Center and he also told me to not ask questions.

5. Throughout this time I was told by election workers where to stand. Some of the places they told me to stand made it difficult to properly and observe and challenge.

Zachary M Vaupel

Dated: November 8, 2020

[Print name]

Subscribed and sworn to before me on: 11/08/2020

/s/

Notary public, State of Michigan, County of:

My commission expires:

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Margaret Lear Erle

AFFIDAVIT OF ANTHONY DELUCA

Anthony L. DeLuca, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 4, 2020, I arrived at the TCF Center in Detroit Michigan to volunteer as a poll challenger for the GOP.
4. I arrived at approximately 1:30 p.m.
5. As I approached the entrance to the TCF Center on foot from Washington Boulevard, there was a crowd of people outside the entrance of the building trying to enter to volunteer.
6. They all appeared to be there to volunteer on behalf of the GOP but were being denied access by Detroit Police officers.
7. I approached a police officer and told him that I was there to volunteer.
8. He asked me "which party, GOP?"
9. When I answered affirmatively he stated that I would not be allowed to come inside the building because they weren't letting any more volunteers in on behalf of the GOP.
10. When I told him that I was an attorney and showed him my bar card he reluctantly agreed to permit me to enter, but specifically forbid me from going to room 260, which is where I needed to go to become credentialed as a poll challenger.
11. He told me I was only allowed to go to the ABC board, which is where the ballots were being counted and processed.

12. I entered the ABC board area, but was told to leave by an individual who was not a police officer. When I, again, stated that I was an attorney and showed my bar card this individual told me to stand against the wall. He informed me that I was not allowed to enter the area where the ballots were being processed.

13. From this area I could see that many of the tables where ballots were being processed did not have any challengers at them. They only had two or three people sitting in chairs purportedly processing ballots.

14. During this time I witnessed individuals inside the ABC board area placing cardboard over the windows at the entrance to the area so the people who were not being allowed in could not see inside.

15. After some time, I spoke with someone who was with the Trump campaign and was told to go to room 260.

16. I approached room 260 without incident and received my credentials to volunteer as a poll challenger.

17. However, when I tried to get back into the ABC board area, the Detroit Police were not letting anyone inside.

18. There was a large group of us demanding to be let in to work as challengers. We all appeared to be there to volunteer on behalf the GOP.

19. During this time I met another lawyer who was from New York and was part of the John James campaign. He was not allowed to enter the ABC board area either. Other individuals were permitted to enter the area, but when we tried to follow them in we were physically prevented from getting through the door.

20. After some time, Lawrence Garcia, a lawyer for the City of Detroit, along with the individual who had told me to stand against the wall came outside of the ABC board area to address the crowd.

21. The latter stated that the reason they were not letting people inside was because both parties were at capacity. He stated that 130 challengers per side were allowed inside. He stated that he was basing his belief that the GOP was at capacity because he was in possession of a "book" with the names of the volunteers who had signed in to challenge ballots, but then stated that if those people did not sign out when they left, that was their choice.

22. Mr. Garcia spoke as well and stated that if the GOP challengers that had signed in did not sign out it was not "our problem."

23. Even though GOP volunteers were not, in fact, at capacity, we were still not allowed to enter and contest ballots.

Dated: November 9, 2020

Anthony L. DeLuca

11/9/2020

Subscribed and sworn to before me on: 11/9/2020

/s/ Kimberly Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF MARC RUSSELL

Marc Russell, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan and the City of East Lansing.

3. I was a Republican Poll Challenger on November 3, 2020 from approximately 5:30 pm to 9:00 pm

4. While voting at my home precinct in the morning, I witnessed at least 3 voters who stated that they had requested an absentee ballot, they had not received them, then were given regular ballots without being verified via call to the city clerk's office against the polling book.

5. John, the precinct chair, and the poll workers were hostile and attempted to intimidate me by telling me they felt very threatened by my presence.

6. At approximately 6 pm, the chair called the city clerk and complained about my presence. The city clerk, Jennifer, arrived, made false accusations such as talking to voters and threatened to kick me out. I politely explained I needed to perform my role as a challenger and could not do so with the requirement of staying far away.

7. No poll workers were required to remain six feet from one another and social distancing guidelines were not being followed. The social distancing guidelines seemed to apply only to republican poll challengers. In the end, the city clerk said I had to stay at least six feet away due to Covid, and if her employees still felt threatened she would return to expel me from the precinct.

8. Throughout the day, I experienced a pattern of hostility, intimidation, and secrecy by John and the poll workers.

Dated: November 8, 2020

Marc Russell

Marc Russell

11/8/20

Subscribed and sworn to before me on: 11/8/2020

/s/ Kimberly Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF ANGELIC JOHNSON

Angelic Johnson, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On November 4th, 2020 I was a challenger for the Republican Party at the TCF Center in Detroit, MI. I was there from approximately 9am to 6pm.

4. I observed an election worker who found what appeared to be a spoiled ballot and a duplicate ballot. The election worker asked a supervisor what to do with the two ballots and the supervisor told them to process both.

5. I observed Republican challengers being objected from the counting room and election workers cheered.

6. I attempted to leave the counting room for lunch, but as I was about to do so I observed an election worker loudly announce that no one else would be allowed into the counting room. At that time Republican challengers had arrived to take the place of challengers who had already been there for hours, but they were not allowed in.

7. I observed cardboard being placed on the windows of the counting room to block the view of challengers who could not get in.

8. I heard a man yell "we gonna get yall" and I believe this was directed at Republican challengers.

9. I observed a Republican lawyer being ejected and he said it was because he had "asked for a count."

Dated: November 8, 2020

Angelic Johnson

Angelic Johnson

Subscribed and sworn to before me on:
/s/ 08 November 2020
Notary public. State of Michigan. County of: Wayne
My commission expires: Oct. 15. 2022
Florence Dortenzio Simmons
Florence dortenzio simmons
acting in the county of Macomb

AFFIDAVIT OF Diana D. Burton

Diana D. Burton, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. We were not permitted to speak with our Republican lawyer Tim Griffin on Monday and Tuesday At TCF Center AV counting board Hall E. Our Republican lawyer was being followed and admonished by a democrat who was harassing Tim Griffin, the lawyer.

4. My husband and I were assigned to work at TCF center on Monday and Tuesday Nov. 2,3. We arrived at 10 am and worked till 8 pm on Nov. 2. I was assigned to table 37 . Every challenged ballot was initially placed in the problem box. After a few hours the ballots began to disappear and when questioned the poll workers supervisor told me that they were being sent through with the rest of the ballots and would be "dealt with" on Tuesday election day.

5. On Tuesday we arrived at TCF AV counting board at 7 am and worked till 5 pm. Initially I was assigned to work at Table 28. The poll workers and supervisor were very hostile to me, and screamed at me to stay back 6 feet. I said I could not see the ballots from 6 feet and gave them a copy of Michigan law that says we are able to approach to see what we need to see and then maintain 6 feet after observing what needed to be observed. She screamed at me again and said NO you are not permitted to be closer than 6 feet.

6. I was reassigned to observe the tabulators after that, and while they were shut down for lunch and break I walked around the floor. On our way back from a break we saw an elections truck drive onto the hall floor and two men carrying two usps white plastic bins full of opened ballots. I asked them where they came from and they said they didn't know, "I'm just doing my job". I followed them to central area and tables where ballots were waiting to be tabulated and asked the women supervisor (approximately 4 pm) what were these opened ballots. She said they are blank ballots and said they needed more blank ballots because they ran out. They ran out, she said, because of filling out so many duplicate ballots.

7. I walked around the floor again and observed many people at many tables filling out duplicate ballots. I told several tables that the law requires a Republican and a Democrat pollwatcher to complete duplicate ballots. I was screamed at and told that was not true. At one table we were not allowed to look at the duplicate being completed.

8. At multiple tables we were told the reason for the duplicate ballots was due to wrong precinct which means it had wrong address. They would take that ballot and complete a duplicate ballot for the precinct to which that ballot had arrived.

Diana D. Burton
Diana D. Burton

Diana D. Burton

Subscribed and sworn to before me on:
08 Nov 2020
Notary public, State of Michigan, County of: Wayne
My commission expires: 06/14/2022
Florence Dortenzio Giammo
acting in county of Macomb

AFFIDAVIT OF BRIAN DRZEWIECKI

Brian Drzewiecki, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On Tuesday, November 3 2020 I was non-partisan challenger at the TCF Center in Detroit, MI. I was at the TCF Center from 6:30am to 8:30pm.
4. I observed table 62 from approximately 7:00am to 8:000pm.
5. I observed election workers process ballots that did not match the poll book. I inquired about this and the election workers said they just have to make an electronic note on the poll book. The election workers said this is how they were trained.
6. I observed the poll workers just looking for a signature, not a matching signature.
7. I observed the poll workers letting duplicate ballots be made with no Republican witnesses.

Dated: November 8, 2020

Brian Drzewiecki

[Print name]

BRIAN DRZEWIECKI

Subscribed and sworn to before me on:
08 November 2020

Notary public, State of Michigan, County of: Wayne

My commission expires: 06-14-2022

Florence Dortenzio Giammo

Florence dortenzio giammo
acting in the county of Macomb

7

AFFIDAVIT OF JAZMINE EARLY

Jazmine Early, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. I was a Republican challenger at the TCF Center in Detroit, Michigan from approximately 11:00am on November 4, 2020 until 7:00am on November 5, 2020.

4. I first went to observe table 17. The Democrat challenger at table 17 acted in an aggressive and intimidating manner.

5. I then went to another table, but there was nothing happening at that table, so I moved to table 26.

6. At table 26 there was an election worker named Brianna and an election worker name Angel. There was also a non-partisan challenger and a Democrat challenger.

7. Election workers Brianna and Angel consistently attempted to impede my ability to observe and challenge ballots. They acted in a manner that I believe was designed to intimidate me.

8. Some ballots had information that needed to be manually entered into the computer system. Due to a lack of visibility, I could not properly observe this process and began challenging all of these ballots. I took notes of these ballots numbers.

9. I began to notice election workers complaining about Republican challengers and attempting to get Republican challengers removed from the counting room.

10. I noticed Brianna and Angela talk to several people about me.

11. A male election worker came over and told me to move away from the table or I would be removed. I told him I was doing nothing wrong. He remarked that English was not my first language and that because of this I should not be taking part in this process.

12. At approximately 3:50pm, I saw Brianna and Angel talk to several police officers. Five police officers surrounded me and told me that I was getting too close and disrupting the election workers. I told them that this was a lie. I believe the election workers lied about me because I was a Republican.

13. As other Republican challengers were kicked out of the room during this period, the election workers would cheer. Election workers cheered and taunted Republican challengers in a way that I believe was designed to intimidate them.

14. At approximately 7:15 pm I observed election workers take ballots and envelopes from a "problem ballot" tray and combine them with a stack of empty envelopes. I asked about this, but was not given an answer.

15. I observed military ballots being duplicated due to potential problems. It was not clear what happened to the original ballots. I was not given an answer about this.

16. At approximately 7:48pm I noticed election workers manually entering information into the computer system for some ballots. I noticed that "1/1/1900" was entered as the birthdate for several different voters. I inquired about this to Brianna who said a birthdate was needed so they just entered that date. I

challenged these ballots, but was dismissed and they continued processing these ballots.

17. At approximately 9:27 pm I went to table 86. A supervisor told the workers at table 86 that they were not properly locking voters into the system.

18. After that I went to table 94. I observed election workers moving ballots in what seemed like an improper manner. I asked about it and was told I could not ask about that process. I did not have the ability to properly observe and challenge this process.

19. At approximately 12:08am, I spoke with a lawyer from a Republican campaign who informed me that tables were being left unattended with ballots at them. I observed the following tables unattended: 17, 43, 59, 79, 76,72, 55, 57, 36, 30, 29, 22, 8, 2, 9 134, 133, 20, 124, 120, 119, 12, 111, 113, 104, 109, 101, 95, 96, 93, 85, 5, 90, 88, 5, 85, 83, 82, 77, 68, 75, 74.

20. I observed boxes with ballots in them loaded up to leave the TCF Center that were not properly sealed. I requested them to be sealed before being taken out.

21. At approximately 5:17 am I observed trays being loaded into a truck that was pulled into the TCF Center. The truck was marked Penke Truck Rentals and had Indiana license plates. I inquired what was on the trays. I was told blank ballots. Then the truck door was closed and they left.

22. Throughout my time at the TCF Center I took notes detailing everything above.

Dated: November 8, 2020

Jazmine M. Early

Jazmine Early

Subscribed and sworn to before me on:

08 Nov 2020

Notary public, State of Michigan, County of: Wayne

My commission expires: 06-14-2022

Florence Dorlenzio Giammo

AFFIDAVIT OF BRIAN PANNEBECKER

Brian Pannebecker, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I applied to work as an election worker for Detroit for the 2020 General Election. I was never contacted back, despite applying and making several calls. I indicated I was a Republican on my application.
4. I was certified as a challenger by the Michigan Republican Party and went to the TCF Center on Tuesday November 3, 2020 and Wednesday November 4, 2020.
5. Throughout my time as a challenger over two days at the TCF Center I never encountered any election worker who identified themselves as a Republican.
6. I and other Republican challengers inquired to as many of the 134 tables as possible to try to find a single Republican election worker. We could not find any Republican election worker.
7. On November 3, over a period of several hours I only observed one election worker checking signatures.
8. At approximately 9:50am on November 4, I observed multiple ballots with illegible signatures at Table 1. I asked an election worker about verifying signatures and he said "that was done yesterday."
9. At approximately 12:00 noon on November 4th, I attempted to challenge a ballot at table 51. The table 51 team leader George refused to enter my challenge. I then went to two other election workers, Danny Baxter and Carol. Carol referred me to Chris

Thomas. After waiting for five to ten minutes I was able to speak to Chris Thomas. Chris Thomas walked back to table 51 with me and instructed George to enter my challenge.

10. The process described in paragraph 9 required me to be away from table 51 for five to ten minutes just to enter a single challenge. I believe they handled the challenge in this way to try to dissuade Republican workers from entering more challenges and to move Republican workers away from the tables.

Dated: November 8, 2020

Brian Pannebecker

BRIAN PANNEBECKER

[Print name]

Subscribed and sworn to before me on:

s/_____

Notary public, State of Michigan, County of:

My commission expires:

State of MI
Notary Public
appointed 08/15/2016 Wayne
Florence Dortenzio Giammo
Florence Dortenzio Giammo
Exp 06/14/2022
Acting in the county of Macomb
08 November 2020

AFFIDAVIT OF GLEN SITEK

GLEN SITEK, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. The events of Nov. 5, 2020 at TCF (Cobo Hall) at the AV boards. Being a Challenger credentialed with the Election Integrity Fund, a non-partisan 501C3 non-profit group working to document the fair and legal processing of absentee ballots did observe the following event. After 7 pm while checking with EIF challengers at the Counting Board tables a fellow worker Mikki Rudoff and I decided to witness the activity at the tabulators. While approaching machine #11, Mikki and I observed the operator addressing the jammed machine she was using. A stray ballot set aside to the left of her machine. Half of the ballots from the top bin were combined with remaining ballots from the bottom tray, stacked shuffled ant then placed in the feeder and the machine was activated and tabulated without error. We did not observe the operator reset the machine counter before starting the recount. The operator quickly bundled the stack along with a count sheet and slipped them into a large soft sided bin on the floor opposite the tabulator work- station.

4. The operator quickly picked up the ballot on the table and exited the work area and into the adjoining arena where she located someone at Counting Board 54 ICC 11 and handed off the ballot to a worker at the table. While approaching the table I noticed no ballot processing being done effectively on break mode. I began scanning the area for a supervisor to ask about the ballot when the worker rose with the ballot and headed across the arena again. She went to the dais in center of the arena that served as the HQ. There the worker located table 54 supervisor Yolanda Brown and handed her the ballot that she added to 4 other ballots in her hand. After finishing her conversation with the area manager Yolanda proceeded to a table where she acquired 5 blank ballots to use in the duplication process and headed to table 54 and put 3 workers to the task. All 4 were crowded together for the instructions. So when she stepped back from them I immediately got her attention and introduced myself and asked if she was the table supervisor and she confirmed she was. I got her name and then asked if there was a Republican present to witness partake in the process She just staired at me and I told her I was there to confirm the process and a republican should be there. She admitted there was not. I asked if one was requested to be there. Again, she just staired at me and I shared that I was required to ask. She told me no she had not. I thanked her and went the left side of the table to observe the workers now working on the new ballots 06380 & 06381. I took a position on the outer table that put me on the main pedestrian walkway along the outer line of tables and next to adjoining worker break area. The workers glanced at me for moment and went to work. After a short time, it seemed the male worker closest to me was having

difficulty filling the spaces instructed by the 2 women and were having to physically point where he needed to mark. It seemed he might be able to read. He became agitated when he noticed me at this point and he told me "you got to leave". I immediately told him I needed to watch them duplicate the ballot. He then more loudly told me lore loudly "you need to get away from you" I told him again I needed to finish witnessing the process. The male worker that loudly said you need to get away from me. Rose and stepped toward and shoved me away from the table. I stood there silently and waited a minute as I assessed the situation as a I glanced to my right and I saw 3 Detroit police standing 75 -100 feet away talking next to the outer arena wall. I approached them and addressed the closest officer and told him I had just been assaulted and wanted to file an assault & battery charge against the pole worker. He asked if I had been assaulted and I told him yes. By whom he asked? I pointed to the table and told him the male worker at table 54. Where? I turned and started back to the table to show them and upon arriving took up my previous position next to the table, thy ewer now working on another ballot. The male worker looked up a me a loudly said "I told you, you need to stay away from him". I explained I had to witness the copy. And he responded as he did before. "I told you to get away from" stood up and shoved be a 2nd time. I was surprised I did not collide with 3 police officers walking in my direction. It looked like they were going to walk on by when I announced to them I had just been assaulted a 2nd time. I insisted on filing a police report and Sgt. Makey asked me if I was sure. I said I was. Officer Swilley was given the assignment to take my info, I asked for the assailants' name and he said it would be on the report and they would contact me. Sgt. Makey suggested I go work in a different area. And I asked if he was telling me not to do my job. He replied it was a suggestion. Sgt. Smith and one other patrolman were present. Because another challenger had showed up and was watching the ballot duplication I thought it better to report the incident to our organization and attorney.

Dated: November 8, 2020

GLE.N SITEK

Glen Sitek

Subscribed and sworn to before me on:
08 November 2020

Notary public, State of Michigan, County of: Wayne

My commission expires: 06-24-2022

Florence Dortanzio Giammo

Florence dortanzio Giammo
acting in the county of Macomb

AFFIDAVIT OF Bridget Staruch

Bridget Staruch being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On November 4th, 2020 at 6:40am, In the TCF Center Detroit, I witnessed AVCounting Board #122. All 5 members were simultaneously opening all of the (Approximate 200+ Ballots), they were pulling tabs at the same time, not in any order and were NOT scanning into the poll book on computer. No one was cross referencing the signatures either. Envelopes and Ballot tabs were scattered about.

4. Dated: November 7, 2020

[Bridget E. Staruch]

Subscribed and sworn to before me on:

Michael J. Ballard

Notary public, State of Michigan, County of: Oakland

My commission expires: 2/12/24

AFFIDAVIT OF KRISTY KLAMER

Kristy Klamer, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. I was at the TCF Center in Detroit Michigan from 7:00am to 10:00pm on Tuesday, November 3, 2020 and from 8:30am on Wednesday November 4, 2020 to 4:30am Thursday on November 5, 2020.

4. I along with many others were intimidated, harassed, verbally attacked, or met with resistance consistently on November 4, 2020 from Democrat challengers, independents, a lawyer, team leaders, and supervisors. I experienced a lawyer, 2 team leaders, and 3 others come as a group to come intimidate me after challenging a ballot in which I was met with much resistance. It never got put in the computer. I was told by a Democrat lawyer that I couldn't keep challenging the ballots and was told I might get escorted out. I was told by the same Democrat lawyer that I could not challenge every ballot. I asked the lawyer nicely, as she began aggressively accusing me & trying to bait me, if she was trying to intimidate me. She said "don't put words in my mouth. You're a liar." I walked away. I witnessed two other people experiencing a similar situation both times I stepped in to try to deescalate the situation. I was repeatedly lied to by different people and told things like I shouldn't be watching the ballots being duplicated and should "just let them do their job."

5. The events described above impaired my ability to properly observe and challenge.

6. At one point I had about 8-10 Democrat challengers all near me. I had two big guys come stand close to me and say "I think we're going to stand right here." My friend was silently raising her hand to challenge a ballot and no one was coming. A crowd drew and a man started attacking her verbally. I began to see a pattern of intimidation against Republican challengers. I also noticed a tactic of fake befriending & trying to ask lots of questions to Republican challengers to either gather info or distract you while trying to observe.

7. I walked around the whole room many times. At one point I walked around the whole room and saw about 3 confrontations.

8. Around early afternoon tensions began to rise there seemed to be a literal shift in the room. I noticed the team leaders, after one of their many meetings (I couldn't figure out why they met so often & it was frustrating because they were unavailable to us for a while during that time), began to become more aggressive. There seemed to be a distinct difference. There was a specific team leader that was helping to eject Republican challengers and really enjoyed making it a big scene as the police would escort out. He would walk with them and one time said "you wanted to go outside is that what you want." He was trying to get everyone riled up and he seemed to love the applause that would break out every time one of our attorneys or other Republicans were escorted out. I never saw a Democrat escorted out.

9. I witnessed an Asian Republican man being teamed up against (4-5 people). This man was being told he wasn't allowed to watch a ballot being duplicated.

10. I had a democrat challenger ask me where I lived. After sharing with her she said "Why did you come here?" I told her that they needed more Republicans here. She said "I'm sure there is fraud everywhere I think I'll go to your town next time."

11. I stayed along with 10-12 other people until 4:30am on Thursday 11/5 morning to make sure all the ballots were properly secured. They let the election workers go around 11:30. There was a big line of election workers that formed to sign something. Two women heard them offer $300 for the election workers to stay. The election workers then had some meetings with the supervisors & team leaders meanwhile the tables were left with the ballots not being secured in anyway. We did our best to be at as many tables as we could for the securing process.

12. After checking all of the tables we found about 8 or so that were "locked," but they were not latched so you could just open them. They were not secure. I wrote down the numbers and as a team we made sure they were properly latched/locked. There were multiple tables where the ballots seemed to not add up. So much so that election workers at one table took everything out and were recounting it.

13. I observed 46 ballots processed that were not in the computer system. For these ballots election workers manually entered information including birthdates of "1/1/1900." These ballots were the following:

Precinct# 57 #3647, #3224,

#3641, #6051, #4207, #2278,

#3162, #3165, #0721,

#4327, #5318, #4326, #2280,

#4323, #1122, #0757,

#4324, #3591, #1368,

#1237, #3163, #4328,

#3167, #1302, #4206,

#4325, #4276, #1383, #5322,

#2300, #2096, #1366,

#0958, #1121, #1358,

#1176, #3161,

Precinct #74 #2689, #1488,

#1489, #2183, #1822, #2182,

#0260.

Precinct #68 #4251

Precinct #66 #5452

Dated: November 9, 2020

Kristy Klamer
Kristy Klamer
November 9, 2020

Subscribed and sworn to before me on:
/s/ November 9, 2020
Notary public, State of Michigan, County of:
My commission expires:
07-22-2026

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne
Margaret Lear Erle

AFFIDAVIT OF JEAN LEONARD

Jean M. Leonard, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 4, 2020, I arrived at the TCF Center in Detroit Michigan to volunteer as a poll observer/challenger for the GOP.
4. I arrived at TCF Center at approximately at 9:30am
5. I headed to room 260 to get my credentials. The lady took my license and took down my information.
6. I proceeded to the ballot count room, and signed in on a sheet of paper. Some people signed in, and some just walked in without signing. It was a very haphazard process at best. This room was very disorganized and there was a contemptuous feeling toward the GOP challengers who were there - nothing like one would expect considering the importance of a US presidential election.
7. I spent most of my time at table 15. Anytime I wanted to peek a little closer to see exactly what was going on, I was told I need to get back 6 feet. It's practically impossible to see the numbers/information being scanned onto the computer from the ballot envelopes at that distance.

8. Occasionally, as a ballot was passed to the second person at the table, she would open it up and put another envelope/folder around the ballot and put it back in the mailing envelope before passing it on to the next person at the table. I also saw an extra sticker occasionally being placed on a ballot envelope, which was then scanned.

9. When there was a "problem ballot", a sticky note would be put on the outer envelope and it was put in a "problem ballot bin". I was not able to see what the issue was with such ballots as the font on the screen was too small to read from 6 feet away. The voter log, which was flat on the table also had a small font. I could not always see a signatures, as the 'table leader' was often standing in the way.

10. I asked several times for all the problem ballot numbers that were in the bin since we were not allowed to touch them. One lady at the table told me somebody already wrote them down. I don't know how that could be since I was standing there and did not see anyone take down the numbers. I asked again a little while later and was told I had to wait until they were done with the current batch. When they were done, I asked again and was ignored. They were very uncooperative and clearly did not want me there.

11. I was told there should be at least one GOP worker at the table, and that I should ask who that person was to confirm that was in fact the case. I was told by a (male) worker who would occasionally come around to see if

anyone needed anything at the table, that I wasn't allowed to ask that question. I asked why it was okay that they knew I was from the GOP. He said there could only be one GOP and one Democrat observer/challenger per table. I told him I knew that, but asked why I wasn't allowed to know who the GOP worker was at the table. He said they don't need to share that information with anyone, and it wasn't my business.

12. I did not see anyone ever take the problem ballots from table 15, however, I did see them being removed from other tables around me. I did not see what they did with them or where they took them. These problem ballots were picked up by a single person. We were told that anytime ballots were being moved from one place to another that there should always be one GOP and one Democrat doing this together. This clearly was not the case.

13. I observed many stacks of ballots that appeared in pristine condition, as though they had never gone through the US Postal Service. I saw many with no postal markings on them. There were stacks of them in bundles with rubber bands around them.

14. I took few pictures, but then was sternly told cameras are not allowed. I asked where that rule was written or posted. The person did not have an answer for me and just said, "It's the rule". I then pointed out the 20-30 television/press cameras about 15 feet away.

15. It was very clear that GOP observers/challengers were not welcomed nor wanted there. There was a blatant lack of transparency for anyone trying to see what was going on with the process. The ballot table workers that I encountered were controlling, rude, and defensive. Overall it was a very hostile environment.

Dated November 9, 2020

Jean M. Leonard

Jean M. Leonard

Jean M. Leonard 11/9/20

Subscribed and sworn to before me on:
November 9, 2020

/s/

Notary public, State of Michigan, County of:

My commission expires:

SHANE TREJO
Notary Public, State of Michigan
County Of Oakland
My Commission Expires 11-20-2022
Acting in the County of Wayne

AFFIDAVIT OF MARY LOU NAUERT

Mary Lou Nauert, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was a credentialed election challenger for the Michigan Republican party on Tuesday November 3rd from 7:00am to 1:30pm, approximately, assigned to Pontiac ward 05, precinct 15, at Herrington Elementary School, Oakland County, Michigan.
4. I was required to remain 6 feet from the table where ballots were being processed. From this distance, I was unable to see the ballots or computer screen in order to perform my work as an election challenger. There was no way for me to determine whether the election worker was checking voter identifications and signatures or entering data currently or not. There were several instances where I believe I may have made challenges but I did have not access to have sufficient information. I felt like my hands were tied.

Dated: November 9, 2020

Mary Lou Nauert

Print name:
MARY LOU NAUERT
Nov 9, 2020

Subscribed and sworn to before me on:
/s/ November 9, 2020
Notary public, State of Michigan, County of:
My commission expires: 07-22-2026

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Margaret Lear Erle

AFFIDAVIT OF AMANDA M. POSCH

Amanda M. Posch, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit, and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. I am a GOP Challenger per Laura Cox, Chairman Michigan Republican Party

4. November 4, 2020 Wednesday morning I saw a FB post from the Michigan Conservative Coalition that GOP challengers were needed at TCF Center and headed downtown.

5. I checked in with my credentials from Tuesday, signed in at 11:15 a.m. and walked in. There were several areas where people were walking in and out freely. Once on the floor, I was instructed to go upstairs to room 260 to get credentials for TCF. We were never instructed to sign out if we left the floor to go to the bathroom or get food, etc.

6. Once upstairs, I received GOP credentials and yellow wristband as identification. I walked back downstairs and walked in. At that time I was asked to watch the scanning machines, as there seems to have been numerous issues with them the previous day. I was told we could approach and look by GOP, but a Democratic attorney told me I couldn't and told me I needed to move. I replied that I had as much right as she did to be there, and she threatened to have me thrown out. At that point a few other people stepped in, I believe it was a Republican attorney, and GOP staffers.

7. Again we were told we could step up to the machines if we asked the worker if it was acceptable to approach them, some were amenable but others said no closer than 6 feet due to Covid. We were also told we could not hamper the process (obviously if you need to ask permission to do your job, you are by default hampering the process). In essence we were either intimidated, threatened or barred by poll workers' Covid fears from checking anything properly. The workers also choose to minimize the screens on the computers so we could not in fact read anything from 6 feet away even though we asked if they could increase the window size. At that point one of the workers told another not to talk to us, and tensions were growing.

8. Some of the issues I witnessed in the scanning process:

- If a scanner jammed, it looked like entire batches were placed back into the machine and rescanned.
- Ballot boxes were unlocked, and unattended.

- The computers were connected to the internet and the poll workers wouldn't let us check.
- Several ballot boxes had yellow circle stickers on them that looked similar to the yellow stickers Democratic staffers had on. When I asked the supervisor, his response was: "it's just random, like I am bald and you have hair"
- Unidentified staff would approach with ballots to be scanned and walk away with 2 copies of a ballot.
- Poll workers would not share their names with us.
- Poll workers were allowed to wear Biden/BLM attire.

9. Water fountains were off, and several GOP members told me they were not serving anyone with GOP credentials in the area set up for breaks upstairs.

10. At some point, GOP challengers were not allowed into TCF and poll workers placed paper, and I believe pizza boxes over the windows. We could hear the chants saying "stop the count, let us in" from outside and several people were banging on the windows. Tensions were rising, it was palpable.

11. As the day progressed the GOP challengers in the room (which at that point I heard was half of what the Democratic challengers) felt trapped, as they would NOT let us sign out for another GOP member to replace us.

12. I never really left my station, but saw GOP challengers at tables being thrown out, including GOP attorneys. Poll workers were claiming they were being threatened when they challenged and the police would take them out. EVERY SINGLE "NON-PARTISAN" POLL WORKER in my area STOOD AND CLAPPED AND CHEERED EVERYTIME A GOP CHALLENGER WAS REMOVED. I did not see any Democratic challengers escorted out.

13. I continued to watch scanning, and was approached by someone saying I was not allowed to use my phone. Everyone in that room had their phones on, but I placed it in my bag. I did step away to communicate with my husband and parents, and again was warned by the supervisor that I was making the poll workers uncomfortable. Again, I put my phone away.

14. Around 4:30 p.m. chanting from outside the locked doors, and pounding on the glass erupted. At which point one of the workers I had been watching all day said in my direction "They acting like kindergarteners, I hope the police come and shoot them, like you do to us". I asked her if she was threatening violence towards me, and she mumbled something under her breath that sounded like you heard me, her co-workers started saying I was bothering them all day. Another staffer took pictures of me and literally ran away. A supervisor and a GOP attorney approached, the supervisor asked if I had witnesses, I replied everyone she was sitting with, and they sure aren't going to back me up. The supervisor said without witnesses he could not do anything. She was at ICC 2, was African American, heavy set with a white blouse

with black hearts on it. The supervisor also never helped locate the poll worker who took my picture and ran away even though I was asked to put my phone away all day.

15. I stayed for another half of an hour, and went to the check in area to see if I could pass my credentials on to someone waiting outside, and she said no. The police were still at the door. I was walked out of a side door and left the floor. I went upstairs and saw the crowd that was unable to enter, the majority of which were GOP Challengers and volunteers.

16. As I was leaving the main building I was surprised no one was allowed to enter TCF at all. I was told if I left I would NOT be allowed back into the building even though I am a credentialed GOP Challenger.

Dated: November 9, 2020

AMANDA M POSCH

Subscribed and sworn to before me on:

/s/ November 9, 2020

Notary public, State of Michigan, County of: Macomb

My commission expires: October 11, 2023

Kari A Aloia
Notary Public, State of Michigan
County of Macomb
My Commission Expires 10-11-2023
Acting in the County of Wayne

AFFIDAVIT OF CYNTHIA RENEE RAUF

Cynthia Renee Rauf, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 4, 2020, I received a text from the Macomb County GOP stating that poll challengers were needed at the TCF Center, Detroit, MI.
4. Once I arrived, I went to the GOP Room No: 260 and signed up to be a poll challenger.
5. I received training at that time and wore a lanyard with my GOP credentials.
6. I then proceeded to the downstairs ballot counting area and I looked around to find a ballot counting table that needed a GOP challenger.
7. I then proceeded to Table 5.
8. At about 11:32 am, one of the female election workers at Table 5 called out a Ballot number 7959. This election worker then handed off Ballot number 7959 to another female election worker.
9. The second female election worker opened the envelope that contained the Ballot and the Ballot in the envelope **did not have the same number as the Ballot number that was originally read by the first election worker.**
10. The Ballot in the envelope was number 7952.
11. I personally observed Ballot number 7952.

12. I then said to both the first and the second election workers that I wanted to challenge Ballot number 7952 because it did not match the Ballot number 7959 as originally noted and stated.

13. **The second election worker physically wrote on the top right of Ballot number 7952 the numbers "7959."**

14. I personally witnessed the second election worker change the number on a Ballot. Upon information and belief, the election worker changed the Ballot number on Ballot number 7959.

15. Next, I then questioned the first election worker regarding a computer printed "list' of "names" that she had sitting in front of her and next to her computer.

16. The election worker told me that the list contained names of voters who registered on election day and they were not yet in the computer.

17. The second election worker told me "this happens all the time."

18. Ballot number 7959, that was changed to Ballot number 7952, did not come off the list of names on the computer, but rather from the computer print out list sitting on the table.

19. **At this point, a young male supervisor then approached Table 5, inspected the change that was made on the ballot and approved the ballot to go through for counting.**

20. Sometime afterwards, I then went upstairs to the general room for lunch and stayed for about half hour or so.

21. I then went back down to the counting room and noticed that there were a lot less GOP poll challengers in the room but the Democratic poll challengers were there in full force.

22. I personally noticed at least 4-5 times throughout the afternoon the counting room erupting into an applause each time a GOP poll challenger was escorted out.

23. At about 3:00 pm, I then observed several election workers covering up windows that separated the counting room from a lobby. I saw them cover the windows up half-way so that no-one in the lobby could watch the counting of the ballots.

24. I personally experienced intimidation tactics by both the Democratic poll challengers and the Detroit election workers.

Dated: November 9, 2020

Cynthia Renee Rauf

Cynthia Renee Rauf

Cynthia Renee Rauf
11-9-2020

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Margaret Lear Erle

Subscribed and sworn to before me on:
/s/ November 9, 2020
Notary public, State of Michigan, County of:
My commission expires: 7-22-2026

AFFIDAVIT OF Anne Vanker

Anne Vanker, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 4, 2020 I arrived at the TCF Center in Detroit Michigan to volunteer as a poll challenger for the GOP.
4. I arrived at approximately 9:30 am, I was trained by Pat Colbeck to perform as a poll challenger according to the "Rights and Duties of Election Challengers and Poll Watchers" vr.. October 2020 I was provided and Michigan State Law. I was allowed inside the ABC (Absentee Ballot Counting) area. As soon as I walked in felt I had walked into an extremely contentious environment, as people were shouting at me and I did not know what I had done wrong.
5. I was never allowed to stand in an area that would provide a view of the ballots being processed, claiming the covid rules required a 6 foot distance. I saw workers reference the poll book as well as the ancillary lists that I was told contained names of those who registered to vote the day before and day of the election, but I was unable to see any names on the list or the ballots. The distance I was forced to maintain made seeing or comparing any signatures impossible. I was not allowed to step forward when I had questions about a particular ballot – being yelled at that it was not allowed because of Covid. At one point I observed ballots being put into a box labeled "problem ballot" box without any discussion or collaboration with their co-workers. I attempted challenging these ballots but was denied – there was no supervisor available

to implement the challenge and the box was removed from my area before I was able to resolve any issues. I followed the box being taken away from our table, I followed to the adjudication table and escalated my complaint to supervisor Daniel Baxter, who did finally grant me access, however while I was copying down the ballot numbers from these another worker with a green dot inserted herself between me and the ballots, further obstructing my work. I was copying down ballot numbers from these opened envelopes that were flagged that they were not on any voter registration list and not in the poll book. I estimate 60% or more of these envelopes bore the same signature on the opened outer envelope. I was never given access to view these ballots. I was not given an answer when I asked if these ballots would be counted as votes or not. I was not given information as to a resolution. I have these ballot numbers in a spreadsheet that I can make available. I was never given an answer as to why the envelopes were opened. I was shouted at several times by unidentified people for unknown transgressions. While riding the escalator I wanted to check the time on my phone, a poll worker began yelling at me accusing me of taking pictures and threatening to report me. The overall feeling of the room was one of intentional and organized intimidation and bullying by people who bore no credentials, but wore green dots.

6. After lunch time there was a meeting called and after that point they stopped allowing more in, and ejecting people for trying assert their right to do their job as a challenger.

7. Tension grew through out the day – as more challengers arrived, police were called in, and many challengers were ejected.

Dated: November 9, 2020

Anne Vanker

Anne Vanker
11/9/2020

Subscribed and sworn to before me on: 11/9/2020

Kimberly J Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF LAURA ROUSH

LAURA ROUSH, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter and credentialed GOP Poll Challenger in the State of Michigan.
3. On Wednesday Nov. 4, 2020, I signed in at approximately 11:35 a.m. at TCF Center in Detroit Michigan to work as a Poll Challenger.
4. I was told to monitor counting board table number 19. I arrived at table number 19 and started to watch.
5. At that table, I saw numerous ballots scanned into the electronic system that had no corresponding name in the system; indicating that the ballot did not correspond to a registered voter.
6. I witnessed about 30 ballots that had no name match during the approximate hour of observation at that counting board table number 19.
7. I asked the Poll Supervisor why those ballots had no match to a registered voter and he said something like, Whitmer opened up extra ballots on Sunday and the names of some registered voters are not in the system yet.
8. It's my understanding that if ballot names don't appear in the electronic system, the poll worker is to compare the name on the ballot to a paper roster of registered voters.
9. When I tried to find out if those ballots matched a name in the paper roster the poll worker flipped the roster around quickly, making it impossible for me to read the name and therefore unable to verify that the ballot corresponded to a registered voter.

10. I also noticed that the manner that they themselves were checking the names in the roster appeared to me to be carelessly done. My overall impression is that they weren't even checking the names themselves.

11. I experienced at least one poll worker who was very aggressive and wouldn't allow me near the paper roster at all.

12. After some time, it became clear to me that they didn't want me there and tried to prevent me from doing any type of challenging; acting in an authoritative and dismissive manner in many instances.

13. I also overheard one poll worker say to another poll worker that we have 35,000 more ballots coming and they both high-fived each other. They seemed very happy about these extra ballots.

14. I also witnessed an envelope that was scanned twice. The first name didn't match the second name that appeared. When I mentioned that to the poll worker holding the ballot she ignored me and continued to process the ballot. When I told the supervisor he said something like, it's too late. I saw that they put it in the box of approved ballots.

15. At approximately 1:15 pm, I had left the Counting Hall to eat lunch and escort a friend to the parking lot.

16. Upon returning to the building entrance the security guard told me I was not allowed back in. I had my challenger badge on and told him I was a Poll Challenger and he asked me if I was a GOP challenger and I said yes. He told me I was not allowed back in because the building was at covid capacity.

17. I witnessed several DNC people being allowed in at that time.

18. Eventually I was allowed the enter the building but was still barred from entering the Counting Hall.

19. It wasn't until approximately 6:00 pm when I finally gained entry to the Hall. I entered for the purpose of signing out as I heard that other GOP Poll Challengers were barred entry until other GOP Poll Challengers had signed out.

Dated: November 9, 2020

[Laura Roush]

Laura Roush 11/9/2020

Subscribed and sworn to before me on:

/s/

Notary public, State of Michigan, County of:

My commission expires: 11/20/2022

SHANE TREJO
Notary Public, State of Michigan
County Of Oakland
My Commission Expires 11-20-2022
Acting in the County of Wayne

AFFIDAVIT OF KARYN CHOPJIAN

Karyn Chopjian, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan, in the city of Novi

3. I was a Republican Poll Challenger on November 2, 2020 at the TCF Center in Detroit Michigan.

4. I began observing at approximately 10:30 am. I observed three tables throughout the day and spent a majority of my time at table 61.

5. I witnessed several poll workers wearing political slogans on their face covering including Black Lives Matter.

6. I was a Republican Poll Challenger on November 4, 2020 at the TCF Center in Detroit Michigan.

7. I began observing at approximately 7 am until 9:30 pm.

8. I asked the poll captains at tables 86, 69, 81, 78, and 99 whether there were any republicans at the table. Several times I was ignored or told there were no republicans. I was also told that the City was not allowed to ask poll workers their political party preference. However, I witnessed several of the poll workers collaborating with Democratic Party poll challengers.

9. As a challenger, I was keeping track of blank ballots sent to the tables to be duplicated. There were several thousand ballots left unattended with no security protocol at all times of the day.

10. I was prohibited from observing the ballot duplication process by democratic poll workers and democratic poll challengers. I was being followed, intimidated and harassed by democratic poll challengers. Poll workers and captains witnessed this harassment and did nothing to stop the democratic poll challengers from following me. However, I was threatened I would be kicked out of the TCF Center if poll workers deemed my mask was not fitted properly.

11. When the military ballots came in, poll workers prevented me from observing ballots and used their bodies to prevent me from witnessing the ballot counting process. Poll workers repeatedly asked me to step back, even though I was following state laws regarding social distancing procedures. I was just trying to observe the process and poll workers repeatedly accused me of attempting to slow the process down.

12. There were several inconsistencies between dates of birth and voter registration on military ballots I was able to observe.

13. Throughout the day, I witnessed a pattern of intimidation, secrecy, and hostility by the poll workers. Poll workers would cheer, jeer and clap when poll challengers were escorted out of the TCF Center. There appeared to be collaboration between the democratic poll challengers and the City of Detroit poll workers.

Dated: November 9, 2020

Karyn Chopjian

KARYN CHOPJIAN
11-9-2020

Margaret Lear Erle

Subscribed and sworn to before me on:
/s/ November 9, 2020
Notary public, State of Michigan, County of:
My commission expires:
07-22-2026

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

AFFIDAVIT OF JENNIFER LINDSEY COOPER

Jennifer Lindsey Cooper, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. For the 2020 General Election I was hired and trained as an election worker for Waterford Township Michigan. I was trained for all counting positions, but was assigned to be an absentee ballot counter, including military ballots.
4. I worked as an election worker counting absentee and military ballots from 7:00am on November 3, 2020 to 12:30am on November 4, 2020 in Waterford Township. I encountered no issues during this time, but gained experience in the ballot counting process.
5. From my experience and training, military ballots are processed and counted in the following manner: The envelope is opened and contains a letter from the military voter and a copy of a ballot on plain paper that is filled in by the military voter. These are checked and then the voter's votes are transferred to a blank ballot to be counted. This process is done one ballot at a time. One Republican and one Democrat election worker are supposed to be present for this process.
6. On November 4, 2020 I was a Republican challenger for ballot counting at the TCF Center in Detroit, Michigan. I arrived at approximately 10:00am.
7. I observed Table 16 in the TCF center. I observed an election worker collect approximately five to seven blank ballots and bring them to the table. The election worker left these blank ballots sitting on the table for approximately five minutes

before placing them in a box marked "problem ballots." I challenged the election worker as to what she was doing with the blank ballots. In response the election worker moved the blank ballots and placed them underneath what looked like a poll book. The election worker responded to me that she was waiting for her supervisor to "do military ballots."

8. Approximately fifteen minutes after I challenged her, the election worker was joined by two more election workers. One of the election workers began to read from a standard ballot, not a military ballot, that she had pulled from a stack of other standard ballots. This ballot did not appear to be a military ballot in anyway. There was no outside packaging, there was no military letter, and it was a standard ballot, not the type of ballot returned from military voters.

9. I then saw two more blank ballots filled out in the same manner described in paragraph 8. A standard ballot that did not appear to be a military ballot was read off and a blank ballot was filled in.

10. All of the ballots that I observed filled out in this way contained votes for Joe Biden for President.

11. I further observed that many blank ballots were transferred between tables at a time. They were picked up in large batches and not counted. There was no recording of the chain of custody of these blank ballots. Blank ballots were tucked underneath things, shuffled into boxes labeled "problem ballots" and not tracked.

12. As I attempted to challenge this process I was harassed by Democrat challengers. I was told "go back to the suburbs Karen" and other harassing statements. The Democrat challengers would say things like "Do you feel safe with this women near

you" and "is this Karen bothering you?" I believe this was designed to intimidate me and obstruct me from observing and challenging.

J L Cooper
[signature]

Dated: November 9, 2020

[Print name]
JENNIFER LINASE/COOPER
11/09/2020

Subscribed and sworn to before me on: 11/9/2020
Kimberly J Matson
Notary public, State of Michigan, County of: Wayne
My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF BRETT KINNEY

Brett Kinney, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On Tuesday November 3, 2020 I was a Republican challenger at the TCF Center in Detroit, Michigan from approximately 6:30am to 8:00pm.

4. I observed Table 37 at the TCF Center. The election worker supervisors in my section were named "TJ" and "Raphael."

5. I issued approximately 40 to 50 challenges throughout the day. I challenged ballots where the numbers on the ballot and envelope did not match, ballots and envelopes that did not include proper signatures, ballots with invalid markings and ballots with other issues.

6. The election worker supervisors agreed with many of my challenges and these ballots were placed in an envelope labeled "invalid ballots."

7. I then observed an election worker reach into the envelope labeled "invalid ballots" and process them with valid ballots.

8. I challenged this process to a supervisor and was told "we have to keep the process going."

9. I believe many, if not all, of the invalid ballots that I challenged were processed and counted despite supervisors agreeing with my challenges and originally placing the ballots in an "invalid ballot" envelope.

Dated: November 9, 2020

[Print name]

Brett Kinnell
11-9-2020

Subscribed and sworn to before me on: 11/9/2020

Kimberly J Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

REGARDING THE COVERED WINDOWS OF THE COUNTING ROOM AT TCF

On November 4, 2020 I was at the TCF (Cobo Hall) counting location to serve as a GOP poll challenger. I was never allowed in the room. I want to testify that **all main floor windows to the counting room were covered the entire time I was there** (approximately 11 am to 8 pm).

I am told that **Michigan Secretary of State Jocelyn Benson has said on the Frank Beckmann show that the cardboard was on the windows because the GOP protestors broke them. This is PATENTLY FALSE.** I did not hear the show but I was there. I actually did not know of the protest and happened to be at the counting room windows before the protest began. I was trying to see what was going on in the room by trying to peer between the approximately 2" of glass between the cardboard the wall. I was doing that when the protest began. The windows had been covered all day and have nothing to do with the protest. I also ended up in the protest and can attest to you that no windows were broken.

In a public statement online, Ms. Benson has also asserted that "some" of the windows were covered to protect private information but that some were open to preserve transparency. This also appears untrue to me. First, I did not see any uncovered windows on the main floor. There is a possibility that there were open windows on the second floor, but I was never up there and it would be too distant a vantage point to be meaningful to any public observer. Second, the distance of the counting tables from the wall of windows on the main floor were too far away from the glass to see much even if the windows had been uncovered.

Please feel free to contact me if I can be of further help.

Laura Gee Luke

LAURA GEE LUKE

Date: November 9, 2020

Laura Luke

Lukes4@comcast.net

248-207-2246 (cell phone)

Milford, MI

Susan L. Mills

SUSAN L MILLS
Notary Public, State of Michigan
County of Oakland
My Commission Expires Oct. 27, 2025
Acting in the County of Wayne

Susan L. Mills

Date: 11/9/2020

AFFIDAVIT OF EVAN SHOCK

Evan Shock, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan and in the Township of Chesterfield.

3. At approximately 3:20 pm, a City of Detroit employee came out to the lobby of the TCF Center and explained that no other poll challengers were allowed into the counting boards because of COVID-19 concerns. I later found out that the real reason for not allowing poll challengers into the counting boards was because poll workers were failing to sign out poll challengers upon leaving.

4. I witnessed windows boarded up with cardboard boxes and paper signs to prevent those in the lobby from witnessing the process. I was forced to wait approximately one hour before being let in to the counting boards.

5. I was a poll challenger at approximately 4:20 pm until 9:00 pm.

6. I observed several irregularities including unattended ballot boxes, unidentified people coming in and out of the TCF Center, and a chaotic ballot counting process.

7. There were several instances in which the poll workers and non-credentialed individuals used their bodies to prevent republican and independent poll challengers from witnessing and observing the ballot counting process.

8. At table 61, I witnessed a poll worker manually enter four ballots into the system and assign each one a fictitious birth date of 01-01-1900.

9. Throughout the day, I witnessed a pattern of chaos, intimidation, secrecy, and hostility by the poll workers and non-credentialed individuals. The poll leaders engaged in intimidation and threats any time a ballot was properly challenged. It appeared that every ejected individual was an independent or republican poll challenger.

10. Poll workers would cheer, jeer and clap when poll challengers were escorted out of the TCF Center. There seemed to be collaboration between the democratic poll challengers and the City of Detroit poll workers.

Dated: November 9, 2020

Evan Shock
Evan Shock
11/9/2020

Evan Shock

Subscribed and sworn to before me on:
/s/ November 9, 2020
Notary public, State of Michigan, County of:
My commission expires: 07-22-2026

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne
Margaret Lear Erle

AFFIDAVIT OF QIAN SCHMIDT

Qian Schmidt, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan and in the Township of West Bloomfield.

3. I was a Republican Poll Challenger on November 3, 2020.

4. I began observing at table 83 starting at 10:00 pm on November 3, 2020 and concluded at 5:00 am on November 4, 2020.

5. I observed several irregularities including unattended ballot boxes, unidentified people coming in and out of the TCF Center, and a chaotic ballot counting process.

6. I witnessed three ballots that were not found in the system. The polls workers separated those ballots. I asked the supervisor where those ballots were going and the supervisor, Monica, ignored me and walked away.

7. As a challenger, I was prohibited from observing the ballot duplication process by poll workers and democratic poll challengers circling around me.

8. There were several instances in which the poll workers and non-credentialed individuals used their bodies to prevent republican and independent poll challengers from witnessing and observing the ballot counting process. These workers and non-credentialed individuals used COVID-19 as the justification for intimidating and preventing poll challengers from witnessing the process.

9. I am of Chinese descent and speak Mandarin Chinese. I was personally harassed and discriminated against by a young, African American, non-credentialed individual who stated "what gives you the right to be here since you are not American." I answered "I am American." This ethnic intimidation and discriminated continued for five minutes.

10. Throughout the day, I witnessed a pattern of chaos, intimidation, secrecy, and hostility by the poll workers and non-credentialed individuals.

Dated: November 9, 2020

Qian Schmidt

Qian Schmidt

Nov 9, 2020

Subscribed and sworn to before me on: 11/9/2020

/s/ Kimberly Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF Erik Duus

Erik Duus, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 3, 2020 I arrived at the TCF Center in Detroit Michigan to volunteer as a poll challenger for the GOP.
4. I arrived at approximately 10:10 pm and worked through the night until 4:40 am Wednesday morning.
5. Were you denied access? No, but my access for meaningful ballot challenging was hindered by social distancing requirements and intimidation throughout the night as the rest of my statement will explain.
6. For the first hour of the shift I observed no irregularities at my table, the entire time I was kept 6 feet away. At one point I tried to step forward to better visualize a ballot, and was told to stand back. At this point I was treated respectfully.
7. Activity seemed to slow down, a few tables were working on ballots, but people started disengaging, reading and falling asleep as there was no work to be done. This atmosphere continued until about 12:30 am, at which time many people started coming in, many dressed in BLM and "Count the Vote" garb.
8. From the tunnel in the interior of the building ballots began arriving from an official looking Department of Elections vehicle and were delivered to the adjudication desk, apparently to be distributed. It was estimated that the delivery contained at least

24,00 ballots based on guess of numbers of bundles. Ballot processing activity seemed to increase after this delivery.

9. My table had little activity so I roamed to tables where there was more activity but no GOP challengers present. I wound up working between tables 94 and 95. I observed an acquaintance being intimidated by a very large man in "Count the Vote" gear, towering over him and extremely close. Social distancing was enforced and strongly defended between challengers and workers, but not at all between the intimidating men and the challengers.

10. I walked over to be a presence hoping to deter any problem. At this point this man turned his attention to his cell, and I believe he sent a text message, soon after two large men came and I observe them watching me the entire night, even to the restroom and back to my table. They remained with me for the rest of the shift. At this time it was obvious a coordinated and organized system of challenger intimidation was implemented. I felt totally outnumbered and that my personal safety was at risk.

11. During the entire evening there was minimal police presence, I counted no more than 2 officers. It seemed the ballots were abandoned in many locations in the room, sitting far from any activity and unattended. My shift was coming to an end, but I left a bit earlier (4:40 am) and furtively because I felt my personal safety was at risk from the men that were tailing me all evening. I basically snuck out a door and went quickly to my car.

Dated: November 9, 2020

[signature]

[Print name] ERIK DWS
11/9/20

Subscribed and sworn to before me on: 11/9/2020

Kimberly J Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF RANDALL S. CHAMPAGNE

Randall S. Champagne, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 3, 2020 I was a Republican challenger at the TCF Center in Detroit, MI from approximately 6:00am to 1:00pm.
4. I observed unsealed ballots in the TCF center. I was told signatures had been checked the previous day for some ballots. These ballots were in white plastic boxes that were not locked in anyway.
5. I observed ballot tabulating that began at approximately 9:30am.
6. When tabulating began I was asked to stand so far away from the tabulating that it was difficult to properly observe the process. Election workers said covid was the reason for the required distance, but at times I was required to stand over six feet away.
7. Ballots were placed in the tabulating machines and after they had been counted they were placed in white plastic boxes.
8. At one point I observed a machine get jammed. Election workers then reran the box of ballots they had been counting, including what I believe were ballots that had already gone through the machine. Election workers blocked my view of the process so I could not tell if any precautions were taken to prevent ballots from being counted twice. To my knowledge no such precautions were taken.

9. Ballots that had been counted and placed in white plastic boxes were left unattended and unsecured. I saw no precautions being taken to make sure these ballots were not counted again.

10. I observed other irregularities, but was forced to stand at such a distance that I could not fully observe the process in order to challenge it.

11. I did not observe any process for tracking or monitoring the flow or chain of custody of ballots by election workers.

12. At approximately 11:30am I observed a coffee stained ballot go through the duplication process. Election workers would not allow challengers to observe the process close enough to properly monitor it.

Dated: November 9, 2020

[Print name]

Randall S. Champagne
11/09/2020

Subscribed and sworn to before me on: 11/9/2020

/s/ Kimberly Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF MATT SEELY

Matt Seely, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 4, 2020 I was a Republican challenger at the TCF Center in Detroit, Michigan from approximately 9:00am to 8:00pm.
4. At times, I was harassed and intimidated by others that were present in the counting room who did not have credentials displayed for any organization. They would get in the way to prevent me and other challengers from seeing the processing of ballots; they would interfere with challenges being issued; they would try to distract Republican challengers to make sure they were not able to pay close attention to the processing of ballots.
5. These challengers that did not have credentials displayed made false statements about some of the Republican challengers that resulted in the Republican challengers being removed from the counting board. Specifically, they accused a Republican lawyer of taking his mask off
6. The security team denied access to new Republican challengers to replace the challengers that were leaving the facility unless they signed out. The sign-out process was not explained to any of the challengers before they entered the TCF Center.
7. The Democrat Party set up tables in the TCF Center counting room where they were able to provide food and refreshments to the Democrat Party challengers. There is not supposed to be food or drink allowed in the counting room. This allowed the

Democrat challengers to remain in the room during lunch while the Republican challengers left and were then locked out.

8. At one point, the windows to the TCF Center counting room were being covered up to prevent anyone outside the room from being able to see into the counting room.

9. Towards the end of the processing, I witnessed election workers entering new people into the system manually with a date of 1/1/1900.

10. In the back of the counting room, there was two large pallets with suitcase sized metal cases. Each pallet had shrink wrap around it, but one of the pallets appeared to have had a number of cases removed. When I was looking at these pallets, someone on the security staff told me to leave the area and that if I returned, I would be ejected from the counting board.

11. Most of the challengers and the challenges that they tried to make were ignored by the staff overseeing the election process.

12. From my observations, the most efficient counting tables could process approximately one hundred ballots an hour. At no time when I was at the TCF Center was every table counting ballots. At most times approximately fifty to one hundred tables were counting ballots. Given these observations, I do not understand how over one hundred thousand ballots could have been counted during the times the TCF Center was used as a counting location.

Dated: November 9, 2020

[Print name] MATTHEW JAMES SEELY

11/9/2020

Subscribed and sworn to before me on:
/s/ November 9, 2020

Notary public, State of Michigan, County of:

My commission expires:
07-22-2026

Margaret Lear Erle

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

AFFIDAVIT OF BRIDGETT LYN ZELASKO

Bridgett Lyn Zelasko, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was trained online and assigned to be a ballot challenger at the polls at TCF Center. I arrived to the TCF Center on Wednesday, November 4, 2020 at 12:13 p.m. I had received paperwork from the City Clerk to perform this duty.
4. I also received training at the TCF Center to be a ballot challenger as well.
5. When I arrived to the TCF Center, I was waiting in Room 260. Our group was missed a couple of times; however, we ultimately went down to the main entrance of where ballots are around 1:08 p.m.
6. When we attempted to go in, the individuals at the entrance stated that there were no spots available for Republicans but there were fifty-two (52) spots for Non-Partisan.
7. Thereafter, I went back up to change my designation from Republican to Non-Partisan and immediately went back down at approximately 2:05 p.m. By the time I came back down, they indicated no spots were available for Non-Partisan either.
8. At this time, I then watched the people inside put pizza boxes on the windows to impede any outside observers. The police took the pizza boxes down twice while I was there; however, they continued to put the boxes back on the windows.
9. There was a white male, well dressed, who identified himself as the chief legal officer and top lawyer for Detroit. He stated that there were not letting in any more people in to where the ballots were.

10. Then the Election Coordinator (black male) then stated if the Republicans did not sign out when they completed their shift, then "too bad, too sad." He additionally stated that they were not going to allow anymore people in due to COVID-10; however, the press continued to go in.

11. I ultimately left at 3:45 p.m. and shortly thereafter individuals locked the TCF Center doors to the outside.

12. I was denied complete access to perform my ballot challenger role.

13. When I attempted to leave by getting on the elevator to the parking structure, there was a man that would not let me on. His refusal to let me in the elevator forced me to access my car by walking the circular ramp up. I finally arrived to my car at 5:15 p.m.

Dated: November 9, 2020

Bridgett Lyn Zelasko

Bridgett Lyn Zelasko
November 9, 2020

Subscribed and sworn to before me on:
/s/ November 9, 2020
Notary public, State of Michigan, County of:
My commission expires: 07-22-2026

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Margaret Lear Erle

AFFIDAVIT OF TRACY TOPINI

Tracy Topini, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 3 and 4, 2020 I was a Republican Challenger at the TCF Center in Detroit, MI from approximately 10:00pm on November 3 to 5:00am on November 4.
4. I observed Democrat challengers and individuals from an organization called "Election Protection" approach and surrounded Republican challengers in an intimidating and argumentative manner. For every one Republican Challenger I saw four or five others.
5. Many of the Democrat challengers and non-partisan challengers did not wear credentials.
6. I was told by Democrat and non-partisan challengers to stand six feet away from a counting table due to covid, even though they were much closer than six feet to me. This impaired my ability to observe and challenge the ballots.
7. At one point, I spoke in my native language to a friend of mine who was also a Republican challenger.

8. A black male challenger who was not wearing credentials approached us and asked us "where were you born; where do you live," "you both speak the same language and other challengers speak the same language, you must know each other, you are lying." I believe this was designed to obstruct our ability to observe and challenge. He also put his fingers two to three inches from my face. These actions obstructed my ability to observe and challenge the process.

9. At approximately 12:00 to 12:30 I observed two ballots marked for Donald Trump and one marked for Jo Jorgenson at my table and a nearby table.

Dated: November 9, 2020

Tracy Topini

[Print name]

Tracy Topini

11-9-2020

Subscribed and sworn to before me on: 11/9/2020

Kimberly J. Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF DEBORAH JEAN FUQUA-FREY

Deborah Jean Fuqua-Frey, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 4, 2020, I arrived at the TCF Center Building around 12:00 p.m.
4. I was not allowed to enter the building where I was to be a Michigan Republican challenger and I did not in fact enter.
5. I witnessed persons who identified themselves as Democrat poll challengers being allowed to enter, and in fact enter the building.
6. I also witnessed people representing special interest groups specifically AFL-CIO, Black Lives Matter with masks on that had it on the mask, Media, and UAW.
7. I repeatedly called out "discrimination" when non-Michigan Republican people were let in by security staff.
8. I remained outside until 8:00 p.m., after which I left without having been able to perform my duty as a Michigan Republican challenger.

Dated: November 9, 2020

Deborah J. Fuqua-Frey
Deborah J. Fuqua-Frey
11-9-2020

Subscribed and sworn to before me on: 11/9/2020
Kimberly Matson
Notary public, State of Michigan, County of: Wayne
My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF DANIEL UNGAR

I, Daniel Ungar, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On November 4, 2020, I went to the TCF Center, Detroit, MI to volunteer with the MI GOP as to the vote counting process in Detroit. I arrived around 12:30 pm and went to Room #260 where a GOP representative informed me that the GOP needed attorneys to supervise and/or answer questions from the GOP poll challengers. I am a licensed attorney in the State of Michigan.

4. I and two other attorneys accompanied the GOP representative down to the ballot counting room. As I was signing in at the ballot counting room, a male election worker who identified himself as the "supervisor" (also may be known as "Jerome") told the Detroit female election worker who was checking me in not to let me or the other two attorneys in as the GOP had too many poll challengers already on the floor. The supervisor also admitted out loud that there were more Democratic poll challengers on the floor than the maximum number allowed and that the Democrats had more poll challengers than the GOP. I did not personally observe this supervisor refusing to allow more Democratic poll challengers in the room but did personally witness the supervisor restricting my entry into the ballot counting room.

5. The supervisor said that the GOP was over its 134 limit of poll challengers. I asked the supervisor how he arrived at the number "134" and he was unable to provide me with

an explanation even though I specifically asked him if the restricted number was related to a "fire code" rule.

6. I personally did not observe any election worker physically counting the number of GOP poll challengers. Even though the GOP representative explained to the election supervisor that the group of individuals he was with were not "poll challengers" but rather lawyers who were there to assist the poll challengers, the supervisor refused to admit us.

7. The election supervisor included supervisory personnel of the GOP in the 134 allotment of partisan poll challengers for the GOP.

8. I then left the ballot counting room and hung out for a while in the building. Around 2:30-3:00 pm I received credentials from the Election Integrity Fund, a non-partisan voter watchdog organization, in one of the hallways upstairs. I then went back downstairs in an attempt to again enter the ballot counting room. At this time, there was a crowd of people outside the ballot counting room and the doors were locked. There was a lot of confusion as to what was happening any why they were not allowing people in. Several minutes later a man came out and announced that he had a statement to make. He introduced himself as Lawrence Garcia, corporation council for the City of Detroit and also an Election Commissioner. He announced to the group of individuals trying to gain access to the ballot counting room that "they are no longer admitting people to the room."

9. Mr. Garcia introduced the "political organization coordinator" who was the supervisor that had denied me entry earlier (a/k/a Jerome). Jerome announced, "All groups are

above capacity and that no poll challengers are allowed in, including non-partisan poll challengers."

10. A person from the group shouted out to the supervisor that poll challengers were in fact leaving and that the numbers were coming down. The supervisor responded to the group and said: "We have a book where people sign in. People are supposed to sign out, and if they do not sign out, that is there choice." He repeated, "If people do not sign out, it is not our fault."

11. The supervisor's comment was clearly understood as an admission that he knew there were fewer than the allotted number of poll challengers on the floor because signed-in poll challengers had left the room, and that he was solely relying on poll challengers' failure to sign out to make a false determination that the number of poll challengers permitted on the floor exceeded the allotted 134.

12. Also, around this time, I observed Detroit election workers attempting to cover the windows that separated the ballot counting room from the lobby outside to prevent those outside the room from seeing what was happening inside.

13. I went back up to Room 260 and I filled out an incident report regarding the City of Detroit election personnel's refusal to admit poll challengers to the ballot counting room even when they knew that people left without signing out.

14. Around 4pm I went back downstairs to the entrance to the ballot counting room and soon thereafter, an election worker came out of the locked door and announced that they were now going to permit 6 non-partisan poll challengers in the ballot counting room. I was one of the 6 non-partisan poll challengers permitted to sign in, on behalf of the Election Integrity Fund. I signed in at 4:03 pm.

15. During my poll challenger activities, I witnessed the following: I was at the table for Precinct 80 (I believe they were processing military ballots) and noticed that there were two identical envelopes; same address, same handwriting with two names: one was "[illegible]," and the other one was "[illegible]." These two names could not be found in the data base and consequently, an election worker decided to enter their names into the data base. Because there was no identifying information as to these two voters, the election worker entered into the data base the birth date of one of the ballots as "November 3, 2020" (the date of the election) and the date of birth entered for the second ballot was "1/1/1900." A third ballot with the name of "[illegible]" was also data supplemented with a birth date of "1/1/1900."

16. As to the two [illegible] ballots, the "[illegible]" ballot was a single page that did not look like a ballot because it did not have any options for any elected position. It only had write-in spaces for the positions of President, Senator and Representative. I observed this ballot as follows: In the President category, someone had written in "Biden/Harris; in the Senator category someone had written in the word "(Democrat)"; and in the representative category someone had written in the word "(Democrat)." Another election worker then took a blank (real) ballot and filled out that ballot as follows: For President, Biden/Harris was filled in; for Senator, Gary Peters was filled in; for Representative, the Democratic candidate was selected. I raised an objection to the process of tabulating this ballot and my challenge was dismissed.

17. I heard the election workers state that the second ballot ([illegible]) did not contain a ballot inside of the envelope. I also personally did not observe a ballot in the envelope. The supervisor in that area then stated that a second ballot should be (and was) filled

out exactly like the first ballot. These ballots were sent off for tabulating. I raised an objection to the process of tabulating this ballot and my challenge was dismissed.

Dated: November 9, 2020

Daniel Ungar
DANIEL UNGAR 11/09/2020

Subscribed and sworn to before me on: 11/9/2020
/s/ Kimberly Matson
Notary public, State of Michigan, County of: Wayne
My commission expires:
9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of _____

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF NORA KATHLEEN STORM

Nora Kathleen Storm, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On November 4, 2020 I arrived at the TCF Center in Detroit Michigan to volunteer as a poll challenger for the GOP.

4. I arrived at approximately 10:37 am with four other challengers that I knew beforehand. We went to room 204 to obtain our credentials and sign in. I did have access to work behind the poll workers and noticed that all ballots displayed on the screen were Democrat. I asked to observe the platform area with election officials and the supervisor denied me access. I was not given a reason.

5. The pace of the workers were very slow and no one appeared to be supervising. About 12:30 pm I took a lunch break and went to room 204. At about 1pm I returned to the poll worker area and worked in a different area. I believe table 65. I felt intimated by union people who were staring at me. I asked to look at post mark on the envelopes of the ballots and was told I could not do so. There was a true effort to keep me from seeing anything that was happening.

6. I observed that many of the poll workers were using cell phones and they had large backpacks and suitcases around them. I inquired about large trays of folded ballots and I was told by the poll workers that that they were empty ballots to be used for redoing "bad" ballots.

7. At about 3pm there was a large ruckus and I felt very intimidated so I decided to leave and was escorted out the back door. Thereafter, I learned that they boarded up the windows and were denying access to others.

Dated: November 9, 2020

Nora Kathleen Storm

Subscribed and sworn to before me on:
/s/ November 9, 2020
Notary public, State of Michigan, County of:

My commission expires: 07-22-2026

NORA STORM
11/9/2020

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Margaret Lear Erle

AFFIDAVIT OF DANNY FRACASSI

Danny Fracassi, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On Wednesday, November 4 from 10:00am to 5:00pm I was a Republican challenger at the TCF Center in Detroit, Michigan.
4. At one point I attempted to challenge a vote at Table 70 and was told by an election worker that I could not challenge that vote. Election workers called over police officers and attempted to have me ejected from the building.
5. From my observations, I believe election workers were targeting challengers who were effective at challenging ballots and attempting to get them removed.
6. I had to leave the counting room to use a restroom, but then was prevented from re-entering the counting room.
7. I and other Republican challengers were not allowed into the room at this point and were told that the maximum number of Republican and Democrat challengers were already in the room. I asked how this number was arrived at or to see documentation of it, but was not given any answers.
8. I observed plastic panels being used to cover windows so that challengers could not see what was going on in the counting room.
9. One of the men who was putting up panels had a green dot sticker on. Similar stickers were used by Democrat and other challengers.

10. I observed a woman trying to get her relative, who was in the counting room, medication that he needed. She was prevented from doing so. Later an ambulance was called for him.

Dated: November 9, 2020

[Print name]

Danny Fracassi
11-9-2020

Subscribed and sworn to before me on: 11/9/2020

Kimberly Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF CAROL ANN WHITMORE

CAROL ANN WHITMORE sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan. I was a Poll Chairman at Precinct 279 at Wayne County Community College District on November 3, 2020 from 5am until 10:30pm. The one thing that was brought to my attention by a Republican Poll watcher was a posted sign on the outside of the building stating that the polls closed at 6pm. Per my directive, she immediately took down the stated sign.

3. On November 4, 2020 I arrived at 9am the TCF Center in Detroit Michigan to volunteer as a poll challenger for the GOP. I received my credentials at room 260 upstairs.

4. I arrived in the room at approximately 9:20 am. I noticed many of the workers were not socially distanced and I questioned them on such. I was also told there was a republican at most tables but there was clearly not any republicans and thus made a poll challenge to that effect about 11:30am. I was stationed at table 53 and after 1pm very little activity was taking place.

5. About 4:30pm I left the room and went to room 260 for about one hour. I heard from several people in the room that they were waiting for military ballots so I decided to take a break. At about 6pm, I was denied access back in and was told by several swat team members that I could not enter. I stayed in the lobby taking video of people

leaving the room with large backpacks, satchels, bags and one person with a cooler. I left to go home at 1am. I have all of the video available for viewing.

Dated: November 9, 2020

Carol Ann Whitmore

Carol Ann Whitmore

Carol Ann Whitmore
11-9-2020
Carol Ann Whitmore

Subscribed and sworn to before me on: 11/9/2020

Kimberly J Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

To whom it may concern

I am John C. Palmer, III. And, this is my report after watching activities in close proximity to the Detroit Department of Elections Building during the hours of 4 pm to sunset on Tuesday, November 3, 2020. I was a volunteer observer, under the training of Steve Orsini, a two term Precinct Delegate for Precinct 35 in Canton, Michigan, an 11th Congressional District Member to the State of Michigan and Elected Delegate to the Michigan Convention.

I have listed my observations below:

- Observation 1

  a. During the entire time of my observation period as stated above on Tuesday, November 3, 2020.

  b. I was either positioned and parked in the Fisher Theater parking lot, on the south side of the lot facing south, looking at the Department of Elections building and or positioned in the parking lot and alleyway adjacent to the west side of the Detroit Department of Elections building looking to the north.

  c. I observed drive-up voting the entire time I was there.

  d. People would just drive up, drop off what was assumed to be a ballet, and drive off.
     i. Is this a secure and valid method of ballot collection?
     ii. No I.D. verification.
     iii. Compared to the Novi, MI precinct that I voted in earlier in the day, there was no perceivable effort made to invalidate mail-in or absentee ballots if someone was voting in-person.
     iv. It was also noted, that one could simply drive around the block and vote again.

- Observation 2

  a. On Tuesday, November 3, 2020, approximately 4:00 to 5:30 pm

  b. I watched 10 or more vehicles with out-of-state license plates drive up to the loading dock area. I remember seeing Illinois, Minnesota, Missouri, Virgina, etc. See picture.

  c. I was shocked to see that the ballot machines were controlled by these individuals and not Michigan and/or Detroit residents.

  d. I assume these were people brought in by the DNC to control ballot counting activities.

  e. Many of these out-of-state people carried boxes with Dominion written on them from their vehicles.

Signature: John C. Palmer, III Date: 11-9-20

Notary: Kimberly J Nelson

Kimberly Jol Nelson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF MITCHELL DePERNO

Mitchell DePerno , being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. On November 4, 2020 I arrived at the TCF Center in Detroit Michigan to volunteer as a poll challenger for the GOP.

4. I arrived at approximately 10:30am and I went to the GOP room on the second floor (room 260) to obtain my credentials and sign in. I then went downstairs and signed in as an observer. Many of the poll workers were opening the ballots which I was trying to observe and read. I was asked on several occasions to step back to 6 ft away by a Democrat challenger. This happened multiple times. It was impossible to read the ballots from 6 feet away.

5. On several occasions, I noticed that there was no Republican worker present at the poll tables. I attempted to make a report of same and then felt very intimated. Supervisors were reluctant to write up my reports but finally did so when I brought an election official to push the issue.

6. Around 1:30pm I left for the day due to the stress of the situation.

Dated: November 9, 2020

Mitchell DePerno

MITCHELL DEPERNO
11/9/20

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

Subscribed and sworn to before me on: 11/9/2020

Kimberly J Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

AFFIDAVIT OF VIRGINIA JEUP

Virginia Jeup, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was a credentialed election challenger for the Michigan Republican party on Wednesday November 4th, assigned to the TCF Center, a.k.a. Cobo Hall in Detroit, Wayne County, Michigan, where absentee ballots were being processed.
4. I arrived at the TCF Center at approximately 11:15am.
5. I was assigned to go out to purchase some necessary office supplies for the Republican party and left the TCF Center at approximately 12:30am.
6. When I returned at approximately 1:15pm, I was refused all entry to the TCF Center by people identifying themselves as health officials, who stated that the facility was at capacity due to COVID.
7. While I waited outside the TCF Center, I witnessed approximately 8 to 10 other people be granted entry to the facility, including people identifying themselves as Democrats, and media, which appeared to include anyone with a camera. Anyone identifying himself or herself as a Republican was denied entry. Approximately every 10 minutes someone was granted entry.
8. I waited outside the TCF Center to be granted entry for approximately 3 hours and 45 minutes, leaving at approximately 5:00pm.

Dated: November 9, 2020

Virginia L Jeup

Print name:

Virginia L. Jeup

11/09/2020

Subscribed and sworn to before me on: 11/9/2020

Kimberly J Matson

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF ANGELA MARIE EILF

Angela Marie Eilf, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I reside in Bay City, Michigan.
4. I had found on Facebook that there was a call for assistance with counting the ballots.
5. I went to the TCF Center in Detroit, Michigan on Wednesday, November 4, 2020 around 1:00 p.m./1:30 p.m. until approximately 5:30 p.m.
6. My intentions on going to the TCF Center was to be either a challenger or observer.
7. When I arrived around 1:00 p.m./1:30 p.m., there was no real crowd gathering at that time. There was no real security, issues or anything that availed itself to me; however, multiple groups thereafter were prevented and told due to COVID-19.
8. When I was walking in to the TCF Center upon my arrival, I walked with a woman who asked me what party I belonged to. I then asked her, do you need to know that. She answered back yes and that the individuals inside will want to know. I then told her I was part of the Republican party. Immediately after my answer, the woman became rude, stated she was part of the Democratic Party and clearly was no longer friendly.
9. I then entered the room where the ballots were. I was then told that there was no room for anyone else in there (Democrat, Republican or Non-Partisan); however, the woman that I walked up with was allowed in. I then inquired if they were going to need help, but I was still told no and that someone would call if need be.

10. As I waited around outside the lobby area, I then encountered a gentleman who instructed me to go up to Room 260 of the TCF Center.

11. As instructed, I went up to Room 260, which I presumed was for the GOP. This was approximately 2:30 p.m. when I went up to this room. There were hundreds of people on this floor who had signed up to be watchers, challengers, etc.

12. I was handed an Unofficial TCF Absentee Vote Counting Board General Layout And Procedure paper [hereinafter referred to as "Unofficial Layout And Procedure"]. Please see attached.

13. I was told after receipt of this Unofficial Layout And Procedure paper, I was told there would be five (5) inspectors: 4 Democrats to 1 Republican. I later learned that it was supposed to be 1:1 ratio not 4:1.

14. From the Room 260, I was put in a group of about thirty (30) to forty (40) people and taken down to the main ballot area around 3:30 p.m./4:00 p.m. Prior to be taken down, a woman had given us some instructions, which included but not limited to as follows:

    a. The ballots need to be confirmed by a written book or electronically and if not, then raise your hand and a lawyer would assist;

    b. Make sure that you keep at least six (6) feet distance, if not, that people were being thrown out;

    c. Make sure that you have your mask properly on, if not, that people were being thrown out;

    d. Warned that it was extremely hostile and individuals were being difficult, but do not engage or become confrontational with them.

15. I was immediately concerned about these instructions.

16. After the training was complete, I decided I was nervous about being a counter and did not wish to perform that duty; however, I did still want to be a watcher/observer.

17. When we came down and attempted to get in, our group was not allowed to go in where the ballots were. We were told that they were over their numbers and no one else was allowed in.

18. The people in our group were getting a little more agitated and a supervisor came out to talk to our group. Shortly thereafter, the police came over and it was clear that they were there to intimidate us. At this time, the supervisor simply stated that if we wanted to wait, we could.

19. I have a video of when the supervisor came over to discuss this.

20. Members of our group were questioning to the workers at the door and the supervisor about keeping track of people leaving because they made the statement that people were not required to sign out. When questioned further about that, they refused to answer.

21. The man who identified himself as the supervisor eventually only responded "that's the way we're doing it."

22. I knew that throughout the actions to this point, that something was clearly wrong.

23. I ultimately learned that when our group was headed down, that inside they had just begun counting the military ballots. Due to the military ballots being faxed, I was aware that their vote needed to be transposed onto an actual ballot and then required to be witnessed by a Democrat and Republican.

24. Unfortunately, our group was completely denied access into where the ballots were being handled.

25. Thereafter, the supervisor then grabbed pizza boxes and started taping the windows with these boxes to prevent any outside observing. This was at approximately 4:30 p.m./5:00 p.m.

26. Then the doors were locked to ensure no one entered.

27. After not getting anywhere with observing, talking to individuals in charge, being denied complete access, I left around 5:00 p.m./5:30 p.m.

28. I had asked a couple of individuals that were there in the group if they would mind walking me to my car. They agreed to do so.

29. There was only one (1) operational elevator and a security guard in the elevator. It was impressed upon me that this was to block the flow of individuals into the TCF Center/ballot area.

30. When we attempted to get out of the elevator, we observed a man and another security guar in the vestibule near the parking lot of the TCF Center as well as a bunch of individuals standing around them.

31. The man (who I identified later as an attorney) was arguing with the security guard about being held up there for over two (2) hours, that they were being held against their will, that they were election challengers, and that they were told they were being removed due to COVID-19.

32. I am a nurse and to hear the claims that people were being removed due to COVID-19 was completely absurd knowing the size of TCF Center. I told the security guard that individuals who were telling him this information about COVID-19 and that he was being lied to.

33. I heard the attorney ask the security guard who was he getting his direction from and the security guard said, "no comment." I told the security guard, "you cannot hold people against their will."

34. At some point later, people started making their way to get on the elevator to go back in. The security guards (outside the vestibule and from on the elevator) were physically pushing and preventing people from getting on.

35. At that point, I decided I would leave.

Dated: November 9, 2020

Angela Marie Eilf

Angela Marie Eilf

Angela Marie Eilf

11-9-2020

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Subscribed and sworn to before me on:
/s/ November 9, 2020

Notary public, State of Michigan, County of:

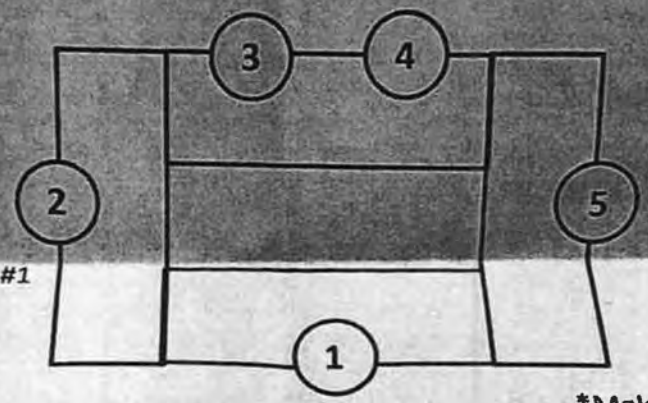
My commission expires: 07-22-2026

Margaret Lear Erle

Unofficial TCF Absentee Vote Counting Board General Layout and Procedure

Inspector 3
*Tears stub off of ballot
*Puts stub in Ballot Stub Envelope
*Hands ballot (in secrecy sleeve) to #4

Inspector 4
*Removes ballot from privacy envelope
*Rolls and flattens ballot
*Examines ballot for rips, stains, etc.
*Verifies correct counting board number
*Hands ballot to #5



Inspector 2
**Verifies name and voter number with #1*
**Writes voter number on envelope*
**Takes ballot (in secrecy sleeve) out of envelope*
**Verifies ballot number with #1*
**Hands ballot (in secrecy sleeve) to #3*
**Puts envelope in numerical order and ties them in groups of 50 to be put into black box at counting board*

Inspector 1
*Scans label on envelope into computer
*Hands envelope to #2
*Informs #2 what number voter this is for the day

Inspector 5
*Makes stacks of 50 ballots each until there are 200 ballots (4 stacks)
*Walks ballots to tabulating machines and hands them to poll worker for tabulation
*Waves a flag for the supervisor to come over if any problems arise

AFFIDAVIT OF MINDI TIETZ

Mindi Tietz, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. On November 4, 2020, I volunteered as a poll challenger at Cobo/TCF Center in Detroit, Michigan and, on November 5, 2020, I volunteered to monitor county canvassing at the Oakland County Elections Office in Pontiac, Michigan.
4. Due to the actions of poll workers and county canvassers, I was not able to serve as a poll challenger or election monitor because I was denied access to the ballot processing area and was forced to be at such a distance that it was impossible to monitor the canvassing process.
5. On November 4, 2020, I volunteered as a credentialled GOP poll challenger at the Cobo Hall/TCF Center (Center) located at 1 Washington Blvd., Detroit, MI 48226. I was at the Center from noon through 2:35 pm Eastern.
6. During that entire time, I was denied access to the ballot processing area and was prevented from serving as a poll challenger. I was denied access five times and was forced to remain in the lobby area.
7. On November 4, 2020, I arrived at the Center at noon with fellow credentialed GOP poll challengers, Mathew Gausden and Karen Ostin. We briefly met with other GOP poll challengers for refresher training.

8. At approximately 1:10 pm, we went to sign-in at the front table of the processing area to serve as poll challengers.

9. After showing our credentials, the poll worker at the front sign-in table told us that we could not go into the processing area because it was over capacity due to COVID and she instructed us to wait in the lobby until other people left.

10. We went to the lobby and, while we were there, multiple Democrats harassed and yelled at us about access to the Center. We ignored them.

11. By 1:30 pm, I observed people leaving the processing area. I went back with my colleagues to the sign-in table and again asked to enter. The same poll worker told us that we could not enter because there were too many GOP challengers and she instructed us to go back to the lobby. At this time, people were going in and out of the processing area without signing in or out at the front desk.

12. We went back to the lobby for a second time. I then witnessed four (4) people with GOP credentials leaving the processing area.

13. My colleagues and I again asked the poll worker at the front table if we could enter. For a third time, she told us we could not go into the processing area. This time she said it was because the GOP individuals we saw leave did not sign out. She again instructed us to wait back in the lobby.

14. At about 2:00 or 2:15 pm, we saw GOP credentialed challengers leave the processing area and we asked them if they had signed out. They confirmed that they signed out at the front desk.

15. For the fourth time, we asked the poll worker to allow us to enter the processing area since the other GOP challengers had signed out. This time she yelled at us that we

could not enter because she needed to process the others' sign-out and that we had to wait in the lobby.

16. In the lobby, we observed more Republicans leaving the processing area. For the fifth time, we went back to gain access to the processing area and was yet again denied by the same poll worker because of overcapacity. The poll worker was allowing people with "independent" credentials to go into the processing area.

17. After being denied the ability to serve as poll challengers for a fifth time, we asked the poll worker if she knew how many Republican and Democrat challengers were currently in the processing area. The poll worker did not know, yet she still told us they were at capacity.

18. I did not witness Republican challengers being allowed into the processing area during my time at the Center. I only saw Republican challengers leaving.

19. Other individuals were coming and going into the room without credentials. These individuals were not wearing the white shirts and black pants of the poll workers.

20. I witnessed people in the lobby wearing Biden/Harris t-shirts.

21. I also volunteered on November 5, 2020 to monitor county canvassing at the Oakland County Elections Office, 1200 N. Telegraph Rd., Dept. 417, Pontiac, Michigan 48341. I arrived at approximately 9:00 am Eastern

22. The county canvassers told me they were comparing the number of casted ballots to the number of voters in the poll book. They also explained that they were accounting for all ballots that were sent to each precinct.

23. There were four (4) county canvassers and the Deputy County Clerk, Sandra Hughes O'Brien, at the elections office.

24. I was there to monitor and challenge the county canvassing. I was with fellow GOP observers.

25. A county canvasser told us to stay 20 feet away.

26. Fellow GOP observers raised the issue that we could not see what they were doing from this distance.

27. A county canvasser told us that the county canvass was not a challengeable process. He instructed us that at no time could we come within 6 feet and instructed us to remain 20 feet away.

28. From my location 20 feet away, I could not see any of the information being checked by the canvassers.

29. I left the elections office at approximately 11:00 am because I could not monitor the canvass process at the distance I was told to maintain.

DATED: November 9, 2020.

Mindi Tietz

Mindi Tietz

Subscribed and sworn to before me on: 11/9/2020

Mindi Tietz 11-9-2020

Notary public, State of Michigan, County of: Wayne

My commission expires:

9/2/2024

Kimberly Joi Matson
Notary Public - State of Michigan
County of Wayne
My Commission Expires 9/2/2024
Acting in the County of Wayne

AFFIDAVIT OF JEREMY MCCALL

I, Jeremy McCall, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I received a FB message from a friend who informed that the GOP was looking for volunteers to assist as poll challengers in the City of Detroit.
4. I arrived at the TCF Center around 12:30 pm on November 4, 2020 and went to Room 260. I received my credentials and I attended the training to be a poll challenger.
5. Multiple people from the GOP were complaining that they were being intimidated, harassed inside the ballot counting room, and thus they were leaving because they were feeling unsafe, and some were being escorted out by the police. Once I was inside the ballot counting room, I personally observed an additional group of GOP poll challengers being escorted out a side door and they were not being allowed to "sign out" of the official "sign in" book. Thus, the floor count for the poll challengers for the GOP was not accurately determined and the city election workers were deliberately pushing GOP poll challengers to exit the room without an accurate tally of those remaining inside.
6. At around 3:00 pm, I headed downstairs to the ballot counting room but was denied entry.
7. At around 3:19 pm, a "health official" announced that the ballot counting room was at COVID capacity and thus, no-one from any of the political parties was allowed to go

8. into the room. However, the media was allowed complete and total access and the COVID "rules" did not apply to them.

9. At about 4:07pm I then proceeded back downstairs to the lobby of the ballot counting room. At this time, I noticed that the windows that separated the ballot counting room and the lobby were now completely covered with cardboard, pizza boxes and whatever the election officials could find.

10. At around 5:50 pm I was admitted into the ballot counting room as a GOP challenger and I checked in. I was specially told that I could not approach any election worker within 6 feet.

11. I personally observed a GOP poll challenger get into a loud discussion with a Democratic poll challenger and a Democratic lawyer. The Democrats accused this GOP poll challenger of getting too close to an election worker and accused her of being within 6 feet of the election worker. The GOP poll challenger was escorted out of the room and the Democratic poll challenger, including other democrats who joined in the discussion, were permitted to stay in the ballot counting room.

12. I also personally observed from the outside window many of the election workers with coolers, rolling luggage, backpacks, duffle bags and other containers allowed to be within the personal space of the election workers. I did not view any inspection of these items, and as a matter of fact, my personal backpack was not searched prior to entering the ballot counting room.

13. I did not disclose my party affiliation when I was in the ballot counting room because of intimidation and harassment.

Dated: November 9, 2020

Jeremy McCall

JEREMY MCCALL
11-9-2020

Subscribed and sworn to before me on:
/s/ November 9, 2020
Notary public, State of Michigan, County of:
My commission expires: 07-22-2026

MARGARET LEAR ERLE
Notary Public, State of Michigan
County of Wayne
My Commission Expires 07-22-2026
Acting in the County of Wayne

Margaret Lear Erle

General Affidavit

The within named person (Affiant), Mary E. Shinkle, who is a resident of Ingham County, State of Michigan, personally came and appeared before me, the undersigned Notary Public, and makes this her statement, testimony and General Affidavit under oath or affirmation, in good faith, and under penalty of perjury, of sincere belief and personal knowledge that the following matters, facts, and things set forth are true and correct, to the best of her knowledge:

Assigned to: City of Detroit AV Count Board as Poll Challenger
Dates: Monday, November 2, 2020 to Thursday, November 5, 2020

Monday, November 2, 2020, I observed at several Absentee Voting Count Board (AVCB) precinct tables during the pre-processing of the AV ballot received by the City of Detroit. Most of the AVCB Election workers at precinct tables were observed processing the ballot envelopes correctly by opening; placing the evelopes in stacks of 50; passing the envelopes to the next person who scanned and checked voter name and signature against the electronic poll book; passing the envelope to the next person to partially pull the end of the ballot out then read the ballot number for confirm it was correct. Then several AVCB Election workers at precinct tables were observed not following the correct process and scanning more than 50 ballots at a time and not checking the ballot envelope scanned against data in the electronic the poll book.

Tuesday, November 3, 2020, I observed at AVCB precinct table #55 duplicating ballots. I inquired with the Table Captain the reason for the duplication, and was told it was because the voter was sent and returned a ballot from the wrong precinct, so the ballot had to be duplicated. A few moments later, I stepped forward to view a duplicated ballot and was immediately told by an Election Worker at table #55, "you can't be looking at our ballots". I replied, "the law allows me to view the ballots and the process during the duplication process". She continued, "no you can't. You are mistaken, so I am just pointing that out to you, because if we make a mistake then you would be all over us." Then another Election Worker at table #55 then covered the already duplicated ballots with a piece of paper so I could not see the top ballot. I stepped back away from the table but continued to observe the ballots being duplicated until the Election Workers were completed with this task.

Wednesday, November 4, 2020, I observed at AVCB precinct tables #88, #83, #5, #86 the Election workers being extremely rude and aggressive toward our Poll Challengers and Attorneys when ballot challenges were attempted to be made.

Thursday, November 5, 2020 at 4:38 AM, I observed with Ty Bundy at AVCB precinct tables #16, #17, #23, #26, #37 that outer ballot envelopes (with received stamp and voter signature) and ballot stubs were left at these AVCB tables unsecured, and not placed in secured bags with seals, which should have been done when the precinct was closed. I asked an Election Worker (David) about the ballot envelopes and ballot stubs having been left at these tables. He replied "we are working on it" then walked away. Moments later he watched him leave the AVCB room, and he did not return.

General Affidavit

Thursday, November 5, 2020 at 5:03 AM, I observed at AVCB precinct table #17 that there are three (3) unsealed ballot boxes at this table. At 5:17 AM, an Election Worker walked by and noticed the 3 unsealed ballot boxes; he stopped and opened each one box and discovered ballots inside of each; he advised Dan Baxter, who came to table #17 and inspected the 3 boxes as well; Dan Baxter and an Election Worker moved the 3 boxes to the far end of the room; I followed the two gentlemen and 3 boxes, and observed the 3 boxes being sealed by Dan Baxter. Also left at table #17 were the outer ballot envelopes and ballot stubs; these ballot envelopes were in a large black & grey plastic tub; not in a sealed case.

Dated this 9 day of November 2020.

Mary E Shinkle

Signature of Affiant

==========

State of Michigan
County of Ingham

Subscribed and sworn to, or affirmed, before me on this 9 day of November 2020, by Affiant Mary Shinkle.

Henrietta Lynn Tow

Signature of Notary Public

Henrietta Lynn Tow
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF INGHAM
My Commission Expires October, 5 2027
Acting in the County of Ingham

10-5-2027

My Commission expires

AFFIDAVIT OF ALISA VALDEN

Alisa Valden, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.
2. I am a registered voter in the State of Michigan.
3. I was personally present at the TCF Center in Detroit, MI. I arrived there around noon on November 4, 2020.
4. When I arrived, I attended training and was credentialed by the Michigan Republican Party as a challenger.
5. Myself and other challengers were told to wait for the election worker shift change.
6. I was told by someone in the group that Republican challengers were not being allowed in however Independent challengers were.
7. I was informed that independent groups were also offering credentials.
8. I attended the independent group training session and was later credentialed by them.
9. Upon completion, I attempted to gain access into the "vote counting room."
10. I stood outside the entry of the "vote counting room" with approximately 50 other challengers, the vast majority of which were Republicans or Independence.
11. Again, I stood with the other challengers and waited to gain access to the "vote counting room" but it was not offered.
12. I de-credentialed myself as an independent challenger.
13. Around 7:00 pm, I was allowed into the "vote counting room" as a Republican challenger where I observed counting board 66 which was in the process of transcribing military ballots.

14. While there, I encountered a Democrat challenger named Scott who had been present prior to my arrival.

15. I was only able to observe 3 ballots being counted before they stopped counting at counting board 66.

16. While waiting for another table, I was told by an election worker that a batch of ballots weren't included in the most recently printed poll book and had to be entered.

17. I was told that the birthdates on these ballots would have unusual birthdates from the early 1900's.

18. Shortly after, I went to counting board 1, I also personally witnessed the name on precinct F ballot number 03097 was given to ". ." The individual had an address of and had a birthdate of August 1, 1999.

19. When I later observed precinct F ballot number 03097, the name was changed to

20. I was intimidated by election workers and Democratic challengers who upon finding out my political affiliation while I was in the "vote counting room."

21. Affiant further sayeth not.

Dated: November 9, 2020

Alisa R Valden

Alisa Valden

Subscribed and sworn to before me on:
/s/ Nov. 9, 2020 notary Barbara A. Harrell

Notary public, State of Michigan, County of:
My commission expires: Aug. 4, 2025

BARBARA A. HARRELL
NOTARY PUBLIC, STATE OF MI
COUNTY OF OAKLAND
MY COMMISSION EXPIRES Aug 4, 2025
ACTING IN COUNTY OF Wayne

AFFIDAVIT OF Anita Chase

Anita Chase, being sworn, declares under penalty of perjury:

1. I am personally familiar with the facts stated in this Affidavit and, if sworn as a witness, am competent to testify to them as well.

2. I am a registered voter in the State of Michigan.

3. I checked the voter records for my deceased son's name (Mark D. Chase) and it showed that he had voted twice since he passed away. Once when he was 38 years old (age he passed away but in July) and once when he was 42 years old which would have been this election.

Dated: November 7, 2020

Anita Chase
Anita Chase

Subscribed and sworn to before me on:
/s/ Dawn L Colson
Notary public, State of Michigan, County of: MACOMB
My commission expires: 12/21/2025

DAWN L COLSON
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF MACOMB
My Commission Expires Dec. 21, 2025
Acting in the County of MACOMB

EXHIBIT 4

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, Jr.,

Plaintiff,

-vs-

CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,

Defendants.

_____/

COMPLAINT AND APPLICATION FOR SPECIAL LEAVE TO FILE QUO WARRANTO COMPLAINT

EXPEDITED CONSIDERATION REQUESTED

FILE NO: 20-_____-AW

JUDGE

David A. Kallman (P34200)
Erin E. Mersino (P70886)
Jack C. Jordan (P46551)
Stephen P. Kallman (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

There is no other pending or resolved civil action arising out of the same transaction or occurrence as alleged in the complaint.

APPLICATION FOR SPECIAL LEAVE TO FILE QUO WARRANTO COMPLAINT

NOW COMES the above-named Plaintiffs, **CHERYL A. COSTANTINO AND EDWARD P. MCCALL, JR.,** by and through their attorneys, **GREAT LAKES JUSTICE CENTER**, and for their application for leave to file a complaint for quo warranto relief, and for their complaint, hereby states as follows:

1. Pursuant to MCL 600.4545(2), Plaintiffs respectfully request that this Honorable Court grant them special leave to file Counts II and III of this complaint for quo warranto for all the reasons as stated in their complaint, motion for temporary restraining order, supporting affidavits, exhibits, and accompanying brief, which are all incorporated herein by reference.

2. Plaintiffs request this relief as recognized in *Shoemaker v City of Southgate*, 24 Mich App 676, 680 (1970).

WHEREFORE, Plaintiffs request that his application for special leave to file Counts II and III of this complaint for quo warranto relief be granted and that this Honorable Court grant such other and further relief as appropriate.

Dated: November 8, 2020.

/s/ David A. Kallman
David A. Kallman (P34200)
Attorney for Plaintiffs

COMPLAINT

NOW COMES the above-named Plaintiffs, **CHERYL A. COSTANTINO AND EDWARD P. MCCALL, JR.** (hereinafter "Plaintiff"), by and through their attorneys, **GREAT LAKES JUSTICE CENTER**, and for their Complaint hereby states as follows:

INTRODUCTION

1. The election was held on November 3, 2020 and approximately 850,000 votes were

reported as cast in Wayne County, Michigan.

2. Plaintiff brings this action to raise numerous issues of fraud and misconduct that occurred in order to protect the rights of all voters in Michigan, especially Wayne County.

3. In summary, this Complaint raises numerous instances of fraud, including, but not limited to:

a. Defendants systematically processed and counted ballots from voters whose name failed to appear in either the Qualified Voter File (QVF) or in the supplemental sheets. When a voter's name could not be found, the election worker assigned the ballot to a random name already in the QVF to a person who had not voted.

b. Defendants instructed election workers to not verify signatures on absentee ballots, to backdate absentee ballots, and to process such ballots regardless of their validity.

c. After election officials announced the last absentee ballots had been received, another batch of unsecured and unsealed ballots, without envelopes, arrived in trays at the TCF Center. There were tens of thousands of these absentee ballots, and apparently every ballot was counted and attributed only to Democratic candidates.

d. Defendants instructed election workers to process ballots that appeared after the election deadline and to falsely report that those ballots had been received prior to November 3, 2020 deadline.

e. Defendants systematically used false information to process ballots, such as using incorrect or false birthdays. Many times, the election workers inserted new names into the QVF after the election and recorded these new voters as having a birthdate of 1/1/1900.

f. On a daily basis leading up to the election, City of Detroit election workers and

employees coached voters to vote for Joe Biden and the Democrat party. These workers and employees encouraged voters to do a straight Democrat ballot. These election workers and employees went over to the voting booths with voters in order to watch them vote and coach them for whom to vote.

g. Unsecured ballots arrived at the TCF Center loading garage, not in sealed ballot boxes, without any chain of custody, and without envelopes.

h. Defendant election officials and workers refused to record challenges to their processes and removed challengers from the site if they politely voiced a challenge.

i. After poll challengers started discovering the fraud taking place at the TCF Center, Defendant election officials and workers locked credentialed challengers out of the counting room so they could not observe the process, during which time tens of thousands of ballots were processed.

j. Defendant election officials and workers allowed ballots to be duplicated by hand without allowing poll challengers to check if the duplication was accurate. In fact, election officials and workers repeatedly obstructed poll challengers from observing. Defendants permitted thousands of ballots to be filled out by hand and duplicated on site without oversight from poll challengers.

PARTIES, JURISDICTION, AND VENUE

4. Plaintiff Cheryl A. Costantino is a resident of Wayne County, voted in the November 3, 2020 election, and was a poll challenger.

5. Plaintiff Edward P. McCall, Jr. is a resident of Wayne County, voted in the November 3, 2020 election, and was a poll challenger.

6. Defendant City of Detroit is a municipality located in Wayne County tasked with

the obligation to hold all elections in a fair and legal manner.

7. Defendant Election Commission is a department of the City of Detroit.

8. Janice M. Winfrey, in her official capacity, is Clerk of the Defendant City of Detroit and the Chairman of the Defendant Detroit City Election Commission and is the city official who oversees and supervises all elections in the City of Detroit.

9. Cathy M. Garrett, in her official capacity, is the Clerk of Defendant Wayne County, and is the county official who oversees and supervises all elections in Wayne County.

10. Defendant Wayne County Board of Canvassers is the appointed body that is responsible for canvassing the votes cast within the county they serve. The Board members certify elections for all local, countywide and district offices which are contained entirely within the county they serve.

11. This action is properly filed in Wayne County Circuit Court pursuant to MCR 3.306(A)(2), Mich. Const. art. 2, sec. 4, par. 1(h), MCL 600.4545, and MCL 600.605. Venue is proper pursuant to MCR 3.306(D).

GENERAL ALLEGATIONS

12. Wayne County used the TCF Center in downtown Detroit to consolidate, collect, and tabulate all of the ballots for the County.

13. The TCF Center was the only facility within Wayne County authorized to count the ballots.

Forging Ballots on the Qualified Voter List

14. An attorney and former Michigan Assistant Attorney General was a certified poll challenger at the TCF Center (Exhibit A – Affidavit of Zachary Larsen).

15. As Mr. Larsen watched the process, he was concerned that ballots were being

processed without confirmation that the voter was an eligible voter in the poll book because of information he had received from other poll challengers (Exhibit A).

16. Mr. Larsen reviewed the running list of scanned in ballots in the computer system, where it appeared that the voter had already been counted as having voted. An official operating the computer then appeared to assign this ballot to a different voter as he observed a completely different name that was added to the list of voters at the bottom of a running tab of processed ballots on the right side of the screen (Exhibit A).

17. Mr. Larsen was concerned that this practice of assigning names and numbers indicated that a ballot was being counted for a non-eligible voter who was not in either the poll book or the supplemental poll book. From his observation of the computer screen, the voters were not in the official poll book. Moreover, this appeared to be the case for the majority of the voters whose ballots he personally observed being scanned (Exhibit A).

18. Because of Mr. Larsen's concern, he stepped behind the table and walked over to a spot behind where the first official was conducting her work. Understanding health concerns due to COVID-19, he attempted to stand as far away from this official as he reasonably could while also being able to visually observe the names on the supplemental poll book and on the envelopes (Exhibit A).

19. As soon as Mr. Larsen moved to a location where he could observe the process by which the first official at this table was confirming the eligibility of the voters to vote, the first official immediately stopped working and glared at him. He stood still until she began to loudly and aggressively tell him that he could not stand where he was standing. She indicated that he needed to remain in front of the computer screen where he could not see what the worker was doing (Exhibit A).

20. Both officials then began to tell Mr. Larsen that because of COVID, he needed to be six feet away from the table. He responded that he could not see and read the supplemental poll book from six feet away, and that he was attempting to keep his distance to the extent possible (Exhibit A).

21. Just minutes before at another table, a supervisor had explained that the rules allowed Mr. Larsen to visually observe what he needed to see and then step back away. Likewise, on Election Day, he had been allowed to stand at equivalent distance from poll books in Lansing and East Lansing precincts without any problem. With this understanding, he remained in a position to observe the supplemental poll book (Exhibit A).

22. Both officials indicated that Mr. Larsen could not remain in a position that would allow him to observe their activities; the officials indicated they were going to get their supervisor (Exhibit A).

23. When the supervisor arrived, she reiterated that Mr. Larsen was not allowed to stand behind the official with the supplemental poll book, and he needed to stand in front of the computer screen. Mr. Larsen told her that was not true, and that he was statutorily allowed to observe the process, including the poll book (Exhibit A).

24. The supervisor then pivoted to arguing that Mr. Larsen was not six feet away from the first official. Mr. Larsen told her that he was attempting to remain as far away as he could while still being able to read the names on the poll book (Exhibit A).

25. The supervisor then stood next to the chair immediately to the left of the first official and indicated that Mr. Larsen was "not six feet away from" the supervisor and that she intended to sit in the chair next to the official with the poll book, so he would need to leave (Exhibit A).

26. This supervisor had not been at the table at any time during the process, and she had responsibility for numerous ACVBs. Further, the supervisor's choice of chairs was approximately three feet to the left of the first official and therefore in violation of the six-foot distance rule (Exhibit A).

27. Accordingly, Mr. Larsen understood that this was a ruse to keep him away from a place where he could observe the confirmation of names in the supplemental poll book. The supervisor began to repeatedly tell him that he "needed to leave" so he responded that he would go speak with someone else and fill out a challenge form (Exhibit A).

28. After Mr. Larsen observed and uncovered the fraud that was taking place and had the confrontation with the supervisor, he left the counting room to consult with another attorney about the matter around 1:30 p.m. to 2:00 p.m. (Exhibit A).

29. It was at this point that election officials stopped permitting any further poll challengers to enter the counting room, including Mr. Larsen (Exhibit A).

30. Election officials never allowed Mr. Larsen to re-enter the counting room to fulfill his duties as a poll challenger after he had discovered the fraud which was taking place.

Illegal Voter Coaching and Identification Issues

31. An election employee with the City of Detroit was working at a polling location for approximately three weeks prior to the election. This City of Detroit employee directly observed, on a daily basis, other City of Detroit election workers and employees coaching voters to vote for Joe Biden and the Democrat party. This employee witnessed these workers and employees encouraging voters to do a straight Democrat ballot and witnessed these election workers and employees going over to the voting booths with voters in order to watch them vote and coach them for whom to vote (Exhibit B – Affidavit of Jessy Jacob).

32. During the last two weeks while this same employee was working at the polling location, she was specifically instructed by her supervisor never to ask for a driver's license or any photo I.D. when a person was trying to vote (Exhibit B).

Changing Dates on Ballots

33. All absentee ballots that existed were required to be inputted into the QVF system by 9:00 p.m. on November 3, 2020. This was required to be done in order to have a final list of absentee voters who returned their ballots prior to 8:00 p.m. on November 3, 2020. In order to have enough time to process the absentee ballots, all polling locations were instructed to collect the absentee ballots from the drop-box once every hour on November 3, 2020 (Exhibit B).

34. On November 4, 2020, a City of Detroit election worker was instructed to improperly pre-date the absentee ballots receive date that were not in the QVF as if they had been received on or before November 3, 2020. She was told to alter the information in the QVF to falsely show that the absentee ballots had been received in time to be valid. She estimates that this was done to thousands of ballots (Exhibit B).

Illegal Double Voting

35. The election employee observed a large number of people who came to the satellite location to vote in-person, but they had already applied for an absentee ballot. These people were allowed to vote in-person and were not required to return the mailed absentee ballot or sign an affidavit that the voter lost the mailed absentee ballot (Exhibit B).

36. This would permit a person to vote in person and also send in his/her absentee ballot.

37. Prior to the election, the Michigan Secretary of State sent ballot applications to deceased residents and to non-residents of the State of Michigan.

First Round of New Ballots

38. At approximately 4:00 a.m. on November 4, 2020, tens of thousands of ballots were suddenly brought into the counting room through the back door (Exhibit C – Affidavit of Andrew Sitto).

39. These new ballots were brought to the TCF Center by vehicles with out-of-state license plates (Exhibit C).

40. It was observed that all of these new ballots were cast for Joe Biden (Exhibit C).

Second Round of New Ballots

41. The ballot counters were required to check every ballot to confirm that the name on the ballot matched the name on the electronic poll list; this was the list of all persons who had registered to vote on or before November 1, 2020 and is often referred to as the QVF (Exhibit D - Affidavit of Bob Cushman)

42. The ballot counters were also provided with Supplemental Sheets which had the names of all persons who had registered to vote on either November 2, 2020 or November 3, 2020 (Exhibit C).

43. The validation process for a ballot requires the name on the ballot to be matched with a registered voter on either the QVF or the Supplemental Sheets.

44. At approximately 9:00 p.m. on Wednesday, November 4, 2020, numerous boxes of ballots were brought to TCF Center (Exhibit D).

45. Upon information and belief, the Wayne County Clerk's office instructed the ballot counters to use the date of birth of January 1, 1900 on all of these newly appearing ballots.

46. None of the names of these new ballots corresponded with any registered voter on

the QVF or the Supplemental Sheets (Exhibit D).

47. Despite election rules that required that all absentee ballots be inputted into the QVF system before 9:00 p.m. on November 3, 2020 (Exhibit B), the election workers inputted all of these new ballots into the QVF and manually added each voter to the list after 9:00 p.m. (Exhibit D).

48. Upon information and belief, the vast majority of these new ballots indicated the voter's date of birth as January 1, 1900 entered into the QVF (Exhibit D).

49. These newly received ballots were either fraudulent or apparently cast by persons who were not registered to vote prior to the polls closing at 8:00 p.m. on November 3, 2020.

No Transparency - Denied Access

50. Numerous election challengers were denied access to observe the counting process by the Defendants.

51. After denying access to the counting rooms, election officials used large pieces of cardboard to block the windows to the counting room thereby preventing anyone from watching the ballot counting process (Exhibit C).

Qualified Voter File Access

52. Whenever an absentee vote application or in-person absentee voter registration was finished, election workers were instructed to input the voter's name, address, and date of birth into the QVF system (Exhibit B).

53. The QVF system can be accessed and edited by any election processor with proper credentials in the State of Michigan at any time and from any location with internet access (Exhibit B).

54. This access permits anyone with the proper credentials to edit when ballots were

sent, received, and processed from any location with internet access (Exhibit B).

55. Many of the counting computers within the counting room had icons that indicated that they were connected to the internet (Exhibit F – Affidavit of Patrick J. Colbeck).

Absentee Ballot Signatures

56. Whenever a person requested an absentee ballot either by mail or in-person, that person was required to sign the absentee voter application.

57. When the voter returned his/her absentee ballot to be counted, the voter was required to sign the outside of the envelope that contained the ballot.

58. Election officials who process absentee ballots are required to compare the signature on the absentee ballot application with the signature on the absentee ballot envelope.

59. Election officials at the TCF Center instructed workers to never validate or compare the signatures on absentee applications and the absentee envelopes to ensure their authenticity and validity (Exhibit B).

Unsecured Ballots

60. A poll challenger witnessed tens of thousands of ballots being delivered to the TCF Center that were not in any approved, sealed, or tamper-proof container (Exhibit E – Affidavit of Daniel Gustafson).

61. Large quantities of ballots were delivered to the TCF Center in what appeared to be mail bins with open tops (Exhibit E).

62. Contrary to law, these ballot bins and containers did not have lids, were not sealed, and did not have the capability of having a metal seal (Exhibit E).

COUNT I – CONSTITUTIONAL RIGHT TO ACCURACY AND INTEGRITY OF ELECTIONS
MICHIGAN CONSTITUTION – ARTICLE 2, SECTION 4, PARAGRAPH 1(H)

63. Paragraphs 1 through 62 are hereby incorporated by reference as if fully restated

herein.

64. Plaintiff brings this action to vindicate his constitutional right to a free and fair election ensuring the accuracy and integrity of the process pursuant to the Michigan Constitution, art. 2, sec. 4, par. 1(h), which states all Michigan citizens have:

> The right to have the results of statewide elections audited, in such a manner as prescribed by law, to ensure the accuracy and integrity of elections.

65. The Mich. Const., art. 2, sec. 4, further states, "All rights set forth in this subsection shall be self-executing. This subsection shall be liberally construed in favor of voters' rights in order to effectuate its purposes."

66. Based upon all the allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to enjoin the certification of the election results pending a full investigation and court hearing, and to order an independent audit of the November 3, 2020 election to ensure the accuracy and integrity of the election.

COUNT II – STATUTORY QUO WARRANTO CLAIM – ELECTION FRAUD
MCL 600.4545(2); MCL 168.861

67. Paragraphs 1 through 66 are hereby incorporated by reference as if fully restated herein.

68. MCL 600.4545(2) permits an action to request the issuance of a writ of quo warranto if the action is brought within 30 days after the election upon the request of "any citizen of the county by special leave of the court or a judge thereof."

69. The statute also requires this action to "be brought against the municipality wherein such fraud or error is alleged to have been committed."

70. Quo Warranto may be brought to remedy fraudulent or illegal voting or tampering with ballots or ballot boxes before a recount pursuant to MCL 168.861, which states,

> For fraudulent or illegal voting, or tampering with the ballots or ballot boxes before a recount by the board of county canvassers, the remedy by quo warranto shall remain in full force, together with any other remedies now existing.

71. Based upon the allegations contained herein, material fraud or error occurred in this election so that the outcome of the election was affected.

72. Based upon the above allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to issue a writ of quo warranto and order appropriate relief, including, but not limited to, enjoining the certification of the election results pending a full investigation and court hearing, ordering a recount of the election results, or voiding the election and ordering a new election, to remedy the fraud.

COUNT III – COMMON LAW QUO WARRANTO CLAIM – ELECTION FRAUD

73. Paragraphs 1 through 72 are hereby incorporated by reference as if fully restated herein.

74. MCR 3.306(B)(2) permits an action to request the issuance of a writ of quo warranto.

75. An application to proceed by quo warranto must disclose sufficient facts and grounds and sufficient apparent merit to justify further inquiry.

76. Quo warranto is warranted whenever it appears that material fraud or error has been committed at any election. This type of action is brought to challenge the validity of the election itself. *Barrow v Detroit Mayor*, 290 Mich App 530, 543 (2010). For all the reasons stated herein and in the attached affidavits, material fraud or error was committed during the election.

77. This Quo Warranto claim is brought to remedy fraudulent or illegal voting or tampering with ballots or ballot boxes.

78. Based upon the allegations contained herein, material fraud or error occurred in this

election so that the outcome of the election was affected.

79. Based upon the above allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to issue a writ of quo warranto and order appropriate relief, including, but not limited to, enjoining the certification of the election results pending a full investigation and court hearing, ordering a recount of the election results, or voiding the election and ordering a new election, to remedy the fraud.

COUNT IV – EQUAL PROTECTION VIOLATION
Mich Const, art I, § 2.

80. Paragraphs 1 through 79 are hereby incorporated by reference as if fully restated herein.

81. The Equal Protection Clause of the Michigan Constitution provides that "[n]o person shall be denied the equal protection of the laws; nor shall any person be denied the enjoyment of his civil or political rights." Mich Const, art I, § 2.

82. The right to vote is a fundamental civil right and a political right.

83. The Equal Protection Clause forbids election officials granting the right to vote on equal terms but later devaluing a person's vote through failing to use specific standards and uniform rules.

84. Only specific standards and uniform rules provide sufficient guarantees of equal treatment.

85. Every person has the right to vote, with their vote counted as one vote, and not have his or her vote diluted and voided out by the counting of an illegal vote.

86. Defendants handling of the election, as described above and as described in the attached affidavits, establish how rampant and systemic fraud devalued and diluted Plaintiff's civil and political rights.

87. The illegal procedures, illegal standards, and illegal treatment of the ballots and the counting of ballots in Wayne County and in Detroit employed by Defendants unconstitutionally burden the fundamental right to vote.

88. Defendants have no legitimate interest in counting illegal and improper ballots, counting ballots more than once, illegally correcting and improperly duplicating ballots, adding false birthdates and voter information to ballots, and improperly handling the collection and counting of ballots in a way that dilutes and cancels out rightfully and properly cast votes.

89. Based upon the above allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to order appropriate relief, including, but not limited to, enjoining the certification of the election results pending a full investigation and court hearing, ordering a recount of the election results, or voiding the election and ordering a new election, to remedy the fraud.

COUNT V – STATUTORY ELECTION LAW VIOLATIONS

90. Paragraphs 1 through 89 are hereby incorporated by reference as if fully restated herein.

Violation of MCL 168.765a.

91. Absent voter ballots must only be counted when "at all times" there is "at least 1 election inspector from each major political party." MCL 168.765a.

92. Per eyewitness accounts described in this Complaint and its attached sworn affidavits, Defendants habitually and systematically disallowed election inspectors from the Republican party, including Plaintiff, to be present in the voter counting place and refused access to election inspectors from the Republican party, including Plaintiff, to be within a close enough distance from the absent voter ballots to be able to see for whom the ballots were

cast.

93. Defendants refused entry to official election inspectors from the Republican party, including Plaintiff, into the counting place to observe the counting of absentee voter ballots. Defendants even physically blocked and obstructed election inspectors from the Republican party, including Plaintiff, by adhering large pieces of cardboard to the transparent glass doors so the counting of absent voter ballots was not viewable.

Violation of MCL 168.733

94. MCL 168.733 requires:

> (1) The board of election inspectors shall provide space for the challengers within the polling place that enables the challengers to observe the election procedure and each person applying to vote. A challenger may do 1 or more of the following:
>
> (a) Under the scrutiny of an election inspector, inspect without handling the poll books as ballots are issued to electors and the electors' names being entered in the poll book.
>
> (b) Observe the manner in which the duties of the election inspectors are being performed.
>
> (c) Challenge the voting rights of a person who the challenger has good reason to believe is not a registered elector.
>
> (d) Challenge an election procedure that is not being properly performed.
>
> (e) Bring to an election inspector's attention any of the following:
>
> (i) Improper handling of a ballot by an elector or election inspector.
>
> (ii) A violation of a regulation made by the board of election inspectors pursuant to section 742.
>
> (iii) Campaigning being performed by an election inspector or other person in violation of section 744.
>
> (iv) A violation of election law or other prescribed election procedure.
>
> (f) Remain during the canvass of votes and until the statement of returns is duly signed and made.
>
> (g) Examine without handling each ballot as it is being counted.
>
> (h) Keep records of votes cast and other election procedures as the challenger desires.

(i) Observe the recording of absent voter ballots on voting machines.

95. Per eyewitness accounts described in this Complaint and its attached sworn affidavits, Defendants habitually and systematically failed to provide space for election inspectors from the Republican party, including Plaintiff, to observe election procedure, failed to allow the inspection of poll books, failed to share the names of the electors being entered in the poll books, failed to allow the examination of each ballot as it was being counted, and failed to keep records of obvious and observed fraud.

96. Poll challengers, including Plaintiff, observed election workers and supervisors writing on ballots themselves to alter them, apparently manipulating spoiled ballots by hand and then counting the ballots as valid, counting the same ballot more than once, adding information to incomplete affidavits accompanying absentee ballots, counting absentee ballots returned late, counting unvalidated and unreliable ballots, and counting the ballots of "voters" who had no recorded birthdates and were not registered in the State's Qualified Voter File or on any Supplemental voter lists.

97. Michigan law requires that in order to register as an absentee voter, the application must be made in writing and received by the clerk by 5pm on the Friday before the election.

Violation of MCL 168.765(5)

98. Michigan election law, MCL 168.765(5), requires Defendants to post the following absentee voting information anytime an election is conducted which involves a state or federal office:

a. The clerk must post before 8:00 a.m. on Election Day: 1) the number of absent voter ballots distributed to absent voters 2) the number of absent voter ballots returned before Election Day and 3) the number of absent voter ballots delivered for processing.

b. The clerk must post before 9:00 p.m. on Election Day: 1) the number of absent voter ballots returned on Election Day 2) the number of absent voter ballots returned on Election Day which were delivered for processing 3) the total number of absent voter ballots returned both before and on Election Day and 4) the total number of absent voter ballots returned both before and on Election Day which were delivered for processing.

c. The clerk must post immediately after all precinct returns are complete: 1) the total number of absent voter ballots returned by voters and 2) the total number of absent voter ballots received for processing.

99. Upon information and belief, Defendants failed to post by 8:00 a.m. on Election Day the number of absentee ballots distributed to absent voters and failed to post before 9:00 p.m. the number of absent voters returned before on Election Day.

100. Per Michigan Election law, all absentee voter ballots must be returned to the clerk before polls close at 8pm. MCL 168.764a. Any absentee voter ballots received by the clerk after the close of the polls on election day will not be counted.

101. Michigan allows for early counting of absentee votes prior to the closings of the polls for large jurisdictions, such as the City of Detroit and Wayne County.

102. Upon information and belief, receiving tens of thousands additional absentee ballots in the early morning hours after election day and after the counting of the absentee ballots had concluded, without proper oversight, with tens of thousands of ballots attributed to just one candidate, Joe Biden, indicates Defendants failed to follow proper election protocol.

103. Based upon the above allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to order appropriate relief, including, but not limited to, enjoining the certification of the election results pending a full investigation and court hearing, ordering a recount of the election results, or voiding the election and ordering a new election, to remedy the fraud.

WHEREFORE, Plaintiff respectfully requests that this Honorable Court:

A. issue an order requiring Defendants to conduct an independent and non-partisan audit to determine the accuracy and integrity of the November 3, 2020 election;

B. issue an *ex-parte* TRO prohibiting Defendants' from certifying the election results or continuing to count ballots until this matter can be heard by the Court.

C. issue an preliminary injunction prohibiting Defendants' from certifying the election results until this matter can be heard by the Court.

D. issue an order voiding the November 3, 2020 election results and order a new election to be held.

E. Issue a protective order as requested in the attached Motion for TRO.

F. grant such other and further relief as is equitable and just, and grant him costs, expenses and attorney fees incurred in having to bring this action.

I HEREBY STATE AND AFFIRM THAT I HAVE HAD READ THE FOREGOING COMPLAINT AND THAT IT IS TRUE AND ACCURATE TO THE BEST OF MY INFORMATION, KNOWLEDGE, AND BELIEF.

Dated: November 8, 2020.

Cheryl A. Constantino, Plaintiff

Dated: November 8, 2020.

Edward P. McCall

Edward P. McCall, Plaintiff

Prepared By:

/s/ David A. Kallman

David A. Kallman	(P34200)
Stephen P. Kallman	(P75622)
Jack C. Jordan	(P46551)
Erin E. Mersino	(P70886)
Attorneys for Plaintiff	

Great Lakes Justice Center

EXHIBIT 3

I HEREBY STATE AND AFFIRM THAT I HAVE HAD READ THE FOREGOING COMPLAINT AND THAT IT IS TRUE AND ACCURATE TO THE BEST OF MY INFORMATION, KNOWLEDGE, AND BELIEF.

Dated: November 8, 2020.

Cheryl A. Costantino, Plaintiff

Dated: November 8, 2020.

Edward P. McCall, Plaintiff

Prepared By:

/s/ David A. Kallman

David A. Kallman	(P34200)
Stephen P. Kallman	(P75622)
Jack C. Jordan	(P46551)
Erin E. Mersino	(P70886)
Attorneys for Plaintiff	

Great Lakes Justice Center

EXHIBIT 3

EXHIBIT A

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, JR.,

Plaintiff,

-vs-

CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,

Defendants.

AFFIDAVIT OF ZACHARY LARSEN

FILE NO: 20-_____-AW

JUDGE

David A. Kallman (P34200)
Erin E. Mersino (P70886)
Jack C. Jordan (P46551)
Stephen P. Kallman (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

AFFIDAVIT

The Affiant, Zachary Larsen, being first duly sworn, hereby deposes and states as follows:

1. My name is Zachary Larsen, I am over the age of eighteen, have personal knowledge of the facts stated in this Affidavit and, if sworn as a witness, I am competent to testify to these facts.

2. I am an attorney in private practice and licensed in the State of Michigan. Prior to my entry into private practice, I served as an Assistant Attorney General for eight years from January 2012 through January 2020, where I was recognized with an award for the quality of my work and served the state on several high-priority litigation matters.

3. In September 2020, I volunteered to serve as a poll challenger for the Michigan Republic Party's election day operations to ensure the integrity of the vote and conformity of the election process to the election laws of Michigan.

4. In preparation for my service, I attended an elections training, reviewed materials relating to the conduct of elections, and read pertinent sections of Michigan's election law.

5. On Election Day, Tuesday, November 3, 2020, I served as a roving attorney and credentialed poll challenger with a group of attorneys and visited approximately 20-30 voting precincts in Lansing, East Lansing, and Williamston, Michigan to confirm that the election was conducted in accordance with law, and on a few occasions, to address complaints raised by specific voters.

6. During my visits to precincts on Election Day, I was allowed to visually inspect the poll book without touching it at every precinct where we asked to review it. In each instance, I was allowed to stand a respectful distance behind the election officials while remaining close enough to read relevant names and numbers.

7. The following day, on Wednesday, November 4, 2020, I arrived at the former Cobo Center, now known as the TCF Center, in Detroit, Michigan to serve as a poll challenger for the absent voter count occurring in Detroit and arrived between 9:30 and 9:45 a.m.

8. Prior to my admission to the floor where the absent voter count was occurring, I received credentials from the Michigan Republican Party and further instruction regarding the process for handling ballots at absent voter counting boards ("AVCBs").

9. Thereafter, I received a temperature scan from election officials that confirmed I did not have an elevated temperature. I arrived inside, and I was "checked in" by an election official who reviewed my driver's license and confirmed my credentials and eligibility to serve as a challenger. I was admitted at approximately 10:30 a.m.

10. When I arrived at a counting table and began to observe the process, I noticed immediately that part of the process that was being implemented did not conform to what I had been told in my training and the materials that I had received.

11. Specifically, the information I had received described the process that was supposed to be occurring at the tables as follows.

12. A first election official would scan a ballot. If the scan did not confirm a voter in the poll book, that official would then check the voter against a paper copy "supplemental poll book."

13. The official would then read the ballot number to a second election official and hand the ballot to that official, who would remove the ballot (while still in the secrecy sleeve) and confirm the ballot number. That second official would then hand the ballot (in the secrecy sleeve) to a third official who would tear the stub off of the ballot, and place the stub in a ballot stub envelope, then pass the remaining ballot to a fourth official.

14. The fourth official would then remove the ballot from the secrecy sleeve, flatten the ballot to ensure it was capable of processing, and visually inspect for rips, tears, or stains before placing the ballot in the "ballots to be tabulated box." However, if that fourth official identified a

concern, she would place the ballot back in its envelope and into a "problem ballots" box that required additional attention to determine whether they would be processed and counted. A copy of a diagram that I had received on this process is attached as Exhibit A to this affidavit.

15. What I observed immediately was that the secrecy of the ballot was not being respected.

16. Instead, the second official at the table where I was observing was repeatedly placing her fingers into the secrecy sleeve to separate the envelope and visually peek into the envelopes in a way that would allow her to visually observe the ballot and identify some of the votes cast by the voter.

17. Sometimes, the third official whose job was merely to remove the stub from the ballot would likewise remove the ballot from the secrecy sleeve or otherwise peek to observe the ballot. Sometimes a ballot would be removed completely from the secrecy sleeve and then placed back inside and passed along this process.

18. I conferred regarding this issue with another challenger at a nearby table, and he indicated he had observed similar irregularities regarding the use of the secrecy sleeves.

19. When that challenger raised the issue with a supervisor, and he was immediately asked "why does it matter?" and "what difference does it make?"

20. Beyond the legal requirements for maintaining ballot secrecy, both of us were concerned that the violations of the secrecy of the ballot that we witnessed could be or were being used to manipulate which ballots were placed in the "problem ballots" box.

21. Later that morning, at another table, a challenger identified concerns that ballots were being placed into "problem ballots" boxes purportedly based on the reason that the voter had failed to place the ballot in the secrecy sleeve, while other ballots at the same table were being

passed along and placed into the "ballots to be tabulated" box that also did not have secrecy sleeves.

22. I personally observed that several ballots were placed into the "problem ballots" boxed and marked with a sticky note indicating that they were "problem ballots" merely because of the lack of a secrecy sleeve.

23. When I spoke with a supervisor regarding this issue, he explained that these ballots were being placed in the "problem ballots" box for efficiency.

24. From my experience at the first table I had visited (addressed in Paragraphs 15 through 17 above), I had also witnessed ballots that were placed into the "ballots to be tabulated" box that had arrived without a secrecy sleeve. So the differentiation among these ballots despite both ballots arriving in secrecy sleeves was perplexing and again raised concerns that some ballots were being marked as "problem ballots" based on who the person had voted for rather than on any legitimate concern about the ability to count and process the ballot appropriately.

25. Just before noon, I arrived at another table (which I later contemporaneously noted as AVCB # 23), and I conferred with the Republican challenger who had been observing the process from a viewing screen and watching the response of the computer system as ballots were scanned by the first official.

26. I asked the challenger if she had observed anything of concern, and she immediately noted that she had seen many ballots scanned that did not register in the poll book but that were nonetheless processed. Because she needed to leave for lunch, I agreed to watch her table.

27. As I watched the process, I was sensitive to her concern that ballots were being processed without confirmation that the voter was an eligible voter in the poll book, so I stood at the monitor and watched.

28. The first ballot scanned came in as a match to an eligible voter. But the next several ballots that were scanned did not match any eligible voter in the poll book.

29. When the scan came up empty, the first official would type in the name "Pope" that brought up a voter by that last name.

30. I reviewed the running list of scanned in ballots in the computer system, and it appeared that the voter had already been counted as having voted. Then the first official appeared to assign a number to a different voter as I observed a completely different name that was added to the list of voters at the bottom of a running tab of processed ballots on the right side of the screen.

31. That same official would then make a handwritten notation on her "supplemental poll book," which was a hard copy list that she had in front of her at the table.

32. The supplemental poll book appeared to be a relatively small list.

33. I was concerned that this practice of assigning names and numbers indicated that a ballot was being counted for a non-eligible voter who was not in either the poll book or the supplemental poll book. From my observation of the computer screen, the voters were certainly not in the official poll book. Moreover, this appeared to be the case for the majority of the voters whose ballots I had personally observed being scanned.

34. Because of this concern, I stepped behind the table and walked over to a spot behind where the first official was conducting her work.

35. Understanding health concerns due to COVID-19, I attempted to stand as far away from this official as I reasonably could while also being able to visually observe the names on the supplemental poll book and on the envelopes.

36. Partly inhibiting my ability to keep a distance, the tables were situated so that two counting tables were likely a maximum of eight feet apart. In other words, you could not stand more than four feet behind one without being less than four feet from another.

37. As soon as I moved to a location where I could observe the process by which the first official at this table was confirming the eligibility of the voters to vote, the first official immediately stopped working and glared at me. I stood still until she began to loudly and aggressively tell me that I could not stand where I was standing. She indicated that I needed to remain in front of the computer screen.

38. I responded, "Ma'am, I am allowed by statute to observe the process." As I did, a Democratic challenger ran towards me and approached within two feet of me, saying "You cannot speak to her! You are not allowed to talk to her." I responded, "Sir, she spoke to me. I was just answering her."

39. The first official again told me that the only place I was allowed to observe from was at the computer screen. A second official at the table reiterated this. I said that was not true.

40. Both officials then began to tell me that because of COVID, I needed to be six feet away from the table. I responded that I could not see and read the supplemental poll book from six feet away, but I was attempting to keep my distance to the extent possible.

41. Just minutes before at another table, a supervisor had explained that the rules allowed me to visually observe what I needed to see and then step back away. Likewise, on Election Day, I had been allowed to stand at equivalent distance from poll books in Lansing and East Lansing precincts without any problem. With this understanding, I remained in a position where I would be able to observe the supplemental poll book until I could do so for the voter whose ballots had just been scanned and did not register in the poll book.

42. Both officials indicated that I could not remain in a position that would allow me to observe their activities and they were going to get their supervisor.

43. This seemed particularly concerning because the Democratic challenger who raised concerns over my verbal response to the official had been positioned behind the second official (the one who confirms ballots as described in Paragraph 13) no further away than I was from the first official at that time and had not been stationed at the computer screen as the officials repeatedly told me was the only place that I could stay.

44. When the supervisor arrived, she reiterated that I was not allowed to stand behind the official with the supplemental poll book, and I needed to stand in front of the computer screen. I told her that was not true, and that I was statutorily allowed to observe the process, including the poll book.

45. The supervisor then pivoted to arguing that I was not six feet away from the first official. I told her I was attempting to remain as far away as I could while still being able to read the names on the poll book.

46. In an attempt to address her concerns, I took a further step away from the table and indicated I would try to keep my distance, and that I thought I was about six feet away from the first official. The supervisor then stood next to the chair immediately to the left of the first official and indicated that I was "not six feet away from" the supervisor and that she intended to sit in the chair next to the official with the poll book, so I would need to leave.

47. This supervisor had not been at the table at any time during the process, and she had responsibility for numerous ACVBs. Further, the supervisor's choice of chairs was approximately three feet to the left of the first official and therefore in violation of the six-foot distance rule.

48. Accordingly, I understood that this was a ruse to keep me away from a place where I could observe the confirmation of names in the supplemental poll book. The supervisor began to repeatedly tell me that I "needed to leave" so I responded that I would go speak with someone else or fill out a challenge form.

49. I went to find another attorney serving as a challenger and returned to discuss the matter further with the supervisor. When I returned, she reiterated her assertions and insisted that there was nowhere where I could stand in conformity with the six-foot rule that would allow me to observe the supplemental poll book. Ultimately, to avoid further conflict with the supervisor, I agreed that I would leave that counting table and move to another table.

50. Between 1:30 p.m. and 2 p.m., my colleague and I decided to return to the suite that housed the Republican challengers to get lunch. We left the counting floor and went up to the Republicans second-floor suite.

51. About 30 to 45 minutes later, an announcement was made that challengers needed to return to the floor. As we attempted to return, we were made aware that the officials admitting people had limited the number of election challengers to another 52 people who would be allowed inside. I displayed my credentials and walked up to near the door where a small crowd was gathering to be let in.

52. Shortly thereafter, a man came out to announce that no one would be let in (despite the prior announcement) because the room had reached the maximum number of challengers. As he was asked why we would not be let in, he explained that the maximum number of challengers were determined from the number of names on the sign-in sheet, regardless of how many people had left the room.

53. Many Republican challengers had left the room for lunch without signing out, including myself and my colleague. Accordingly, we were being arbitrarily "counted" towards this capacity limitation without actually being allowed into the room to observe.

54. When challengers raised this issue with the man at the door, he refused to discuss any solutions such as confirming the identify of challengers who had been previously admitted.

55. To the best of my recollection, I was never informed that if I left the room and failed to sign out that I would be refused admission or that there would be no means of confirming that I had been previously admitted.

56. The above information is true to the best of my information, knowledge, and belief.

57. Further affiant says not.

Zachary Larsen

On this 8th day of November, 2020, before me personally appeared Zachary Larsen, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that he has read the foregoing affidavit by his subscribed and knows the contents thereof, and that the same is true of his own knowledge and belief, except as to those matters he states to be on information and belief, and as to those matters he believes them to be true.

Stephen P. Kallman
Notary Public, Eaton County, Michigan
My Commission Expires: 11/26/2025

GREAT LAKES JUSTICE CENTER

EXHIBIT 3

EXHIBIT B

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, JR.,

Plaintiff,

-vs-

CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,

Defendants.

_____/

AFFIDAVIT OF JESSY JACOB

FILE NO: 20-_____-AW

JUDGE

David A. Kallman (P34200)
Erin E. Mersino (P70886)
Jack C. Jordan (P46551)
Stephen P. Kallman (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

AFFIDAVIT

The Affiant, Jessy Jacob, being first duly sworn, hereby deposes and states as follows:

1. My name is Jessy Jacob. I am an adult citizen and resident of the State of Michigan.

2. I have been an employee for the City of Detroit for decades.

3. I was assigned to work in the Elections Department for the 2020 election.

4. I received training from the City of Detroit and the State of Michigan regarding the election process.

5. I worked at the election headquarters for most of September and I started working at a satellite location for most of October, 2020.

6. I processed absentee ballot packages to be sent to voters while I worked at the election headquarters in September 2020 along with 70-80 other poll workers. I was instructed by my supervisor to adjust the mailing date of these absentee ballot packages to be dated earlier than they were actually sent. The supervisor was making announcements for all workers to engage in this practice.

7. At the satellite location, I processed voter registrations and issued absentee ballots for people to vote in person at the location.

8. I directly observed, on a daily basis, City of Detroit election workers and employees coaching and trying to coach voters to vote for Joe Biden and the Democrat party. I witnessed these workers and employees encouraging voters to do a straight Democrat ballot. I witnessed these election workers and employees going over to the voting booths with voters in order to watch them vote and coach them for whom to vote.

9. During the last two weeks while working at this satellite location, I was specifically instructed by my supervisor not to ask for a driver's license or any photo I.D. when a person was trying to vote.

10. I observed a large number of people who came to the satellite location to vote in-person, but they had already applied for an absentee ballot. These people were allowed to vote in-person and were not required to return the mailed absentee ballot or sign an affidavit that the voter lost the mailed absentee ballot.

11. Whenever I processed an absentee voter application or in-person registration, I was instructed to input the person's name, address, and date of birth into the Qualified Voter File (QVF) system.

12. The QVF system can be accessed and edited by any election processor with proper credentials in the State of Michigan at any time and from any location with internet access.

13. I worked at the satellite location until the polls closed on November 3, 2020 at 8:00 p.m. and properly completed the entry of all absentee ballots into the QVF by 8:30 p.m.

14. I then reported to work at the TCF Center on November 4, 2020, at 8:30 a.m. to process ballots. I was instructed not to validate any ballots and not to look for any deficiencies in the ballots.

15. Absentee ballots that were received in the mail would have the voter's signature on the envelope. While I was at the TCF Center, I was instructed not to look at any of the signatures on the absentee ballots, and I was instructed not to compare the signature on the absentee ballot with the signature on file.

16. All absentee ballots that existed were required to be inputted into the QVF system by 9:00 p.m. on November 3, 2020. This was required to be done in order to have a final list of absentee voters who returned their ballots prior to 8:00 p.m. on November 3, 2020. In order to have enough time to process the absentee ballots, all satellites were instructed to collect the absentee ballots from the drop-box once every hour on November 3, 2020.

17. On November 4, 2020, I was instructed to improperly pre-date the absentee ballots receive date that were not in the QVF as if they had been received on or before November 3, 2020. I was told to alter the information in the QVF to falsely show that the absentee ballots had been received in time to be valid. I estimate that this was done to thousands of ballots.

18. The above information is true to the best of my information, knowledge, and belief.

19. Further affiant says not.

Jessy Jacob

On this 7th day of November, 2020, before me personally appeared Jessy Jacob, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that she has read the foregoing affidavit by her subscribed and knows the contents thereof, and that the same is true of her own knowledge and belief, except as to those matters she states to be on information and belief, and as to those matters she believes them to be true.

Stephen P. Kallman
Notary Public, Eaton County, Michigan
My Commission Expires: 11/26/2025

GREAT LAKES JUSTICE CENTER

EXHIBIT 3

EXHIBIT C

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, Jr.,

Plaintiff,

-vs-

CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,

Defendants.

AFFIDAVIT OF ANDREW SITTO

FILE NO: 20-_____-AW

JUDGE

David A. Kallman (P34200)
Erin E. Mersino (P70886)
Jack C. Jordan (P46551)
Stephen P. Kallman (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

AFFIDAVIT

The Affiant, Andrew Sitto, being first duly sworn, hereby deposes and states as follows:

1. My name is Andrew Sitto and I was a poll challenger for the November 3, 2020 election.

2. I arrived at the TCF Center at 9:30 p.m. on November 3, 2020.

3. I reported to the counting room, which is a large room on the main floor of the TCF Center. The room is about 100 yards long and about 50 yards wide with windows.

4. The poll challengers watch the counters who were sitting at tables comparing paper ballots to Michigan electronic poll book or registered voter list (sometimes called the QVF) on computer screens. Each counter compares the ballot to an electronic database on his/her computer to determine if the ballot correlates to a person who is registered to vote.

5. I was standing in the center of the room where there were replacement or duplicate ballots for damaged ballots. I remained in this location from about 10:00 p.m. until about 4:30 a.m. If a counter needed a duplicate ballot, they would come to this central location to take a duplicate ballot.

6. At approximately 4:30 a.m., I thought everyone was going to go home as our shift had ended.

7. There were two men in charge of the counting, one in his 30s and one in his 50s.

8. At approximately 4:30 a.m., on November 4, 2020, the man in his 50s got on the microphone and stated that another shipment of absentee ballots would be arriving and would have to be counted.

9. I heard other challengers say that several vehicles with out-of-state license plates pulled up to the TCF Center a little before 4:30 a.m. and unloaded boxes of ballots.

10. At approximately 4:30 a.m., tens of thousands of ballots were brought in and placed on eight long tables. Unlike the other ballots, these boxes were brought in from the rear of the room.

11. The same procedure was performed on the ballots that arrived at approximately 4:30 a.m., but I specifically noticed that every ballot I observed was cast for Joe Biden.

12. While counting these new ballots, I heard counters say at least five or six times that all five or six ballots were for Joe Biden. All ballots sampled that I heard and observed were for Joe Biden.

13. There was a shift change at 5:00 a.m. for the poll challengers. Many challengers decided to leave at the 5:00 a.m. shift change. I decided not to leave and continued to monitor the ballot counting.

14. Upon information and belief, the TCF Center was the only place where absentee ballots were being counted.

14. Upon information and belief, the TCF Center was the only place where absentee ballots were being counted.

15. I filled out about six or seven incident reports about what occurred at the TCF Center.

16. At approximately 2:00 p.m. on November 4, 2020, election officials covered windows to the counting room with cardboard to block the view.

17. A little after 2:00 p.m., I exited the glass enclosed room to take a break in the lobby area of the TCF Center. When I tried to go back into the counting room, security guards refused to allow me back in to monitor the counting

18. Previously, people could come and go freely into the counting room.

19. The above information is true to the best of my information, knowledge, and belief.

20. Further affiant says not.

Andrew Sitto

On this 7th day of November, 2020, before me personally appeared Andrew Sitto, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that he has read the foregoing affidavit by him subscribed and knows the contents thereof, and that the same is true of his own knowledge and belief, except as to those matters he states to be on information and belief, and as to those matters he believes them to be true.

Notary Public, Macomb County, Michigan

My Commission Expires: 7/1/2027

KATHREIN ACHO
NOTARY PUBLIC
COUNTY OF MACOMB
My Commission Expires
July 1, 2027
Acting in the County of
Oakland
STATE OF MICHIGAN

EXHIBIT 3

Great Lakes Justice Center

EXHIBIT D

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, JR.,
Plaintiff,

-vs-

CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,

Defendants.
_____/

AFFIDAVIT OF ROBERT CUSHMAN

FILE NO: 20-_____-AW

JUDGE

David A. Kallman (P34200)
Erin E. Mersino (P70886)
Jack C. Jordan (P46551)
Stephen P. Kallman (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

AFFIDAVIT

The Affiant, Robert Cushman, being first duly sworn, hereby deposes and states as follows:

1. My name is Robert Cushman. I am an adult citizen and resident of the State of Michigan.

2. I served and was trained to be a poll challenger for the November 2020 election in Detroit, Michigan.

3. During my observations of the normal processing of ballots on November 4th between about 7:45 a.m. and 8:30 a.m. I was substantially obstructed from performing my challenger duties of observing and making notes at Board Number 31. The persons involved either directly or indirectly involved: 1. A worker named Joe, 2. A supervisor named Miss Browner, 3. an unknown person with no credentials, 4. a Democratic Challenger with credentials and one of the AVCB leaders named David Nathan.

4. On Wednesday, November 4, 2020, Detroit election officials told us that they were going to process military ballots last. I did my best to try to observe the processing/duplication of the military ballots.

5. On November 4, 2020, I was surprised to see numerous new boxes of ballots arrive at the TCF Center in the evening. I first noticed these boxes in the distribution area after many of the military ballots had been distributed and processed. I estimate these boxes contained several thousand new ballots when they appeared.

6. The main list of persons who had registered to vote on or before November 1, 2020, was listed on an electronic poll book, often referred to as the QVF. As I understand it, the Supplemental Sheets were the lists of persons who had registered to vote on November 2, 2020 or November 3, 2020.

7. I observed that none of the names on these new ballots were on the QVF or the Supplemental Sheets.

8. I saw the computer operators at several counting boards manually adding the names and addresses of these thousands of ballots to the QVF system.

9. When I asked what the possible justification was to counting ballots from unknown, unverified "persons," I was told by election supervisors that the Wayne County Clerk's Office had "checked them out."

10. I challenged not one ballet, but the entire process as the names were not in the QVF or Supplemental Sheets and because the DOB's were all wrong, all being marked as 01-01-1900.

11. An Election Supervisor near board number #86 advised me to go to the podium of election officials and ask one of them to help me. I did, and I enlisted the help of one of the leaders, a young man named Anthony Miller.

12. Mr. Miller walked me back to board number #86 and asked what I wanted the challenge to say. I said that I did not want to challenge just one ballot, but the entire process, as I was witnessing several thousand ballots inputted illegally.

13. Mr. Miller advised the computer operator what to type in as a challenge so that it was part of the Official Record in the Poll Book for Board Number #86.

14. I challenged the authority and the authenticity of all of these ballots that were being processed late with absolutely no accompanying documentation, no corresponding name in the QVF, and no corresponding name in the Supplemental List.

15. Every ballot was being fraudulently and manually entered into the Electronic Poll Book (QVF), as having been born on January 1, 1900. This "last" batch of ballots was processed in the 8:00 p.m. to 10:00 p.m. time frame.

16. When I asked about this impossibility of each ballot having the same birthday occurring in 1900, I was told that was the instruction that came down from the Wayne County Clerk's office.

17. Mr. Miller was very clear about these late ballots and that the instructions were coming from the Wayne County Clerk's office.

18. I was surprised and disappointed at the preponderance of dishonesty, irregularities, and fraudulent tactics at the November 3, 2020 election at the TCF Center.

19. The above information is true to the best of my information, knowledge, and belief.

20. Further affiant says not.

Robert Cushman

On this 7th day of November, 2020, before me personally appeared Robert Cushman, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that he has read the foregoing affidavit by him subscribed and knows the contents thereof, and that the same is true of his own knowledge and belief, except as to those matters he states to be on information and belief, and as to those matters he believes them to be true.

Stephen P. Kallman
Notary Public, Eaton County, Michigan
My Commission Expires: 11/26/2025

EXHIBIT 3

GREAT LAKES JUSTICE CENTER

EXHIBIT E

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, JR.,
Plaintiff,

-vs-

CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,

Defendants.
_____/

AFFIDAVIT OF DANIEL GUSTAFSON

FILE NO: 20-_____-AW

JUDGE

David A. Kallman (P34200)
Erin E. Mersino (P70886)
Jack C. Jordan (P46551)
Stephen P. Kallman (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

AFFIDAVIT

The Affiant, Daniel Gustafson, being first duly sworn, hereby deposes and states as follows:

1. My name is Daniel Gustafson. I am an adult citizen and resident of the State of Michigan.

2. I served and was trained to be a poll challenger for the November 3, 2020 election.

4. Large quantities of ballots were delivered to the TCF Center in what appeared to be mail bins with open tops.

5. These ballot bins and containers did not have lids, were not sealed, and did not have the capability of having a metal seal.

6. The ballot bins were not marked or identified in any way to indicate their source of origin.

7. The above information is true to the best of my information, knowledge, and belief.

8. Further affiant says not.

Daniel Gustafson

On this 8th day of November, 2020, before me personally appeared Daniel Gustafson, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that he has read the foregoing affidavit by him subscribed and knows the contents thereof, and that the same is true of his own knowledge and belief, except as to those matters he states to be on information and belief, and as to those matters he believes them to be true.

Stephen P. Kallman
Notary Public, Eaton County, Michigan
My Commission Expires: 11/26/2025

GREAT LAKES JUSTICE CENTER

EXHIBIT 3

EXHIBIT F

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, JR.,
Plaintiff,

-vs-

CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,

Defendants.
_____/

AFFIDAVIT OF PATRICK J. COLBECK

FILE NO: 20-_____-AW

JUDGE

David A. Kallman (P34200)
Erin E. Mersino (P70886)
Jack C. Jordan (P46551)
Stephen P. Kallman (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

AFFIDAVIT

The Affiant, Robert Cushman, being first duly sworn, hereby deposes and states as follows:

1. My name is Patrick J. Colbeck, I was a poll challenger for the November 3, 2020 election, and I am a resident of Wayne County.

2. At approximately 5:30pm on November 3, 2020, I asked Daniel Baxter if Tabulation Computers were connected to internet. Mr. Baxter said simply "No."

3. At approximately 5:45pm on November 3, 2020, I first asked Chris Thomas how the tabulated results were to be transferred to the County and other parties. He said he didn't know, but he would find out. I repeated this inquiry throughout the evening until Mr. Thomas responded that he would not be able to release that information until the end of the next day. Early during the morning, I was able to look at a copy of the Detroit Election manual which specified that the tabulated votes would be copied from the adjudicator computers to a series of flash drives.

4. At approximately 7:30pm on November 3, 2020, about 50% of Poll Workers left the AV Counting Board before 8pm in violation of MCL 168.792a(11). An announcement was made by Detroit Election Officials at 7:45pm calling them back but most had already left the AV Counting Board area.

5. At approximately 11pm on November 3, 2020, I asked David Nathan if any of the computers were connected to the internet. He said "No." When I asked for confirmation, he said "Trust me." I stated that he may have been misled. When I pressed for a demonstration, he repeated "Trust me." All it takes to confirm the connectivity status of a Windows computer is to roll the cursor over the LAN connection icon in the bottom right corner of the display. When there is no internet connection, a unique icon showing a cross-hatched globe appears. I proceeded to review the terminal screens for the Tabulator and Adjudicator computers and I observed the icon that indicates internet connection on each terminal. Other poll challengers can attest to this observation as required (e.g. Kristina Karamos and Randy Bishop).

6. Sometime during the evening I proceeded to examine the physical cabling connections between all of the computers in the facility. The results of this observation are captured in the attached network topology diagram. The IT technician stationed on the stage actively discouraged any close-up observation of the network. Phone usage ban discouraged taking photographs of equipment. There were no observed ethernet connections for Electronic Poll Books at AV Counting Boards, but Wi-Fi Routers were present with attached active Wi-Fi networks in area including one called "AV_Connect" and a separate one for "CPSStaff" which were both of sufficient signal strength to be accessed outside of the Counting Board as well as inside. I did not confirm presence of internet connection for Electronic Poll Books but the "security incident" at 10am on 11/3 would seem to indicate that they were connected to internet via Wi-Fi.

7. Further affiant says not.

Patrick J. Colbeck

GREAT LAKES JUSTICE CENTER

EXHIBIT 3

On this 8th day of November, 2020, before me personally appeared Patrick J. Colbeck, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that he has read the foregoing affidavit by him subscribed and knows the contents thereof, and that the same is true of his own knowledge and belief, except as to those matters he states to be on information and belief, and as to those matters he believes them to be true.

Patrick J Colbeck

Barbara A. Harrell

Notary Public, Oakland County, Michigan
My Commission Expires: Aug 4, 2025

BARBARA A. HARRELL
NOTARY PUBLIC, STATE OF MI
COUNTY OF OAKLAND
MY COMMISSION EXPIRES Aug 4, 2025
ACTING IN COUNTY OF Wayne

GREAT LAKES JUSTICE CENTER

EXHIBIT 3

EXHIBIT G

STATE OF MICHIGAN

COURT OF APPEALS

PROMOTE THE VOTE,

Plaintiff-Appellant,

V

SECRETARY OF STATE,

Defendant-Appellee,

and

HOUSE OF REPRESENTATIVES and SENATE,

Intervening Appellees.

FOR PUBLICATION
July 20, 2020
9:00 a.m.

No. 353977
Court of Claims
LC No. 20-000002-MZ

PRIORITIES USA and RISE, INC.,

Plaintiffs-Appellants,

V

SECRETARY OF STATE

Defendant-Appellee,

and

SENATE and HOUSE OF REPRESENTATIVES,

Intervening Defendants-Appellees.

No. 354096
Court of Claims
LC No. 19-000191-MZ

Before: METER, P.J., and RONAYNE KRAUSE and GADOLA, JJ.

METER, P.J.

EXHIBIT 3

In Docket No. 353977, plaintiff, Promote the Vote (PTV), appeals by right a June 24, 2020 order entered by the Court of Claims. In Docket No. 354096, plaintiffs, Priorities USA and Rise, Inc. (collectively, the Priorities USA plaintiffs), also appeal by right the June 24, 2020 order. The Court of Claims order denied PTV's motion for summary disposition, as well as the Priorities USA plaintiffs' motion for a preliminary injunction, and granted the motions for summary disposition of the Secretary of State (Secretary) and the Senate and House of Representatives (collectively, the Legislature). This Court consolidated the two cases and ordered that the appeals would be decided without oral arguments. *Promote the Vote v Secretary of State*, unpublished order of the Court of Appeals, entered July 8, 2020 (Docket Nos. 353977, 354096).

Priorities USA is a "voter-centric progressive advocacy and service organization," which spends resources, including in the state of Michigan, to register young individuals to vote. Rise, Inc., is a "nonprofit organization that runs statewide advocacy and voter mobilization programs" in Michigan and California, as well as on a number of campuses throughout the country. Part of its mission is to increase voting access for college students. PTV is "a ballot question committee" that drafted the language of Proposal 3, a 2018 ballot proposal to amend Michigan's Constitution, collected more than 400,000 signatures in order to get the proposal placed on the ballot, and led the campaign for the proposal's passage.

On appeal, PTV and the Priorities USA plaintiffs argue that the proof of residency requirements in MCL 168.497(2)-(4), the challenged ballot procedure in MCL 168.497(5), and the Secretary's automatic voter registration policy unduly burden the rights in 1963 Const, art 2, § (4)(1), and are therefore unconstitutional. PTV and the Priorities USA plaintiffs also argue that MCL 168.497 violates the Equal Protection Clause of the Michigan Constitution. For the reasons discussed below, we affirm.

I. LEGAL BACKGROUND

In the 2018 general election, Michigan voters approved Proposal 3, which made changes to Michigan's election law. Specifically, Proposal 3 amended 1963 Const, art 2, § 4. The article now provides:

> (1) Every citizen of the United States who is an elector qualified to vote in Michigan shall have the following rights:
>
> (a) The right, once registered, to vote a secret ballot in all elections.
>
> * * *
>
> (d) The right to be automatically registered to vote as a result of conducting business with the secretary of state regarding a driver's license or personal identification card, unless the person declines such registration.
>
> (e) The right to register to vote for an election by mailing a completed voter registration application on or before the fifteenth (15th) day before that election to an election official authorized to receive voter registration applications.

(f) The right to register to vote for an election by (1) appearing in person and submitting a completed voter registration application on or before the fifteenth (15th) day before that election to an election official authorized to receive voter registration applications, or (2) beginning on the fourteenth (14th) day before that election and continuing through the day of that election, appearing in person, submitting a completed voter registration application and providing proof of residency to an election official responsible for maintaining custody of the registration file where the person resides, or their deputies.[1] Persons registered in accordance with subsection (1)(f) shall be immediately eligible to receive a regular or absent voter ballot.

* * *

All rights set forth in this subsection shall be self-executing. This subsection shall be liberally construed in favor of voters' rights in order to effectuate its purposes. Nothing contained in this subsection shall prevent the legislature from expanding voters' rights beyond what is provided herein. This subsection and any portion hereof shall be severable. If any portion of this subsection is held invalid or unenforceable as to any person or circumstances, that invalidity or unenforceability shall not affect the validity, enforceability, or application of any other portion of this subsection.

(2) Except as otherwise provided in this constitution or in the constitution or laws of the United States[,] the legislature shall enact laws to regulate the time, place and manner of all nominations and elections, to preserve the purity of elections, to preserve the secrecy of the ballot, to guard against abuses of the elective franchise, and to provide for a system of voter registration and absentee voting. No law shall be enacted which permits a candidate in any partisan primary or partisan election to have a ballot designation except when required for identification of candidates for the same office who have the same or similar surnames.[2]

[1] We will refer to the period "beginning on the fourteenth (14th) day before that election and continuing through the day of that election" as the "14-day period."

[2] Before the passage of Proposal 3, 1963 Const, art 2, § 4 consisted of one paragraph, which was very similar to the current paragraph in § 4(2). It provided:

The legislature shall enact laws to regulate the time, place and manner of all nominations and elections, except as otherwise provided in this constitution or in the constitution and laws of the United States. The legislation shall enact laws to preserve the purity of elections, to preserve the secrecy of the ballot, to guard against abuses of the elective franchise, and to provide for a system of voter registration and absentee voting. No law shall be enacted which permits a candidate in any partisan primary or partisan election to have a ballot designation except when

Following the 2018 general election, the Legislature enacted 2018 PA 603, which amended MCL 168.497. The first five provisions of MCL 168.497 now provide:

> (1) An individual who is not registered to vote but possesses the qualifications of an elector as provided in [MCL 168.492] may apply for registration to the clerk of the county, township, or city in which he or she resides in person, during the clerk's regular business hours, or by mail or online until the fifteenth day before an election.
>
> (2) An individual who is not registered to vote but possesses the qualifications of an elector as provided in [MCL 168.492] or an individual who is not registered to vote in the city or township in which he or she is registering to vote may apply for registration in person at the city or township clerk's office of the city or township in which he or she resides from the fourteenth day before an election and continuing through the day of the election. An individual who applies to register to vote under this subsection must provide to the city or township clerk proof of residency in that city or township. For purposes of this subsection, proof of residency includes, subject to subsection (3), any of the following:
>
> (a) An operator's or chauffeur's license issued under the Michigan vehicle code, 1949 PA 300, MCL 257.1 to 257.923, or an enhanced driver license issued under the enhanced driver license and enhanced official state personal identification act, 2008 PA 23, MCL 28.301 to 28.308.
>
> (b) An official state personal identification card issued under 1972 PA 222, MCL 28.291 to 28.300, or an enhanced official state personal identification card issued under the enhanced driver license and enhanced official state personal identification card act, 2008 PA 23, MCL 28.301 to 28.308.[3]
>
> (3) If an application for voter registration under subsection (2) does not have proof of residency as that term is defined in subsection (2), the applicant may provide as his or her proof of residency any other form of identification for election

required for identification of candidates for the same offense which have the same or similar surnames.

[3] A person registering to vote in the 14-day period does not provide proof of residency simply by presenting a Michigan driver's license or personal identification card. Because the individual "must provide to the city or township clerk proof of residency in that city or township," the Michigan driver's license or personal identification card must include an address located in either the city or township. Both the Priorities USA plaintiffs and the Secretary read MCL 168.497(2) in the same manner. We will refer to a Michigan's driver's license or personal identification card that can establish proof of residency under MCL 168.497(2) as a "current Michigan driver's license or personal identification card."

purposes as that term is defined in [MCL 168.2] and 1 of the following documents that contains the applicant's name and current residence address:

(a) A current utility bill.

(b) A current bank statement.

(c) A current paycheck, government check, or other government document.

(4) If an application for voter registration under subsection (2) does not have identification for election purposes, the applicant may register to vote if he or she signs an affidavit indicating that the applicant does not have identification for election purposes and the applicant provides 1 of the following documents that contains the applicant's name and current residence address:

(a) A current utility bill.

(b) A current bank statement.

(c) A current paycheck, government check, or other government document.

(5) Immediately after approving a voter registration application, the city or township clerk shall provide to the individual registering to vote a voter registration receipt that is in a form as approved by the secretary of state. If an individual registers to vote in person 14 days or less before an election or registers to vote on election day, and that applicant registers to vote under subsection (3) or (4), the ballot of that elector must be prepared as a challenged ballot as provided in [MCL 168.727] and must be counted as any other ballot is counted unless determined by a court of law under [MCL 168.747 or MCL 168.748] or any other applicable law.

MCL 168.2(k) defines "identification for election purposes" as the following: "[a]n operator's or chauffeur's license issued under the Michigan vehicle code . . . or an enhanced driver license issued under the enhanced driver license and enhanced official state personal identification card act"; "[a]n official state personal identification card . . . or an enhanced official state personal identification card issued under the enhanced driver license and enhanced official state personal identification card act"; a current operator's or chauffeur's license issued by another state; a current state personal identification card issued by another state; a current state government issued photo identification card; a current United States passport or federal government issued photo identification card; a current military photo identification card; a current tribal photo identification card; or "[a] current student photo identification card issued by a high school in this state, an institution of higher education in this state described in section 4, 5, or 6 of article VIII of the state constitution of 1963, a junior college or community college established under section 7 of article VIII of the state constitution of 1963, or another accredited degree[-] or certificate[-]granting college or university, junior college, or community college located in this state."

An election inspector must identify, as provided in MCL 168.745 and MCL 168.746, a challenged ballot. MCL 168.727(2)(a).[4] Under MCL 168.745, the election inspectors "shall cause to be plainly endorsed on said ballot, with pencil, before depositing the same in the ballot box, the number corresponding to the number placed after such voter's name on the poll lists without opening the same[.]" To prevent the identification of challenged ballots, the election inspectors "shall cause to be securely attached to said ballot, with mucilage or other adhesive substance, a slip or piece of blank paper of the same color and appearance, as nearly as may be, as the paper of the ballot, in such manner as to cover and wholly conceal said endorsement but not to injure or deface the same[.]" MCL 168.746.

MCL 168.747 provides:

> In case of a contested election, on the trial thereof before any court of competent jurisdiction, it shall be competent for either party to the cause to have produced in court the ballot boxes, ballots and poll books used at the election out of which the cause has arisen, and to introduce evidence proving or tending to prove that any person named on such poll lists was an unqualified voter at the election aforesaid, and that the ballot of such person was received. On such trial, the correspondence of the number endorsed on a ballot as herein provided with the number of the ballot placed opposite the name of any person on the poll lists shall be received as prima facie proof that such ballot was cast by such person: Provided, That the ballot of no person shall be inspected or identified under the provisions of this chapter unless such person shall consent thereto in writing, or unless such person has been convicted of falsely swearing in such ballot, or unless the fact that

[4] Any voter may be challenged under MCL 168.727. *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich 1, 14 n 24; 740 NW2d 444 (2007). Under MCL 168.727(1), an election inspector shall challenge an applicant applying for a ballot if the inspector knows or has good reason to know that the applicant is not a qualified and registered elector of the precinct. A registered elector of the precinct present in the polling place may challenge the right of anyone attempting to vote if the elector knows or has good reason to suspect that the individual is not a registered elector in that precinct. *Id.* Additionally, an election inspector or other qualified challenger may challenge the right of an individual attempting to vote who has previously applied for an absent voter ballot and who on election day is claiming to have never received the absent voter ballot or to have lost or destroyed the absent voter ballot. *Id.* These challenges shall not be made indiscriminately or without good cause. MCL 168.727(3). If a person attempting to vote is challenged, the person shall be sworn by one of the election inspectors to truthfully answer the questions asked of the person concerning the person's qualifications as an elector. MCL 168.729. If the person's answers to the questions show that the person is a qualified elector in the precinct, the person "shall be entitled to receive a ballot and vote." *Id.* The person's ballot shall be marked as required by MCL 168.745 and MCL 168.746, but it is counted as a regular ballot. MCL 168.727(2)(a); *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 14 n 24.

> such person was an unqualified elector at the time of casting such ballot has been determined.[5]

See also *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich 1, 14 n 24; 740 NW2d 444 (2007) ("The ballot cast by a challenged voter is marked (and the mark subsequently concealed) with a number corresponding to the voter's poll list number, and is counted as a regular ballot. MCL 168.745; MCL 168.746. The marked ballot becomes relevant only in the event of litigation surrounding a contested election, where the challenged voter's qualifications to vote are disputed.").

According to the Priorities USA plaintiffs, following the passage of Proposal 3, the Secretary began to automatically register to vote those who conducted business with her regarding a driver's license or personal identification card if they were at least 17½ years of age (the AVR Policy). To support this claim, the Priorities USA plaintiffs provide a press release from the Secretary that announced that she had instituted automatic voter registration.[6] But the press release says nothing about automatic voter registration only applying to those who are at least 17½ years of age. However, the Secretary does not dispute the Priorities USA plaintiffs' claim.

II. PROCEDURAL HISTORY

On November 22, 2019, Priorities USA filed suit against the Secretary in the Court of Claims. An amended complaint was filed on January 21, 2020, by the Priorities USA plaintiffs.

[5] MCL 168.748 provides:

> After issue joined in any case of contested election, either party to the cause may present a petition to the court before which the said cause is to be tried, setting forth among other things that the petitioner has good reason to believe and does believe that 1 or more voters at the election out of which the cause has arisen, naming him or them, and stating his or their place of residence, were unqualified to vote at such election; that he believes the same can be established by competent testimony; that the ballot or ballots of such voter or voters were received after being challenged, as provided by law; and praying that the court may try and determine the question of the qualification of such voter or voters at said election, which petition shall be verified by the oath of the petitioner or some other person acquainted with the facts, and thereupon the court shall direct an issue to be framed, within a time to be fixed therefor, for the purpose of determining the question of the qualifications of the voter or voters named in said petition to vote at said election; and such issue shall stand for trial as in other cases, and the verdict of the jury or judgment of the court upon such issue so made shall be received, upon the trial of the principal issue in said cause, as conclusive evidence to establish or to disprove the said qualifications of said voter or voters.

[6] Secretary of State, *Secretary Benson Announces Modernized Voter Registration on National Voter Registration Day* <https://www.michigan.gov/sos/0,4670,7-127-1640_9150-508246--,00.html> (accessed July 14, 2020).

On January 6, 2020, PTV filed suit against the Secretary in the Court of Claims. PTV's complaint and the Priorities USA plaintiffs' amended complaint both advanced similar allegations. PTV and the Priorities USA plaintiffs asserted that the Legislature's proof of residency definition in MCL 169.497 and the requirement that some voters be issued a challenge ballot unduly burdened the self-executing provisions in 1963 Const, art 2, § 4. Additionally, the proof of residency definition violated the Equal Protection Clause of the Michigan Constitution by burdening the right to vote, and by treating similarly situated voters differently: those who registered to vote within the 14-day period, but who could not show proof of residency with a current Michigan driver's license or personal identification card were issued a challenged ballot. The Priorities USA plaintiffs finally asserted that the Secretary's AVR Policy burdened and curtailed the right in 1963 Const, art 2, § 4(1)(d).

Following the consolidation of the two cases, and the Legislature's intervention, the Legislature filed a motion for summary disposition under MCR 2.116(C)(10).[7] The Legislature argued that the proof of residency amendment in MCL 168.497 was a constitutional exercise of its power to preserve the purity of elections, guard against abuses of the elective franchise, and provide for a system of voter registration and absentee balloting. The Legislature further argued that the Michigan Constitution, following the passage of Proposal 3, did not define proof of residency, which essentially required the Legislature to exercise its constitutional powers to define the phrase. The definition of proof of residency did not violate the Equal Protection Clause because the statute provided reasonable, nondiscriminatory restrictions; thus, it was subject to only rational basis review. The state's interest in preventing voter fraud justified the restrictions. Finally, the Legislature argued that the AVR Policy was consistent with 1963 Const, art 2, § 4 because the right to be automatically registered to vote only applies to those who are entitled to register to vote, namely individuals who are 17½ years of age or older.

The Secretary also moved for summary disposition under MCR 2.116(C)(10). Regarding the AVR Policy, the Secretary was automatically registering individuals to vote pursuant to the Michigan Constitution and statute, not a policy. The Secretary also argued that the definition of proof of residency did not impose an unconstitutional burden on the right to vote because the Legislature properly supplemented 1963 Const, art 2, § 4. Furthermore, an individual can register to vote in the 14-day period by signing an affidavit that the individual does not have a form of identification for election purposes and by presenting a document from a broad array of documents listed in the statute. Relatedly, an individual whose ballot must be marked as a challenged ballot casts either a regular ballot or an absent voter ballot. The ballot is merely marked so that it can later be identified if an election is contested. A challenged ballot does not require the individual to reveal the content of the ballot. Individuals who cannot produce a current Michigan driver's license or personal identification card and are required to vote a challenged ballot are not denied equal protection. Individuals who must vote a challenged ballot are not similarly situated to individuals who have a current Michigan's driver's license or personal identification card. The

[7] The Court of Claims granted the Legislature's motion to intervene in lower court no. 19-000191-MZ, and the Priorities USA plaintiffs do not challenge that order on appeal.

use of alternative, and sometimes less objective, forms of proof of residency reasonably warrants additional procedural requirements.

In PTV's motion for summary disposition under MCR 2.116(C)(10), PTV argued that MCL 168.497 imposed additional obligations on the self-executing rights of 1963 Const, art 2, § 4. The term "residence" is generally understood as the place where a person lives. In MCL 168.497, the Legislature defined proof of residency to mean more than simply proof of where one lives. It defined proof of residency to include proof of identity, i.e., a driver's license or personal identification card. Although MCL 168.497 did not require a person registering to vote in the 14-day period to provide a current Michigan driver's license or personal identification card, the Legislature narrowly limited the documents that it would accept as proof of residency, which curtailed and burdened the rights guaranteed by 1963 Const, art 2, § 4. Additionally, under MCL 168.497, only those who provide a current Michigan driver's license or personal identification card receive a regular or absent voter ballot. All others receive a challenged ballot, which is not a regular or absent voter ballot and which is also not a secret ballot.

PTV also argued that MCL 168.497 failed to provide equal protection of the law. The statute creates three classes of voters: (1) those who present a current Michigan driver's license or personal identification card, and who are allowed to vote a regular or absent voter ballot; (2) those who either submit other proof of identity, or who execute an affidavit attesting that they do not possess any of the acceptable forms of proof of identity, with one of a limited number of documents establishing residency, and who are required to vote a challenged ballot, and (3) those who do not have one of the limited number of documents establishing residency, and who are not allowed to vote. MCL 168.497 imposed a severe burden on the rights of the voters in the second class. Those voters had to vote a challenged ballot, which required extra time by the clerk's office, which required the voters to wait longer. MCL 168.497 also imposed a severe burden on the rights of the voters in the third class. These voters were deprived of their right to vote, and there was no compelling state interest justifying the deprivation, according to PTV.

The Priorities USA plaintiffs moved for a preliminary injunction, attaching three affidavits from two students at the University of Michigan and one student at Michigan State University that detailed their difficulties in registering to vote in the 14-day period. The Priorities USA plaintiffs also attached a report from Michael E. Herron, Ph.D., which detailed the results from two surveys he commissioned. In the first survey, 2,000 Michigan residents, who were eligible to vote and planned to vote in 2020, were asked about whether they had the documents listed in MCL 168.497. According to Dr. Herron, 1.6% of the participants answered that they did not have documentation that would satisfy the requirements of MCL 168.497. 1.6% of citizens of voting age in Michigan is 159,320 individuals. According to Dr. Herron, the survey also showed that approximately 6% of the participants who were younger than 25 years of age lacked documentation that would satisfy the requirements of MCL 168.497. The participants in the second survey were students at Michigan colleges or universities. According to Dr. Herron, of the students who were United States citizens and not registered to vote in Michigan, 16.9% of them did not have documentation that would satisfy the requirements of MCL 168.497. Dr. Herron believed that approximately 15,514 of the college and university students in Michigan would not be able to provide proof of residency under MCL 168.497. Dr. Herron also reviewed records provided by the Secretary, which indicated that, in the five elections following the passage of Proposal 3, 264 individuals (94

of whom were 21 years of age or younger) were not able to register in the 14-day period for the upcoming election because they lacked proof of residency.

On June 24, 2020, the Court of Claims issued an opinion and order granting the Legislature's and the Secretary's motions for summary disposition, denying PTV's motion for summary disposition, and denying the Priorities USA plaintiffs' motion for a preliminary injunction. The Court of Claims first addressed the claim that the amendments of 1963 Const, art 2, § 4, following the passage of Proposal 3, were "self-executing" and that the requirements of MCL 168.497(2)-(5) were unconstitutional because they unduly restricted the new rights recognized in the Michigan Constitution. The Court of Claims held that while the Legislature may not enact laws that impose additional burdens on self-executing constitutional provisions, it may enact laws that supplement those provisions, such as laws that provide clarity and safeguard against abuses. Because the phrase proof of residency was undefined in Const 1963, art 2, § 4, and the residence of a voter is essential for voting purposes, the Legislature properly supplemented the constitutional provision when it defined proof of residency.

Next, the Court of Claims rejected the argument that the AVR Policy unduly burdened and curtailed the rights in 1963 Const, art 2, § 4. The AVR Policy was not a policy, but "rather a restatement of state law, specifically MCL 168.493a and MCL 168.492, and is consistent with the right of 'electors qualified to vote' being entitled to automatically register to vote when doing business with the secretary of state offices." Further, the Michigan Constitution defines an elector qualified to vote as any resident who has reached the age of 18, and a qualified voter may be automatically registered to vote as a result of conducting business with the secretary of state. Under MCL 168.492, an elector qualified to vote is someone 17½ years of age or older, "and nowhere does the Constitution grant individuals under the age of [17½] the right to be automatically registered when conducting business with the secretary of state."

The Court of Claims then addressed whether MCL 168.497 placed an unconstitutional burden on voters. The court noted that, although the right to vote was not enumerated in either the federal or state constitutions, the United States Supreme Court has held that citizens have a constitutionally protected right to participate in elections on an equal basis with other citizens in the jurisdiction. Furthermore, the court held, the right to vote is not absolute. A state has the power to impose voter qualifications and to regulate access to the franchise in many different ways. The court rejected the argument that the Legislature's definition of proof of residency in MCL 168.497 placed a severe burden on the constitutional right to register to vote in the 14-day period. The statute imposed some burden on voters—the statute requires an individual to bring to the election office or polling place some form of proof of residency. But, this was a reasonable, nondiscriminatory restriction, given the wide variety of documents that constituted acceptable ways to establish proof of residency. Additionally, if a voter did not have an acceptable proof of residency in the form of a driver's license or a personal identification card, "that person may vote with a challenged ballot that is counted that day, the same as all other ballots," so long as they produce one of the acceptable forms of proof of residency.

The Court of Claims also rejected the Priorities USA plaintiffs' suggestion that younger voters will be most harmed by MCL 168.497. First, because it was a facial challenge to MCL 168.497, there could not be a focus on any possible effects on a discrete population; the focus must be on the voting population as whole. Second, the argument "overlook[ed] the broad range of

documents that suffice under the statute, the majority of which are readily available to college students, and the fact that registration can be accomplished over the internet, something 'younger voters' are surely able to utilize." Third, the argument gave no credence to the young voters' ability to understand and follow clear voter registration procedures.

Finally, the Court of Claims rejected the argument that the requirement in MCL 168.497(5) that challenged ballots be issued to those who register to vote in the 14-day period without providing a current Michigan driver's license or personal identification card violates equal protection because it denied those voters the right to a secret ballot. The court reasoned that challenged ballots were treated the same as any other ballot on election day. "[D]espite [the challenged ballot] being marked on the outside as challenged, upon presentment of identification, the voter was eligible to receive, and did receive, a regular ballot," which complied with 1963 Const, art 2, § 4(1)(f). To the extent that any burden was placed on a voter's right, it was minimal. A challenged ballot was a secret ballot because it was counted in the same way as a normal ballot, and the contents were not revealed to the public. The Court of Claims explained:

> It is only in the event of a contested election, where the challenged ballot is at issue, that the ballot may be inspected or identified; however, this inspection may only occur with either: the voter's written consent; or only *after* the individual has been convicted of falsely swearing the ballot; or the voter was deemed to be unqualified. MCL 168.474. Therefore, the only way for the vote to be revealed—absent express written consent—is under court order and even then, only in two limited circumstances that require a prior determination of falsehood. This is not a severe burden, and it places no burden on the voter at the time of voting, nor does it impact the tabulation of those particular votes cast on election day.
>
> In contrast, the state has an interest in ensuring the integrity of ballots should it be needed. This specific interest is properly served by this regulation, as in the event of suspected voter fraud, the court may reveal the identity of the voter and a determination can be made. Overall, the burden imposed on voters' rights is minimal, and the legislation is within the scope of the state's interest in preserving the purity of elections.

Thus, the Court of Claims granted summary disposition in favor of the Legislature and the Secretary, and dismissed the complaints with prejudice. This appeal follows.

III. DISCUSSION

On appeal in Docket No. 353977, PTV argues that the Court of Claims erred in concluding that there is no constitutional right to vote; MCL 168.497 impermissibly imposed additional obligations on the self-executing provisions of 1963 Const, art 2, § 4(1)(a) and § 4(1)(f)(2); the requirement of issuing a challenged ballot was burdensome, unconstitutional, and served no legitimate state interest. In Docket No. 354096, the Priorities USA plaintiffs similarly argue that the Court of Claims erred in concluding that MCL 168.497 did not violate the self-executing provisions of 1963 Const, arts 1, § 2 and 2, § 4; the AVR Policy did not violate the self-executing provision of 1963 Const, art 2, § 4; and they were entitled to a preliminary injunction. We disagree.

A. STANDARD OF REVIEW

This Court reviews de novo a trial court's decision on a motion for summary disposition. *Ellison v Dep't of State*, 320 Mich App 169, 175; 906 NW2d 221 (2017). Summary disposition is proper under MCR 2.116(C)(10) if, "[e]xcept as to the amount of damages, there is no genuine issue as to any material fact, and the moving party is entitled to judgment or partial judgment as a matter of law."

This Court also reviews de novo questions of constitutional law. *Bonner v Brighton*, 495 Mich 209, 221; 848 NW2d 390 (2014). "A statute challenged on a constitutional basis is 'clothed in a presumption of constitutionality,' and the burden of proving that a statute is unconstitutional rests with the party challenging it." *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich 1, 11; 740 NW2d 444 (2007) (citation omitted).

A challenge to the constitutionality of a statute is either a facial challenge or an as-applied challenge. *Bonner*, 495 Mich at 223 nn 26-27; *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 11 & n 20. "A facial challenge is a claim that the law is invalid *in toto*—and therefore incapable of any valid application," whereas an as-applied challenge "considers the specific application of a facially valid law to individual facts." *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 11 & n 20 (quotation marks and citation omitted). The challenges to MCL 168.497 are facial challenges. PTV and the Priorities USA plaintiffs are asking that MCL 168.497(2)-(5) be declared unconstitutional in all circumstances. They do not claim the statute is unconstitutional only when applied in a specific circumstance.

"A party challenging the facial constitutionality of a [statute] 'faces an extremely rigorous standard.' " *Bonner*, 495 Mich at 223 (citation omitted). A plaintiff "must establish that no set of circumstances exists under which the act would be valid" and "[t]he fact that the . . . act might operate unconstitutionally under some conceivable set of circumstances is insufficient' " to render the act invalid. *Council of Orgs & Others for Ed About Parochiaid, Inc v Governor*, 455 Mich 557, 568; 566 NW2d 208 (1997) (quotation marks, alteration marks, and citation omitted). Indeed, "if any state of facts reasonably can be conceived that would sustain [a legislative act], the existence of the state of facts at the time the law was enacted must be assumed." *Id.* (quotation marks, alteration marks, and citation omitted). "[B]ecause facial attacks, by their nature, are not dependent on the facts surrounding any particular decision, the specific facts surrounding plaintiffs' claim are inapposite." *Bonner*, 495 Mich at 223.

B. CONSTITUTIONAL RIGHT TO VOTE

PTV and the Priorities USA plaintiffs argue that the Court of Claims erred by stating that the right to vote was not expressly enumerated in the Michigan Constitution. Before addressing this argument, we find it necessary to detail the history of the right to vote.

In the Court of Claims opinion and order, the court stated that "the right to vote is not enumerated in either the federal or state constitution . . . ." Although there are numerous provisions in the United States Constitution that prevent states from discriminating against specific groups by taking away their right to vote, there is no specific enumeration of the right to vote. See

San Antonio Indep Sch Dist v Rodriguez, 411 US 1, 35 n 78; 193 S Ct 1278; 36 L Ed 2d 16 (1973) ("[T]he right to vote, per se, is not a constitutionally protected right . . . ."). For example, the Fifteenth Amendment states: "The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude." US Const, Am XV. Nearly identical language is used in the Nineteenth and Twenty-Sixth Amendments, which prohibit denying or abridging the right to vote on the basis of gender or age, respectively. See US Const, Ams XIX and XXVI.

Despite the lack of a positive right to vote, the United States Supreme Court, "[i]n decision after decision, . . . has made clear that a citizen has a constitutionally protected right to participate in elections on an equal basis with other citizens in the jurisdiction." *Dunn v Blumstein*, 405 US 330, 336; 92 S Ct 995; 31 L Ed 2d 274 (1972). Indeed, "[n]o right is more precious in a free country than that of having a voice in the election of those who make the laws under which, as good citizens, we must live. Other rights, even the most basic, are illusory if the right to vote is undermined." *Wesberry v Sanders*, 376 US 1, 17; 84 S Ct 526, 534-535; 11 L Ed 2d 481 (1964). However, "[t]his equal right to vote is not absolute; the States have the power to impose voter qualifications, and to regulate access to the franchise in other ways." *Dunn*, 405 US at 336 (quotation marks and citation omitted).

Following the passage of Proposal 3 in Michigan, this state's constitution now reads: "Every citizen of the Unites States who is an elector qualified to vote in Michigan shall have the following rights: The right, once registered, to vote a secret ballot in all elections." 1963 Const, art 2, § 4(1)(a). Although decided before the passage of Proposal 3, and the relevant amendment of our state's constitution, our Supreme Court stated in *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 16, that "the right to vote is an implicit fundamental political right that is preservative of all rights." (Quotation marks and citation omitted). Our Supreme Court continued: "However, '[t]his equal right to vote is not absolute . . . .' " *Id*., quoting *Dunn*, 405 US at 336 (alteration in original; internal quotation marks omitted).

PTV and the Priorities USA plaintiffs assert that 1963 Const, art 2, § 4(1)(a) provides a constitutional right to vote. This section unambiguously provides that a qualified citizen has the "right, once registered, to vote a secret ballot in all elections." 1963 Const, art 2, § 4(1)(a). However, this section does not provide that an individual has an absolute constitutional right to vote; the individual must first be a qualified elector who has registered to vote. *Id*. Although the Michigan Constitution now expressly provides for the right to vote, certain requirements must be met before an individual can exercise his or her fundamental political right to vote. Despite the Court of Claims' quotation of caselaw predating the passage of Proposal 3, the court's opinion recognized the constitutionally protected status of the right to vote. Thus, there is no error requiring reversal.

C. SELF-EXECUTING CONSTITUTIONAL PROVISIONS

PTV and the Priorities USA plaintiffs argue that the Legislature's definition of proof of residency in MCL 168.497 and the requirement in MCL 168.497(5) that a challenged ballot be issued to anyone who registers to vote in the 14-day period without providing a current Michigan driver's license or personal identification card unduly burden the rights in 1963 Const, art 2, § (4)(1)(f). They claim that, because the rights in 1963 Const, art 2, § 4(1) are self-executing

rights, the statutory provisions are unconstitutional. The Priorities USA plaintiffs also argue that the Secretary's AVR Policy unduly burdens the right in 1963 Const, art 2, § (4)(1)(d). We disagree.

There is no dispute among the parties that the rights in Const 1963, art 2, § 4(1) are self-executing. "A constitutional provision is deemed self-executing, if it supplies a sufficient rule, by means of which the right given may be enjoyed and protected, or the duty imposed may be enforced[.]" *League of Women Voters of Mich v Secretary of State*, ___ Mich App ___, ___; ___ NW2d ___ (2020) (Docket Nos. 350938, 351073); slip op at 11 (quotation marks and citation omitted). While the Legislature may not impose additional obligations on a self-executing constitutional provision, *Wolverine Golf Club v Secretary of State*, 384 Mich 461, 466; 185 NW2d 392 (1971); *Durant v Dep't of Ed (On Second Remand)*, 186 Mich App 83, 98; 463 NW2d 461 (1990), it may enact laws that supplement a self-executing constitutional provision, see *Wolverine Golf Club*, 384 Mich at 466. Statutes that supplement a self-executing constitutional provision may not curtail the constitutional rights or place any undue burdens on them. See *id.*; *Durant*, 186 Mich App at 98. Additionally, the statutes must be in harmony with the spirit of the Michigan Constitution and their object must be to further the exercise of the constitutional rights and make them more available. *League of Women Voters of Mich*, ___ Mich App at ___; slip op at 11. Statutes that supplement a self-executing provision may be desirable, "by way of providing a more specific and convenient remedy and facilitating the carrying into effect or executing of the rights secured, making every step definite, and safeguarding the same so as to prevent abuses." *Wolverine Golf Club v Secretary of State*, 24 Mich App 711, 730; 180 NW2d 820 (1970) (opinion by LESINSKI, C.J.), aff'd 384 Mich 461 (1971) (quotation marks and citation omitted).

1. PROOF OF RESIDENCY

Under 1963 Const, art 2, § 4(1)(f)(2), a person who seeks to register to vote "beginning on the fourteenth (14th) day before that election and continuing through the day of that election" must submit "a completed voter registration application" and provide "proof of residency." A person's residence, for purposes of Michigan election law, is the "place at which a person habitually sleeps, keeps his or her personal effects, and has a regular place of lodging. If a person has more than 1 residence . . . that place at which the person resides the greater part of the time shall be his or her official residence[.]" MCL 168.11(1). An individual may only vote in the township or city in which the individual resides. See MCL 168.491; MCL 168.492. Because an individual may only vote in the township where he or she resides, the individual's residence dictates which candidates and proposals the individual can vote for.

MCL 168.497(2) requires an individual who applies to register to vote in the 14-day period to provide proof of residency. This is not an additional requirement; 1963 Const, art 2, § 4(1)(f)(2) specifically provides that a person who registers to vote in the 14-day period must provide proof of residency. In MCL 168.497(2)-(5), the Legislature defined proof of residency. Because there is no definition of proof of residency in 1963 Const, art 2, § 4(1), the Legislature's definition of proof of residency is a law that supplements the constitutional provision.

A definition from the Legislature of proof of residency was desirable. *Wolverine Golf Club*, 24 Mich App at 730. Absent a statutory definition of proof of residency, confusion and disorder could arise during the 14-day period and on election day itself. Any person who wanted

to register to vote in the 14-day period would be left to wonder what documents would be accepted as proof of residency. Each city or township clerk would have to make his or her own determination regarding what is acceptable proof of residency. Under these individualized determinations, the documents that would be accepted as proof of residency could be different in each of Michigan's cities and townships. Consequently, a definition of proof of residency makes definite what documents an individual must bring to register to vote in the 14-day period and creates a uniform standard in each of Michigan's voting jurisdictions. *Id*. Furthermore, the Legislature has the constitutional authority under 1963 Const, art 2, § 4(2) to enact laws to preserve the purity of elections,[8] to guard against abuses of the elective franchise, and to provide for a system of voter registration and absentee voting. Accordingly, a legislative definition of proof of residency, which makes definite what documents can be used as proof of residency, is in harmony with the Legislature's obligations under the Michigan Constitution concerning the administration of elections and furthers the exercise of voter registration in the 14-day period. *League of Women Voters of Mich*, ___ Mich App at ___; slip op at 11.

Additionally, even though the Priorities USA plaintiffs have presented evidence that the Legislature's definition of proof of residency in MCL 168.497 has prevented, and may prevent, individuals who are qualified to vote from registering in the 14-day period, the Legislature's definition of proof of residency does not unduly burden the right to register to vote in the 14-day period. Under MCL 168.497, a person provides proof of residency if the person presents either of the following: (1) a current Michigan driver's license or personal identification card, MCL 168.497(2); (2) "any other form of identification for election purposes," which includes driver's licenses and personal identification cards issued by other states and student photo identification cards, see MCL 168.2(k), along with a current utility bill, a current bank statement, or a current paycheck, government check, or other government document, MCL 168.497(3); or (3) an affidavit indicating that the individual does not have "identification for election purposes" and a current utility bill, a current bank statement, or a current paycheck, government check, or other government document, MCL 168.497(4).

The Legislature's definition of proof of residency allows a person to register to vote in the 14-day period with a broad array of common, ordinary types of documents that are available to persons of all voting ages. The Legislature did not provide a narrow list of documents that individuals who register to vote in the 14-day period must present as proof of residency. Moreover, 1963 Const, art 2, § 4(1)(f) requires an individual to provide proof of residency when registering to vote in the 14-day period, and MCL 168.497(2)-(4) defines what documents are acceptable to fulfill that constitutional requirement. Because the Legislature's definition does not unduly burden the right to register to vote in the 14-day period, the definition is a proper supplement to 1963 Const, art 2, § 4(1)(f).

[8] "The phrase 'purity of elections' does not have a single precise meaning. However, it unmistakably requires fairness and evenhandedness in the election laws of this state." *Barrow v Detroit Election Comm*, 305 Mich App 649, 676; 854 NW2d 489 (2014) (quotation marks and citation omitted).

2. CHALLENGED BALLOTS

We reject the claims of PVT and the Priorities USA plaintiffs that MCL 168.497(5), which requires that a challenged ballot be issued to anyone who registers to vote in the 14-day period without providing a current Michigan driver's license or personal identification card, unduly burdens the rights in 1963 Const, art 2, § 4(1)(a) and (f). Under 1963 Const, art 2, § 4(1)(f), a person who registers to vote in accordance with that subsection "shall be immediately eligible to receive a regular or absent voter ballot." Under 1963 Const, art 2, § 4(1)(a), a voter is entitled to "a secret ballot."

Michigan election law defines a "regular ballot" as "a ballot that is issued to a voter on election day at a polling place location." MCL 168.3(h). An "absent voter ballot" is "a ballot that is issued to a voter through the absentee voter process." MCL 168.2(b). A challenged ballot is not a third type of ballot. Rather, a challenged ballot is either a regular ballot or an absent voter ballot that is marked (and the mark subsequently concealed) with the number corresponding to the voter's poll list number. See MCL 168.745; MCL 168.746; MCL 168.761(6); *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 14 n 24. Notably, a challenged ballot is entered and tabulated with all the other ballots that are cast. See MCL 168.497(5); *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 14 n 24.

Furthermore, a challenged ballot is a secret ballot. Generally, a secret ballot is one that prevents anyone else from knowing how the individual voted. See *Helme v Bd of Election Comm'rs of Lenawee Co*, 149 Mich 390, 391-393; 113 NW 6 (1907); *People v Cicott*, 16 Mich 283, 297 (1868), overruled on other grounds by *Petrie v Curtis*, 387 Mich 436 (1972). The mark on a challenged ballot, either before or after it is concealed, does not indicate to anyone how the individual voted. Long before Proposal 3 was passed, the Supreme Court recognized that 1963 Const, art 2, § 4 provided a right to a secret ballot. *Belcher v Mayor of Ann Arbor*, 402 Mich 132, 134; 262 NW2d 1 (1978). This right is not absolute; upon a showing that the voter acted fraudulently, the right can be abrogated. *Id.* ("We hold that a citizen's right to a secret ballot in all elections as guaranteed by Const 1963, art 2, § 4, cannot be so abrogated in the absence of a showing that the voter acted fraudulently."). In a contested election, a challenged ballot may be inspected. See MCL 168.747. But, it may only be inspected if the person consents, the person has been convicted of falsely swearing in such ballot, or if it has been determined that such person was an unqualified elector at the time of casting the ballot. *Id.* Because the right to a secret ballot is not absolute, the fact that a challenged ballot may be inspected in a contested election, MCL 168.474, does not mean that it is not a secret ballot.

3. AVR POLICY

The Secretary's AVR Policy does not unduly burden the right in 1963 Const, art 2, § 4(1)(d). Under 1963 Const, art 2, § 4(1), "[e]very citizen of the United States who is an elector qualified to vote in Michigan shall have [certain] rights[.]" In other words, the rights listed in 1963 Const, art 2, § 4(1), including "[t]he right to be automatically registered to vote as a result of conducting business with the secretary of state regarding a driver's license or personal identification card," are rights of "any citizen of the United States who is an elector qualified to vote in Michigan." An individual is not an elector qualified to vote in Michigan—and entitled to

the rights listed in 1963 Const, art 2, § 4(1)—until the individual reaches 18 years of age. See US Const, Am XXVI; 1963 Const, art 2, § 1; *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 at 47 n 1 (CAVANAGH, J., dissenting).

The AVR Policy, which allows those who are 17½ years of age or older to be automatically registered to vote as a result of conducting business with the Secretary regarding a driver's license or personal identification card, is consistent with MCL 168.492. The statute provides:

> Each individual who has the following qualifications of an elector is entitled to register as an elector in the township or city in which he or she resides. The individual must be a citizen of the United States; not less than 17-½ years of age; a resident of this state; and a resident of the township or city. [MCL 168.492.]

Because a person under the age of 18 is not an elector qualified to vote in Michigan, and because the AVR Policy is consistent with MCL 168.492, which allows an individual who is not less than 17½ years of age to register to vote, the argument that the AVR Policy unduly burdens the right in 1963 Const, art 2, § 4(1)(d) is without merit.

D. EQUAL PROTECTION

PTV and the Priorities USA plaintiffs argue that MCL 168.497 violates the Equal Protection Clause of the Michigan Constitution. 1963 Const, art 1, § 2 provides that "[n]o person shall be denied the equal protection of the laws; nor shall any person be denied the enjoyment of his civil or political rights or be discriminated against in the exercise thereof because of religion, race, color or national origin." The Equal Protection Clause in the Michigan Constitution is coextensive with the Equal Protection Clause of the United States Constitution. *Shepherd Montessori Ctr Milan v Ann Arbor Charter Twp*, 486 Mich 311, 318; 783 NW2d 695 (2010). Equal protection applies when a state either classifies voters in disparate ways or places undue restrictions on the right to vote. *Obama for America v Husted*, 697 F3d 423, 428 (CA 6, 2012).

The Priorities USA plaintiffs argue that MCL 168.497(5) violates equal protection because it treats similarly situated voters differently. According to them, although Const 1963, art 2, § 4(1)(f) guarantees that all individuals who register to vote in the 14-day period shall receive a regular or absent voter ballot, under MCL 168.497(5), only those who submit a current Michigan driver's license or personal identification card as their proof of residency receive a regular or absent voter ballot. PTV similarly argues that many people who register to vote in the 14-day period are denied the right to receive a regular or absent voter ballot. The basis for these arguments is that a challenged ballot does not constitute a regular or absent voter ballot. But, as previously discussed, a challenged ballot is a regular or absent voter ballot. As also laid out previously, a challenged ballot does not lose its character as a secret ballot unless the election is contested. Regardless how an individual provides proof of residency, as defined in MCL 168.497, the individual receives a regular or absent voter ballot that is also a secret ballot. Similarly situated voters are not treated differently under MCL 168.497(5).

The Priorities USA plaintiffs argue that the Legislature's definition of proof of residency in MCL 168.497 severely burdens the right to vote because it has, and will, disenfranchise

hundreds, if not thousands, of individuals in Michigan who are qualified to vote. According to the Priorities USA plaintiffs, strict scrutiny should be applied to the definition.

Every election law, "whether it governs the registration and qualifications of voters, the selection and eligibility of candidates, or the voting process itself, inevitably affects—at least to some degree—the individual's right to vote and his right to associate with others for political ends." *Anderson v Celebrezze*, 460 US 780, 788; 103 S Ct 1564; 75 L Ed 2d 547 (1983).[9] Consequently, subjecting every voting regulation to strict scrutiny, thereby requiring that the regulation be narrowly tailored to advance a compelling state interest, would tie the hands of states seeking to assure that elections are operated equitably and efficiently. *Burdick v Takushi*, 504 US 428, 433; 112 S Ct 2059; 119 L Ed 2d 245 (1992). In *Burdick*, the United States Supreme Court held that "a more flexible standard" applies:

> A court considering a challenge to a state election law must weigh the "character and magnitude of the asserted injury to the rights protected by the First and Fourteenth Amendments that the plaintiff seeks to vindicate" against "the precise interests put forward by the State as justifications for the burden imposed by its rule," taking into consideration "the extent to which those interests make it necessary to burden the plaintiff's rights."
>
> Under this standard, the rigorousness of our inquiry into the propriety of a state election law depends upon the extent to which a challenged regulation burdens First and Fourteenth Amendment rights. Thus, as we have recognized when those rights are subjected to "severe" restrictions, the regulation must be "narrowly drawn to advance a state interest of compelling importance." But when a state election law provision imposes only "reasonable, nondiscriminatory restrictions" upon the First and Fourteenth Amendment rights of voters, "the State's important regulatory interests are generally sufficient to justify" the restrictions. [*Id.* at 434 (citations omitted).]

See also *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 21-22, where the Supreme Court, after quoting these two paragraphs, stated:

> Thus, the first step in determining whether an election law contravenes the constitution is to determine the nature and magnitude of the claimed restriction inflicted by the election law on the right to vote, weighed against the precise interest identified by the state. If the burden on the right to vote is severe, then the

[9] Regardless whether the right to vote, following the passage of Proposal 3, is now an expressly enumerated right in the Michigan Constitution, the United States Supreme Court has recognized that the right to vote is a " 'a fundamental political right' " that "is preservative of other basic and civil political rights." *Reynolds v Sims*, 377 US 533, 562; 84 S Ct 1362; 12 L Ed 2d 506 (1964) (citation omitted). A citizen has "a constitutionally protected right to participate in elections on an equal basis with other citizens in the jurisdiction." *Dunn*, 405 US at 336. The right to vote, however, is not absolute; a state has the power to impose voter qualifications, and to regulate access to the franchise in other ways. *Id.*; see also 1963 Const, art 2, § 4(2).

> regulation must be "narrowly drawn" to further a compelling state interest. However, if the restriction imposed is reasonable and nondiscriminatory, then the law is upheld as warranted by the important regulatory interest identified by the state. The United States Supreme Court has stressed that each inquiry is fact and circumstance specific, because "[n]o bright line separates permissible election-related regulation from unconstitutional infringements[.]" [Citation omitted.]

In resolving an equal protection challenge to an election law under the Michigan Constitution, this Court applies the *Burdick* test. *Id.* at 35.

The Legislature's definition of proof of residency does not impose a severe burden on the right to vote. Because Const 1963, art 2, § 4(1) does not define proof of residency, the Legislature provided a definition in MCL 168.497, and the Legislature's definition allows individuals to provide proof of residency with a broad array of ordinary, common documents that are available to persons of all voting ages. The Priorities USA plaintiffs have presented evidence that there are individuals who are qualified to vote and who could not provide proof of residency, as defined in MCL 168.497, in the 14-day period leading up to the March 2020 presidential primary.

However, in arguing that the Legislature's definition of proof of residency has, and will, disenfranchise these individuals, the Priorities USA plaintiffs fail to recognize that an individual can register to vote in several ways. An individual can register to vote by mailing a completed voter registration application on or before the 15th day before the election. 1963 Const, art 2, § 4(1)(e). An individual can register to vote by appearing in person and submitting a completed voter registration application on or before the 15th day before the election. 1963 Const, art 2, § 4(1)(f)(1). See also MCL 168.497(1), which allows an individual to register to vote in person, by mail, or online until the 15th day before the election. Additionally, an individual can register to vote in the 14-day period by appearing in person, submitting a completed voter registration application, and providing proof of residency. 1963 Const, art 2, § 4(1)(f)(2).

The Priorities USA plaintiffs make no claim that any person who is unable to provide proof of residency, as defined in MCL 168.497, in the 14-day period would not be able to register to vote on or before the 15th day before the election. Notably, election days are set by the Michigan Constitution and by statute. See 1963 Const, art 2, § 5; MCL 168.641. Consequently, one should not be uninformed regarding when an election is to be held. Furthermore, it is not unreasonable to expect an individual who wishes to vote in an election, but who is not registered to vote or who has moved since registering to vote, to make inquiries or conduct research—in advance of the election—regarding how to register to vote. In doing so, an individual can learn the different options for registering to vote and the documents that are needed for each method. These inquiries are not a severe or substantial burden. Cf. *Crawford v Marion Co Election Bd*, 553 US 181, 198; 128 S Ct 1610; 170 L Ed 2d 574 (2008) (opinion by STEVENS, J.) (indicating that the inconvenience for those who need a photo identification to vote by gathering the required documents, making a trip to the bureau of motor vehicles, and posing for a photograph does not qualify as a substantial burden); *id.* at 205 (SCALIA, J., concurring) (stating that burdens are severe if they go beyond the merely inconvenient and that "[o]rdinary and widespread burdens, such as those requiring 'nominal effort' of everyone, are not severe") (citation omitted). Furthermore, while the Priorities USA plaintiffs claim that the Legislature's definition of proof of residency is narrow, they make no claim that a more expansive list of specific documents, such as those which the Secretary allows

to constitute proof of residency when one applies for a driver's license or personal identification card,[10] would allow a significant number of individuals who cannot provide proof of residency, as defined by MCL 168.497, to provide it.

The Legislature's definition of proof of residency in MCL 168.497 is a reasonable, nondiscriminatory restriction that applies to all individuals who seek to register to vote in the 14-day period. See *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 497 Mich at 25. It does not, therefore, violate equal protection of the laws.

Furthermore, the Legislature's definition of proof of residency is warranted by the state's regulatory interests. *Id.* at 22. The Legislature has constitutional authority to enact laws to preserve the purity of elections, to guard against abuses of the elective franchise, and to provide for a system of voter registration and absentee voting. 1963 Const, art 2, § 4(2). These obligations include ensuring that fraudulent voting does not dilute the votes of lawful voters. *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 497 Mich at 19-20. Because a person's residence dictates which candidates and proposals the person can vote for, see MCL 168.492, the Legislature has an interest in ensuring that only residents of a city or township vote in that city or township. By defining proof of residency, a phrase undefined by 1963 Const, art 2, § 4(1), the Legislature has enacted a statute that helps to preserve the purity of elections and aids in providing for a system of voter registration. The clerks of Michigan's cities and townships, as well as those qualified to vote in Michigan, now know what documents are needed to establish proof of residency in the 14-day period.

Furthermore, the Legislature's definition of proof of residency is a reasonable means to prevent voter fraud. By defining proof of residency as requiring either a current Michigan driver's license or personal identification or a utility bill, bank statement, paycheck, government check, or other government document with the person's name and current address, the Legislature has required the person to provide a document—created by a neutral, detached third party—that connects the person with their place of residence.

We reject the Priorities USA plaintiffs' claim that voter fraud does not justify the Legislature's definition of proof of residency because voter fraud is not a problem in Michigan and there is no reason to believe that voter fraud would be more prevalent during the 14-day period than in any preceding period. Recall that it is the Michigan Constitution that requires different treatment of persons who register to vote in person on or before the 15th day before the election and those who register in the 14-day period. See 1963 Const, art 2, § 4(1)(f).[11] Additionally, the

[10] These documents include a credit card bill, bank statement, Michigan school transcript, mortgage, lease, or rental agreement, insurance policy, and vehicle title and registration. See Michigan Secretary of State, *Driver's License or ID Requirements*, SOS-428 (June 2020).

[11] "[T]he primary objective of constitutional interpretation, not dissimilar to any other exercise in judicial interpretation, is to faithfully give meaning to the intent of those who enacted the law." *Nat'l Pride at Work, Inc v Governor*, 481 Mich 56, 67; 748 NW2d 524 (2008). Under 1963 Const, art 2, § 4(1)(f), when a person registers to vote in person, the documents that the person must present to the election official depends on when the person registers to vote. If the person registers

Legislature was not required to wait until there was proven voter fraud during the 14-day period before it could enact a definition of proof of residency. See *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 26-27, where the Supreme Court rejected the argument that the state's interest in preventing in-person voter fraud was illusory because there was no significant evidence of such fraud:

> [T]here is no requirement that the Legislature "prove" that significant in-person voter fraud exists before it may permissibly act to prevent it. The United States Supreme Court has explicitly stated that "elaborate, empirical verification of the weightiness of the State's asserted justifications" is *not required.* Rather, a state is permitted to take prophylactic action to respond to potential electoral problems:
>
>> To require States to prove actual [harm] as a predicate to the imposition of reasonable . . . restrictions would invariably lead to endless court battles over the sufficiency of the "evidence" marshaled by a State to prove the predicate. Such a requirement would necessitate that a State's political system sustain some level of damage before the legislature could take corrective action. Legislatures, we think, should be permitted to respond to potential deficiencies in the electoral process with foresight rather than reactively, provided that the response is reasonable and does not significantly impinge on constitutionally protected rights.
>
> Therefore, the state is not required to provide *any* proof, much less "significant proof," of in-person voter fraud before it may permissibly take steps to prevent it. [Citations omitted.]

We also reject the Priorities USA plaintiffs' claim that the Legislature's definition of proof of residency was not justified because other statutes adequately prevent voter fraud. They point to MCL 168.933, which provides that "[a] person who makes a false affidavit or swears falsely while under oath . . . for the purpose of securing registration, for the purpose of voting at an election . . . is guilty of perjury." In *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 28 n 69, the Supreme Court rejected a similar argument that the picture identification requirement of MCL 168.523(1) was not justified because there were statutes that imposed criminal penalties for those who impersonated another for voting purposes. It explained:

to vote on or before the 15th day before the election the person must submit "a completed voter registration application." 1963 Const, art 2, § 4(1)(f)(1). But, if the person registers to vote during the 14-day period, the person must submit "a completed voter registration application" and provide "proof of residency." 1963 Const, art 2, § 4(1)(f)(2). Consequently, it is apparent that the voters who enacted Proposal 3 intended that those who register to vote in the 14-day period must provide additional documentation than those who register to vote on or before the 15th day before the election—in addition to submitting a completed voter registration application, they must also provide proof of residency.

> [T]hat Michigan criminalizes in-person voter fraud does not address Michigan's undisputed interest in *preventing* fraud in the first instance, nor do criminal sanctions provide a means of *detecting* fraud. Moreover, it is unclear how the imposition of criminal penalties could remedy the harm inflicted on our electoral system by a fraudulently cast ballot. [*Id.*]

Accordingly, MCL 168.933 does not dispel the Legislature's interest in preventing voter fraud during the 14-day period.

Finally, PTV, in arguing that MCL 168.497 violates equal protection, focuses on the burden that is caused by the actual issuance of challenged ballots. According to PTV, because it takes longer for a challenged ballot to be issued, which results in longer lines, the requirement that challenged ballots be issued to those who register in the 14-day period without a current Michigan driver's license or personal identification card burdens the right to vote.

The burden of long lines, which results in people having to wait longer to register to vote, is not a severe burden. Long lines are certainly an inconvenience, but a burden must go beyond mere inconvenience to be severe. *Crawford*, 553 US at 205 (SCALIA, J., concurring). Additionally, the burden is justified by the state's interest in preventing voter fraud. See *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 19-20. The challenged ballot provides a procedure, in a contested election, to identify a ballot that was cast by someone who engaged in voter fraud. See MCL 168.747; *Belcher*, 402 Mich at 132. It was reasonable for the Legislature to conclude that it was less likely that those persons who register to vote in the 14-day period with a current Michigan driver's license or identification card would be committing fraud than those who register without one. Those who register to vote with a current Michigan driver's license or personal identification card have a government issued identification that contains their picture and their current address. But someone who registers to vote by providing "any other form of identification for election purposes," may have picture identification with a noncurrent address, such as a driver's license or personal identification card issued by another state, or no address for the person, such as a student photo identification card, and someone who registers to vote by submitting an affidavit that he or she does not have "identification for election purposes" simply provides no photo identification at all.

IV. RESPONSE TO THE DISSENT

Our dissenting colleague concedes that the Legislature was within its rights to establish what constitutes "proof of residency" within the 14-day period. Indeed, the dissent states that the Legislature "can and should" provide guidance as to what is acceptable proof of residency. By making this concession, our colleague must also acknowledge that the legislative choice reflected in MCL 168.497 represents a considered policy judgment of the political branches of our government. That policy judgment is one with which our dissenting colleague clearly disagrees. Indeed, our colleague states that she might have upheld the statute had the Legislature enacted a definition of proof of residency more in line with what she considers to be its "well-understood

meaning."[12] But in our view it is not part of the judicial role to second guess the Legislature's policy judgment in this regard, so long as what has been enacted does not run afoul of the constitution. See *State Farm Fire & Cas Co v Old Republic Ins Co*, 466 Mich 142, 149; 644 NW2d 715 (2002) ("It is not the role of the judiciary to second-guess the wisdom of a legislative policy choice; our constitutional obligation is to interpret—not to rewrite—the law."). We have laid out in painstaking detail why the statutory enactments at issue in this case are well within constitutional bounds.

Finally, the dissent posits that there is a well-accepted meaning of the term "proof of residency." If so, why should the Legislature have need of defining the term, as the dissent concedes that it "can and should" have done? More fundamentally, we disagree that the Legislature has substituted "proof of identity" for "proof of residency." In the context of this statute, a State of Michigan driver's license or personal identification card is being used not as proof of identity, but as proof of residency. Indeed, the Legislature considers it to be the highest and best proof of residency, as a prospective voter need not supply any other documentation within the 14-day period so long as the voter presents either of those documents reflecting an address within the voting jurisdiction.

V. CONCLUSION

We affirm the June 24, 2020 opinion and order of the Court of Claims. The Secretary and the Legislature were entitled to summary disposition. The Legislature's definition of proof of residency in MCL 168.497 and the requirement in MCL 168.497(5) that a challenged ballot be issued to any person who registers to vote in the 14-day period without providing a current Michigan driver's license or personal identification card does not unduly burden any of the rights in 1963 Const, art 2, § 4(1)(a) and (f). The Secretary's AVR Policy also does not unduly burden the right in 1963 Const, art 2, § 4(1)(d). Additionally, the Legislature's definition of proof of residency in MCL 168.497 and the requirement in MCL 168.497(5) concerning the issuance of challenged ballots do not violate equal protection.

Affirmed.

/s/ Patrick M. Meter
/s/ Michael F. Gadola

[12] The dissent lays out the list of documents the Secretary of State accepts as proof of residency when seeking to obtain a driver's license or personal identification card, which is more expansive than the list in MCL 169.497. First, given the Legislature's duty to preserve the purity of elections, and to ensure that the votes of qualified electors are not unfairly diluted, the Legislature was within its rights to require a higher standard of proof of residency for voting purposes than for driving purposes. As to the dissent's argument that the list the Legislature chose discriminates on the basis of income, we note that the more expansive list the dissent appears to prefer includes items such as utility bills, bank statements, mortgages, pay stubs, life insurance policies, and other documents that presume a certain economic status. This appears unavoidable in any scheme designed to establish a person's residency.

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

MELLISSA A. CARONE,

Plaintiff,

-vs-

CITY OF DETROIT: DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of The DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official Capacity as the CLERK OF WAYNE COUNTY BOARD OF CANVASSERS,

Defendants,

/

AFFIDAVIT OF MELLISSA A. CARONE

FILE NO:_____-AW

JUDGE

BOBBY TENORIO
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF WASHTENAW
My Commission Expires February 19, 2021
Acting in the County of Wayne

David A. Kallman (P43200)
Erin E. Mersino (P70886)
Jack C. Jordan (P46551)
Stephan P. Kallman (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plantiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/ Fax: (517) 322-3208

AFFIDAVIT

The Affiant, Mellissa A. Carone, being the first duly sworn, hereby deposes and states as follows:

1. My name is Mellissa A. Carone, I was contracted by Dominion Voting Services to do IT work at the TCF Center for the November 3, 2020 election, and I am a resident of Wayne County.

2. I arrived at the TCF Center at approximately 6:15 AM November 3, 2020 and worked until 4:00 AM November 4, 2020. I went home to get some sleep, then arrived back at the TCF Center at 10:00 AM in which I stayed until 1:45 PM. During this time I witnessed nothing but fraudulent actions take place.

3. The counters (which were trained very little or not at all), were handed a "batch" (stack of 50) of mail-in ballots in which they would run through the tabulator. The tabulators would get jammed 4-5 times an hour, when they jammed the computer would put out an error that tells the worker the ballot number that was jammed and gives an option to either discard the batch or continue scanning at which the counter should discard the batch, put the issue ballot on top of the batch and rescan the entire batch. I witnessed countless workers rescanning the batches without discarding them first which resulted in ballots being counted 4-5 times.

4. At approximately midnight I was called over to assist one of the counters with a paper jam and noticed his PC had a number of over 400 ballots scanned- which means one batch was counted over 8 times. This happened countless times while I was at the TCF Center. I confronted my manager, Nick Ikonomakis saying how big of a problem this was, Nick told me he didn't want to hear that we have a big problem. He told me we are here to do assist with IT work, not to run their election.

5. The adjudication process, from my understanding there's supposed to be a republican and a democrat judging these ballots. I overheard numerous workers talking during shift change in which over 20 machines had two democrats judging the ballots-resulting in an unfair process.

6. Next, I want to describe what went on during shift change, it was a chaotic disaster. It took over two hours for workers to arrive at their "assigned areas", over 30 workers were taken upstairs and told they didn't have a job for them to do. These people were chosen to be counters, in which 6 workers admitted to me that they received absolutely no training at all.

7. The night shift workers were free to come and go as they pleased, they could go out and smoke from the counting room. This is illegal, as there were boxes and stacks of ballots everywhere, anyone could have taken some out or brought some in, and No one was watching them.

8. There was two vans that pulled into the garage of the counting room, one on day shift and one on night shift. These vans were apparently bringing food into the building because they only had enough food for not even 1/3 of the workers. I never saw any food coming out of these vans, coincidently it was announced on the news that Michigan had discovered over 100,000 more ballots- not even two hours after the last van left.

9. When a worker had a ballot that they either could not read, or it had something spilled on it, they would go to a table that had blank ballots on it and fill it out. They were supposed to be filling them out exactly like the one they had received but this was not the case at all. The workers would also sign the name of the person that the ballot belonged to-which is clearly illegal.

10. Samuel Challandes and one more young man in his mid-20 were responsible for submitting the numbers into the main computer. They had absolutely no overhead, my manager Nick would assist them with any questions but Nick was on the floor assisting with IT most of the time.

BOBBY TENORIO
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF WASHTENAW
My Commission Expires February 19, 2021
Acting in the County of Wayne

11. There was a time I overheard Samuel talking to Nick about losing tons of data, they all got on their phones and stepped to the side of the stage. I asked Nick what was going one and he told me it was all taken care of and not to worry about it. I fully believe that this was something very crucial that they just covered up.

12. I was the only republican working for Dominion Voting, and on the stage there was many terrible comments being made by the city workers and Dominion workers about republicans. I did not give out any indication that I was a republican, I have a family at home and knew I was going to have to walk to my car at the end of my shift. If anyone had an American flag on their shirt or mask, they were automatically deemed to be Trump supporters.

13. I called the FBI and made a report with them, I was told that I will be getting a call back.

14. I am doing my best to make sure something is done about this, I was there and I seen all of this take place.

On this 8th day of November, 2020, before me personally appeared Mellissa A. Carone, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that he has read the foregoing affidavit by him subscribed and knows the contents thereof, and that the same is true of his own knowledge and belief, except as to those matters he states to be on information and behalf, and as to those matters he believes them to be true.

Mellissa A. Carone 11/08/20

Notary Public, Washtenaw County, Michigan

My Commission Expires: 02 19 2021
Feb 19, 2021

11/8/2020

BOBBY TENORIO
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF WASHTENAW
My Commission Expires February 19, 2021
Acting in the County of Wayne

EXHIBIT 6

STATE OF MICHIGAN
COURT OF CLAIMS

DONALD J. TRUMP FOR PRESIDENT, INC., *et al.*,	)	
Plaintiffs,	)	
v.	)	No. 20-000225-MZ
SECRETARY OF STATE JOCELYN BENSON,	)	
Defendant.	)	

AFFIDAVIT OF JESSICA CONNARN

I, Jessica Connarn, being first duly sworn, depose and state the following:

1. I was working as the attorney acting as poll challenger with the Michigan Republican Party in a designated area of zone 12-15 when I was approached by a Republican Party poll challenger, who stated that a hired poll worker of the TCF Center, in Wayne County, Michigan, was nearly in tears because she was being told by other hired poll workers at her table to change the date the ballot was received when entering ballots into the computer.

2. When I approached the poll worker, she stated to me that she was being told to change the date on ballots to reflect that the ballots were received on an earlier date. I went to inform a supervisor of this, and I was asked to get the poll worker's name. When I went back to the poll worker's table, I was yelled at by the other poll workers working at her table, who told me that I needed to go away and that I was not allowed to talk to the poll worker with whom I spoke earlier. The poll worker slipped me a note that read "entered receive date as 11/2/20 on 11/4/20." I have attached a photograph I took of this note as Exhibit 1.

3. Based upon what I was told by this poll worker, I believe that poll workers working at the adjudication table were changing the dates ballots were received.

4. I was told to obtain a photo of the poll worker and upon returning to see if the poll worker was still at her location, I noticed the poll worker was moved up on to the adjudication stage where we were not able to communicate with her.

I declare under penalty of perjury that the foregoing is true and correct. Executed this 4th day of November, 2020.

Jessica Connarn
JESSICA CONNARN

Subscribed and sworn to before me this 4th day of November, 2020.

Paul Giaron
Notary Public

Wayne County, Michigan
11/4/2020

My Commission Expires: July 2021

PAUL GIARON

EXHIBIT 2

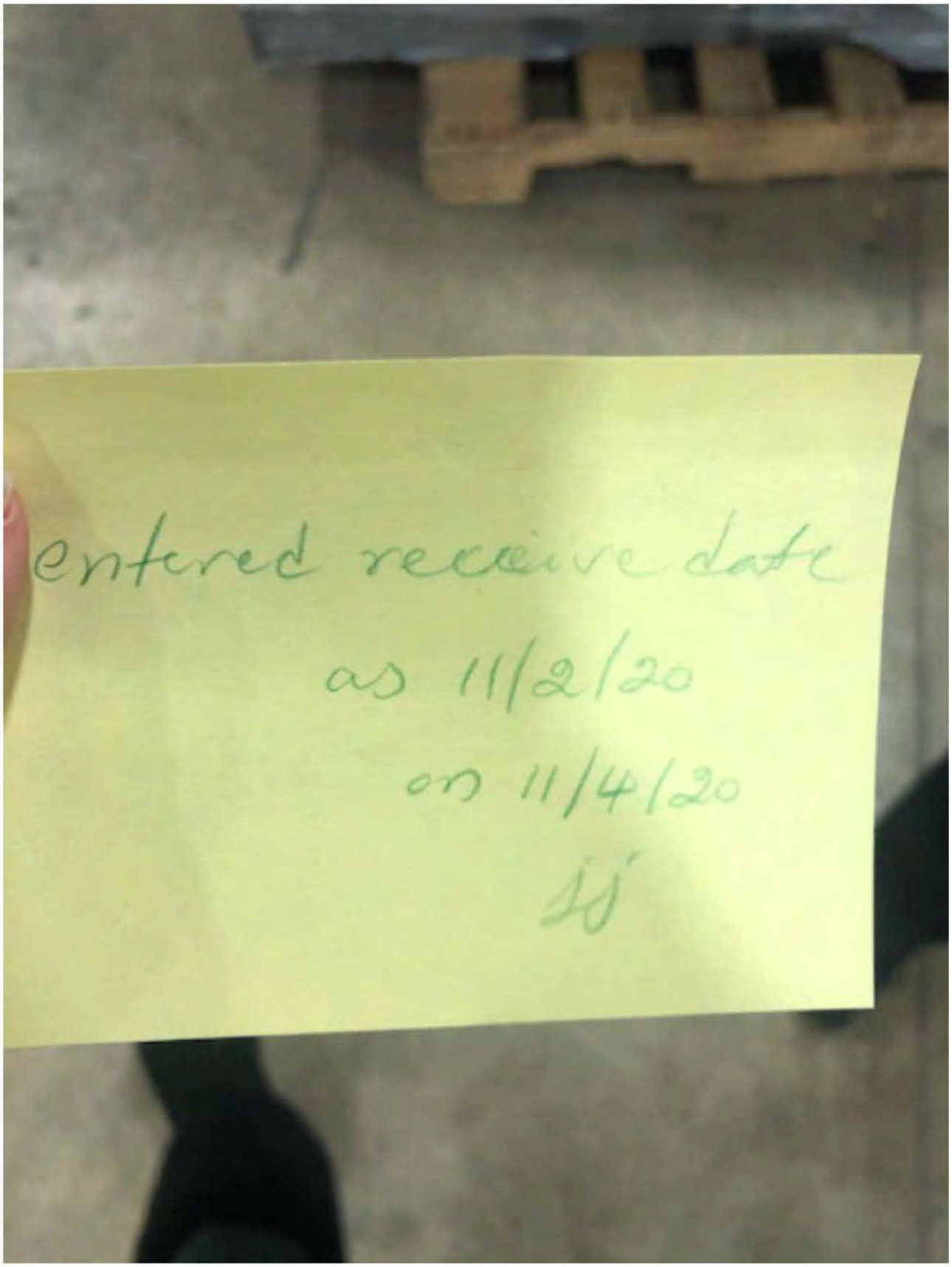


EXHIBIT 2

DECLARATION OF MATT CIANTAR

I, Matt Ciantar, this 17th day of November, under the penalties of perjury and upon personal knowledge that the contents of this Declaration are true, accurate and correct and that I am competent to testify:

1. My name is Matt Ciantar.
2. I am a resident of Plymouth, Michigan.
3. The afternoon following the election as I was taking my normal dog walk (mid-afternoon), I witnessed a dark van pull into the small post office located in downtown Plymouth, MI.
4. I witnessed a young couple late teens / early 20's pull into the parking lot of the post office and proceed to exit their van (no markings) to approach the rear of the van and opened up the back hatch and proceeded to take 3-4 very large clear plastic bags out of the rear of the van and walk them over to a running USPS Vehicle that appeared as if it was "waiting" for them.
5. The two individuals 1 man, 1 woman proceeded to drop these bags at the rear of the post office vehicle that was equipped with a lift gate.
6. There was no interaction between the couple and any USPS employee which I felt was very odd... They did not walk inside the post office like a normal customer to drop of mail. It was as if the postal worker was told to meet and standby until these large bags arrived.

7. As you can see in the pictures the bags were clear plastic with markings in black on the bag and on the inside of these clear bags was another plastic bag that was not clear (could not see what was inside) it was black "garbage bag" looking bag. These bags were all the same, clear bag on outside, black bag on inside, markings on the clear bag and what looked like a black security zip tie on each back as if it were "tamper evident" type of device to secure the bag.

8. I didn't get a chance to snap a license plate of the van nor the couple because by the time I realized I should take pictures of the bags once I noticed that this looked "odd" they had taken off.

9. The other oddity was that the appearance of the couple. After the drop, they were smiling, laughing at one another.

10. What I witnessed and considered that what could be in those bags could be ballots going to the TCF center or coming from the TCF center I felt that it was important to try and capture a picture in an indiscriminate way.

11. I attach photographs that I took at the time of the bag drop. The bags have identification markings on them that can be seen in the photographs.

Matt Ciantar

STATE OF MICHIGAN
ENTERPRISE PROCUREMENT

Department of Technology, Management, and Budget
525 W. Allegan, Lansing MI 48913
P.O. Box 30026, Lansing, MI 48909

NOTICE OF CONTRACT

CONTRACT NO. **071B7700117**
between
THE STATE OF MICHIGAN
and

CONTRACTOR	
	Dominion Voting Systems Inc.
	1201 18th Street, Suite 210
	Denver, CO 80202
	Gio Costantiello
	416-762-8683 ext. 241
	gio.costantiello@dominionvoting.com
	5149

STATE			
	Program Manager	Sally Williams	MDOS
		517-241-2747	
		williams1@michigan.gov	
	Contract Administrator	Sue Cieciwa	DTMB
		517-284-7007	
		cieciwas@michigan.gov	

CONTRACT SUMMARY			
DESCRIPTION: Voting System Hardware, Firmware, Software and Service – Department of State			
INITIAL EFFECTIVE DATE	**INITIAL EXPIRATION DATE**	**INITIAL AVAILABLE OPTIONS**	**EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW**
March 1, 2017	February 28, 2027	None	February 28, 2027
PAYMENT TERMS		**DELIVERY TIMEFRAME**	
Net 45 Days		Refer to Section 2.1 Time Frames	
ALTERNATE PAYMENT OPTIONS			**EXTENDED PURCHASING**
☐ P-card ☐ Direct Voucher (DV) ☐ Other			☒ Yes ☐ No
MINIMUM DELIVERY REQUIREMENTS			
There is no minimum order requirement.			
MISCELLANEOUS INFORMATION			
ESTIMATED CONTRACT VALUE AT TIME OF EXECUTION			**$0.00**

FOR THE CONTRACTOR:

Company Name

Authorized Agent Signature

Authorized Agent **(Print or Type)**

Date

FOR THE STATE:

Signature

Name & Title

Agency

Date

STATE OF MICHIGAN

VOTING SYSTEM HARDWARE, SOFTWARE AND SERVICES CONTRACT TERMS

This VOTING SYSTEM, HARDWARE, SOFTWARE AND SERVICES CONTRACT ("**Contract**") is agreed to between the State of Michigan (the "**State**") and Dominion Voting Systems Inc. ("**Contractor**"), a Delaware corporation. This Contract is effective on March 1, 2017 ("**Effective Date**"), and unless terminated, expires on February 28, 2027 (the "**Term**").
The parties agree as follows:

1. **Definitions**. For the purposes of this Contract, the following terms have the following meanings:

"**Acceptance**" has the meaning set forth in **Section 8.e**.

"**Audit Period**" has the meaning set forth in **Section 30**.

"**Authorized Users**" means all Michigan counties, cities, or townships.

"**Business Day**" means a day other than a Saturday, Sunday or other day on which the State is authorized or required by Law to be closed for business.

"**Change**" has the meaning set forth in **Section** 4.

"**Change Notice**" has the meaning set forth in **Section 4.b**.

"**Change Proposal**" has the meaning set forth in **Section 4.a**.

"**Change Request**" has the meaning set forth in **Section** 4.

"**Confidential Information**" has the meaning set forth in **Section 28.a**.

"**Configuration**" means State-specific changes made to the Software without Source Code or structural data model changes occurring.

"**Contract**" has the meaning set forth in the preamble.

"**Contract Administrator**" is the individual appointed by each party to (a) administer the terms of this Contract, and (b) approve any Change Notices under this Contract. Each party's Contract Administrator will be identified in the Statement of Work.

"**Contractor**" has the meaning set forth in the preamble.

"**Contractor Personnel**" means all employees of Contractor and any Permitted Subcontractors involved in the performance of Services hereunder.

"**Deliverables**" means the voting system tabulators and all related components, and the accessible voting system components, and all other materials that Contractor is required to or otherwise does provide to the State or Authorized Users under this Contract and otherwise in connection with any Services, including all items specifically identified as Deliverables in the Statement of Work.

Notwithstanding the foregoing, the term Deliverable shall not include the EMS Software or System Software.

"**Dispute Resolution Procedure**" has the meaning set forth in **Section 39**.

"**Documentation**" means all user manuals, operating manuals, technical manuals and any other instructions, specifications, documents or materials, in any form or media, that describe the functionality, installation, testing, operation, use, maintenance, support, technical or other components, features or requirements of any Deliverable.

"**Effective Date**" has the meaning set forth in the preamble.

"**EMS Software**" means the Election Management System (EMS) software provided by Contractor under the Statement of Work, and any Maintenance Releases or New Versions provided to the State and any Configurations or Modifications made by or for the State pursuant to this Contract, and all copies of the foregoing permitted under this Contract and the License Agreement.

"**Extended Service Period**" has the meaning set forth in Section 1.6 of the Statement of Work.

"**Fees**" means the prices for Services, EMS Software and Deliverables set forth in an attachment to the Statement of Work.

"**Harmful Code**" means any: (a) virus, trojan horse, worm, backdoor or other software or hardware devices the effect of which is to permit unauthorized access to, or to disable, erase, or otherwise harm, any computer, systems or software; or (b) time bomb, drop dead device, or other software or hardware device designed to disable a computer program automatically with the passage of time or under the positive control of any Person, or otherwise prevent, restrict or impede the State's or any Authorized User's use of such software.

"**Initial Service Period**" has the meaning set forth in Section 1.6 of the Statement of Work.

"**Intellectual Property Rights**" means any and all intellectual property rights in any part of the world, whether registered or unregistered, and all applications for and renewals or extensions of such rights, including rights comprising or relating to: (a) patents, patent disclosures and inventions (whether patentable or not); (b) trademarks, service marks, trade dress, trade names, logos, corporate names and domain names, together with all of the goodwill associated therewith; (c) works of authorship, designs, copyrights and copyrightable works (including computer programs), mask works and rights in data and databases; (d) trade secrets, know-how and other confidential information; and (e) all similar or equivalent rights or forms of protection.

"**Key Personnel**" means any Contractor Personnel identified as key personnel in the Statement of Work.

"**License Agreement**" has the meaning set forth in **Section 5**.

"**Maintenance Release**" means any update, upgrade, release or other adaptation or modification of the Software, including any updated Documentation, that Contractor may generally provide to its licensees from time to time during the Term, which may contain, among other things, error corrections, enhancements, improvements or other changes to the user interface, functionality, compatibility, capabilities, performance, efficiency or quality of the Software.

"**Modification**" means State-specific changes made to the Source Code of the Software to enhance, improve or otherwise create derivative works of the Software.

"**New Version**" means any new version of the Software that the Contractor may from time to time introduce and market generally as a distinct licensed product, as may be indicated by Contractor's designation of a new version number.

"**Operating Environment**" means, collectively, the platform, environment and conditions on, in or under which the EMS Software is intended to be installed and operate, as set forth in the Statement of Work, including such structural, functional and other features, conditions and components as hardware, operating software and system architecture and configuration.

"**Permitted Subcontractor**" has the meaning set forth in **Section 10.e**.

"**Person**" means an individual, corporation, partnership, joint venture, limited liability company, governmental authority, unincorporated organization, trust, association or other entity.

"**Program Manager**" is the individual appointed by each party to (a) monitor and coordinate the day-to-day activities of this Contract, and (b) for the State, to co-sign off on its notice of Acceptance for Services, the EMS Software and Deliverables. Each party's Program Manager will be identified in the Statement of Work.

"**Purchase Order**" means an order for EMS Software, Services or Deliverables to be provided by Contractor and the corresponding fees to be paid by the State or Authorized User, issued by the State or Authorized User, and subject to these terms and conditions.

"**Representatives**" means a party's employees, officers, directors, partners, shareholders, agents, attorneys, third-party advisors, successors and permitted assigns.

"**Services**" means any of the services Contractor is required to or otherwise does provide under this Contract or the Statement of Work (including any exhibits or attachments), as more fully described in the body of this Contract and the Statement of Work.

"Software" means both the EMS Software and the System Software.

"**Source Code**" means the human readable source code of the Software to which it relates, in the programming language in which the Software was written, together with all related flow charts and technical documentation, including a description of the procedure for generating object code, all of a level sufficient to enable a programmer reasonably fluent in such programming language to understand, build, operate, support, maintain and develop modifications, upgrades, updates, adaptations, enhancements, new versions and other derivative works and improvements of, and to develop computer programs compatible with, the EMS Software.

"**Specifications**" means, for the Software, the specifications collectively set forth in the Business Requirements Specification and Technical Specification, together with any other specifications set forth in the Statement of Work or Documentation.

"**State**" means the State of Michigan.

"**State Data**" has the meaning set forth in **Section 27**.

"**Statement of Work**" means the statement of work attached as **Schedule A** to this Contract, including all attachments and exhibits thereto.

"**State Resources**" means all materials and information, including documents, data, know-how, ideas, methodologies, specifications, software, content and technology, in any form or media, directly or indirectly provided or made available to Contractor by or on behalf of the State or Authorized Users in connection with this Contract.

"**System Software**" means the operating system code, including software, firmware and microcode, (object code version) for each Deliverable, including any subsequent revisions, as well as any applicable Documentation.

"**Term**" has the meaning set forth in the preamble.

"**Third Party**" means any Person other than the State, an Authorized User, or Contractor.

"**Third-Party Products**" software or hardware that are not Contractor's proprietary software or hardware, provided by Contractor's distributors or other Third Parties to State.

"**Transition Period**" has the meaning set forth in **Section 22**.

"**Transition Responsibilities**" has the meaning set forth in **Section 22**.

"**Unauthorized Removal**" has the meaning set forth in **Section 10.d.ii**.
"**Unauthorized Removal Credit**" has the meaning set forth in **Section 10.d.iii**.

2. **Statement of Work**. Contractor shall provide the Deliverables, EMS Software and Services, pursuant to the executed License Agreement (defined below) and to the executed Statement of Work, which is attached as **Schedule A** to this Contract. The terms and conditions of this Contract will apply at all times to the Statement of Work.

3. **Statement of Work Requirements**. The Statement of Work will include the following:

   a. A detailed description of the Services to be provided by Contractor, including any service and maintenance obligations and training obligations of Contractor;
   b. A detailed description of the EMS Software to be provided by Contractor;
   c. A detailed description of the Deliverables to be provided by Contractor;
   d. Names and contact information for Contractor's Contract Administrator, Program Manager and Customer Service Manager, and any other Key Personnel of Contractor;
   e. Names and contact information for the State's Contract Administrator and Program Manager;
   f. An exhibit detailing the Fees payable under the Statement of Work, the manner in which such Fees will be calculated, any invoicing requirements, including any time frames on which any such Fees are conditioned, and such other information as the parties deem necessary; and
   g. A detailed description of all State Resources required to complete the Services and Deliverables set forth in the Statement of Work.

4. **Change Control Process**. The State may at any time request in writing (each, a "**Change Request**") changes to the Statement of Work, including changes to the Services, EMS Software (subject to Section 1.5D Statement of Work) and Deliverables (each, a "**Change**"). Upon the State's submission of a Change Request, the parties will evaluate and implement all Changes in accordance with this **Section 4**.

   a. As soon as reasonably practicable, and in any case within twenty (20) Business Days following receipt of a Change Request, Contractor will provide the State with a written proposal for implementing the requested Change ("**Change Proposal**"), setting forth:

      i. a written description of the proposed Changes to any Services, EMS Software or Deliverables;

      ii. a schedule for commencing and completing any additional or modified Services, EMS Software or Deliverables, and the effect of such Changes, if any, on completing any other Services under the Statement of Work;

iii. any additional State Resources Contractor deems necessary to carry out such Changes; and

iv. any increase or decrease in Fees resulting from the proposed Changes, which increase or decrease will reflect only the increase or decrease in time and expenses Contractor requires to carry out the Change.

b. Within thirty (30) Business Days following the State's receipt of a Change Proposal, the State will by written notice to Contractor, approve, reject, or propose modifications to such Change Proposal. If the State proposes modifications, Contractor must modify and re-deliver the Change Proposal reflecting such modifications, or notify the State of any disagreement, in which event the parties will negotiate in good faith to resolve their disagreement. Upon the State's approval of the Change Proposal or the parties' agreement on all proposed modifications, as the case may be, the parties will execute a written agreement to the Change Proposal ("**Change Notice**"), which Change Notice will be signed by the State's Chief Procurement Officer (or his or her designee), and will constitute an amendment to the Statement of Work.

c. If the parties fail to enter into a Change Notice within fifteen (15) Business Days following the State's response to a Change Proposal, the State may, in its discretion:

i. require Contractor to perform the Services under the Statement of Work without the Change;

ii. require Contractor to continue to negotiate a Change Notice;

iii. initiate a Dispute Resolution Procedure; or

iv. if the Change Request is initiated due to changes in the applicable federal or state certification standards or laws, then, notwithstanding any provision to the contrary in the Statement of Work, terminate this Contract for cause under **Section 20**, or otherwise, terminate this Contract for convenience under **Section 21**.

d. No Change will be effective until the parties have executed a Change Notice. Except as the State may request in its Change Request or otherwise in writing, Contractor must continue to perform its obligations in accordance with the Statement of Work pending negotiation and execution of a Change Notice. Contractor will use its best efforts to limit any delays or Fee increases from any Change to those necessary to perform the Change in accordance with the applicable Change Notice. Each party is responsible for its own costs and expenses of preparing, evaluating, negotiating, and otherwise processing any Change Request, Change Proposal, and Change Notice.

e. The performance of any functions, activities, tasks, obligations, roles and responsibilities comprising the Services or Deliverables as described in this Contract are considered part of the Services and Deliverables and, thus, will not be considered a Change. This includes the delivery of all Deliverables in accordance with their respective specifications, and the diagnosis and correction of non-conformities discovered in Deliverables prior to their Acceptance by the State or, subsequent to their Acceptance by the State, as necessary for Contractor to fulfill its associated service and maintenance obligations under this Contract.

f. Contractor may, on its own initiative and at its own expense, prepare and submit its own Change Request to the State. However, the State will be under no obligation to approve or otherwise respond to a Change Request initiated by Contractor.

5. **EMS Software and System Software Licenses**. Contractor hereby grants to the State and Authorized Users the right and license to use the EMS Software, System Software and related Documentation in accordance with the terms and conditions of this Contract and the License Agreement set forth in **Schedule B** (the "**License Agreement**").

6. **Scope of Use for Deliverables**. The State and Authorized Users may use the Deliverables, and any software licensed in connection with such Deliverable, on a worldwide basis for the benefit of themselves. Contractor further authorizes use of the Deliverables by third parties who are under contract with the State or the Authorized User to provide outsourcing services for the benefit of the State or the Authorized User. There are no restrictions on subsequent resale or distribution of Deliverables that the State or Authorized User had paid for in full.

7. **Support and Maintenance**. Contractor shall provide support and maintenance for the EMS Software and all Deliverables in accordance with the applicable service level agreement set forth in the Statement of Work, Section 1.6, and the licensing restrictions set forth in the License Agreement and the terms and conditions of this Contract.

8. **Purchase, Delivery, Installation and Acceptance**.

   a. Purchase Orders. The State or Authorized User will order the EMS Software, Services or Deliverables pursuant to a signed Purchase Order issued by the State or an Authorized User. The State or Authorized User reserves the right to cancel any Purchase Order at any time prior to shipment of the Deliverables or delivery of the Services and shall not be subject to any charges or other fees whatsoever as a result of such cancellation. The State or Authorized User may by written communication cancel or make changes to any Purchase Order subject to an equitable adjustment in the price, delivery schedule, or both, where appropriate. THE TERMS AND CONDITIONS OF THIS CONTRACT WILL APPLY AT ALL TIMES TO ANY PURCHASE ORDERS ISSUED BY THE STATE OR ANY AUTHORIZED USER UNDER THIS CONTRACT. ALL CONTRACTUAL OBLIGATIONS UNDER THIS CONTRACT IN CONNECTION WITH A PURCHASE ORDER PLACED BY AN AUTHORIZED USER ARE THE SOLE OBLIGATION OF THE AUTHORIZED USER PLACING THE ORDER AND NOT THE RESPONSIBILITY OF THE STATE.

   b. Delivery Procedure for Deliverables. Contractor shall deliver all Deliverables within the timeframe set forth in the applicable Purchase Order, FOB destination, with such destination being the "ship to" address as specified in the applicable Purchase Order. Contractor shall bear all risk of loss of or damage to the Deliverable until receipt of delivery at the "ship to" address, and shall arrange and pay for all transportation and insurance sufficient to fully protect the Deliverable while in transit. Each shipment shall include a packing slip indicating the Authorized User's order number, a description of the Deliverable shipped and the quantity shipped. If any loss to, or damage of, the Deliverable occurs prior to receipt of delivery at the "ship to" address by the Authorized User, Contractor shall immediately provide a replacement Deliverable. Title shall pass upon receipt of delivery. Contractor shall make available all appropriate or related user Documentation at the time of delivery of the first unit of each different Deliverable type. Deliverables delivered without the appropriate and required Documentation shall be considered "shipped short" until the applicable Documentation has been received.

   c. EMS Software Installation.

      i. Unless otherwise set forth in the Statement of Work or the applicable Purchase Order, Contractor will deliver, install, and configure the EMS Software in accordance with the criteria set forth in the Statement of Work.

ii. Unless otherwise set forth in the Statement of Work or applicable Purchase Order, Contractor is responsible for ensuring the relevant Operating Environment is set up and in working order to allow Contractor to deliver and install the EMS Software. Contractor will provide the Authorized User with such notice as is specified in the Statement of Work, prior to delivery of the EMS Software to give the Authorized User sufficient time to prepare for Contractor's delivery, and if applicable, installation of the EMS Software. If the Authorized User is responsible for site preparation or installation, Contractor will provide such assistance as Authorized User requests to complete such preparation and installation on a timely basis.

iii. During the Term, Contractor shall provide the State with all Maintenance Releases and New Versions in accordance with the Statement of Work (Section 1.5D, Modification Requirements), each of which will constitute EMS Software and be subject to the terms and conditions of this Contract and the License Agreement.

iv. The State has no obligation to install or use any Maintenance Release or New Version. If the State wishes to install any Maintenance Release or New Version, the State shall have the right to have such Maintenance Release or New Version installed, in the State's discretion, by Contractor or other authorized party as set forth in the Statement of Work.

d. Deliverable Installation. Unless otherwise specified in the Statement of Work or applicable Purchase Order, Contractor shall provide the initial installation of all Deliverables at no additional charge. Installation shall include: unpacking, removal of all shipping and packing materials from the premises, positioning, connecting to internal utility services, and related necessary services to allow for Testing and Acceptance by the Authorized User. All Deliverable installations shall comply with building and facilities standards established by the State or Authorized User. If the Authorized User installs the Deliverable, Contractor shall provide all reasonably necessary telephone assistance at no additional cost during installation.

e. Acceptance**.** Acceptance procedures for Services, EMS Software and Deliverables is set forth in the Statement of Work. Upon completion of testing set forth in the Statement of Work, the State or Authorized User will notify Contractor of its acceptance ("**Acceptance**"), provided such Acceptance occurs and is completed within fifteen (15) calendar days of delivery to the ship to address, after which it will be deemed accepted by the Authorized User or the State, as applicable.

9. Invoicing and Payment.

a. Invoicing. Contractor will invoice the State or Authorized user for Fees in accordance with the requirements set forth in the Statement of Work. Contractor must submit each invoice in electronic format, via such delivery means and to such address as are specified by the State or Authorized User. Each separate invoice must:

i. clearly identify this Contract;

ii. list each Fee item separately;

iii. include sufficient detail for each line item to enable the State or Authorized User to satisfy its accounting and charge-back requirements;

iv. for Fees determined on a time and materials basis, report details regarding the number of hours performed during the billing period, the skill or labor category for such Contractor Personnel and the applicable hourly billing rates;

v. include such other information as may be required by the State or Authorized User; and

vi. any other requirements set forth in the Statement of Work.

b. Payment. Invoices are due and payable by the State, within forty-five (45) calendar days after Acceptance, provided the State determines that the invoice was properly rendered. The State will only disburse payments under this Contract through Electronic Funds Transfer (EFT). Contractor must register with the State at http://www.michigan.gov/cpexpress to receive electronic fund transfer payments. If Contractor does not register, the State is not liable for failure to provide payment. Invoices are due and payable by Authorized Users in accordance with the Authorized User's standard payment procedures.

c. Payment Disputes. The State or Authorized User may withhold from payment any and all payments and amounts it disputes in good faith, pending resolution of such dispute, provided that the State or Authorized User:

i. timely renders all payments and amounts that are not in dispute;

ii. notifies Contractor of the dispute prior to the due date for payment, specifying in such notice (A) the amount in dispute; and, (B) the reason for the dispute set out in sufficient detail to facilitate investigation by Contractor and resolution by the parties;

iii. works with Contractor in good faith to resolve the dispute promptly; and

iv. promptly pays any amount determined to be payable by resolution of the dispute.

d. Not to Withhold Services. Contractor shall not withhold any Services or Deliverables or fail to perform any obligation hereunder by reason of the State's or Authorized User's good faith withholding of any payment or amount or any dispute arising therefrom.

e. Firm Pricing. Unless otherwise set forth in the Statement of Work, all Fees set forth in this Contract are firm and will not be increased during the Term, or any renewal thereof. For purpose of clarity, the parties may negotiate pricing for replacement hardware or components that reach end of life.

f. Taxes. The State is exempt from State sales tax for direct purchases and may be exempt from federal excise tax, if Services or Deliverables purchased under this Contract are for the State's exclusive use or Authorized users. Notwithstanding the foregoing, all Fees are inclusive of taxes, and Contractor is responsible for all sales, use and excise taxes, and any other similar taxes, duties and charges of any kind imposed by any federal, state, or local governmental entity on any amounts payable by the State under this Contract.

g. Right of Setoff. Without prejudice to any other right or remedy it may have, the State and Authorized Users reserve the right to set off at any time any amount owing to it by Contractor against any amount payable by the State or Authorized User to Contractor under this Contract.

10. **Performance of Services**. Contractor will provide all Services and Deliverables in a timely, professional and workmanlike manner and in accordance with the terms, conditions, and specifications set forth in this Contract and the Statement of Work.

a. State Standards

i. To the extent that Contractor has access to the State's computer system or will be handling State Data, Contractor must adhere to all existing standards as described within the comprehensive listing of the State's existing technology standards at http://www.michigan.gov/dmb/0,4568,7-150-56355-108233--,00.html

ii. To the extent that Contractor has access to the State's computer system, Contractor must comply with the State's Acceptable Use Policy, see http://michigan.gov/cybersecurity/0,1607,7-217-34395_34476---,00.html. All Contractor personnel will be required, in writing, to agree to the State's Acceptable Use Policy before accessing the State's system. The State reserves the right to terminate Contractor's access to the State's system if a violation occurs.

b. Contractor Personnel

i. Contractor is solely responsible for all Contractor personnel and for the payment of their compensation, including, if applicable, withholding of income taxes, and the payment and withholding of social security and other payroll taxes, unemployment insurance, workers' compensation insurance payments and disability benefits.

ii. Prior to any Contractor personnel performing any Services, Contractor will:

1. ensure that such Contractor personnel have the legal right to work in the United States; and

2. require such Contractor personnel to execute written agreements, in form and substance acceptable to the State or Authorized User, that bind such Contractor personnel to confidentiality provisions that are at least as protective of the State's information (including all Confidential Information) as those contained in this Contract.

iii. Contractor and all Contractor Personnel will comply with all rules, regulations, and policies of the State or Authorized User that are communicated to Contractor in writing, including security procedures concerning systems and data and remote access, building security procedures, including the restriction of access by the State or Authorized User to certain areas of its premises or systems, and general health and safety practices and procedures.

iv. The State or Authorized User reserves the right to require the removal of any Contractor Personnel found, in the judgment of the State or Authorized User, to be unacceptable. The request must be written with reasonable detail outlining the reasons for the removal request. Replacement personnel for the removed person must be fully qualified for the position. If the State or Authorized User exercises this right, and Contractor cannot immediately replace the removed personnel, the parties agree to negotiate an equitable adjustment in schedule or other terms that may be affected by the required removal.

c. **Background Checks.** Upon request, Contractor must perform background checks on all employees and subcontractors and its employees prior to their assignment. The scope is at

the discretion of the State or Authorized User and documentation must be provided as requested. Contractor is responsible for all costs associated with the requested background checks. The State or Authorized User, in its sole discretion, may also perform background checks.

d. **Contractor's Key Personnel**

i. The State has the right to recommend and approve in writing the initial assignment, as well as any proposed reassignment or replacement, of any Key Personnel. Before assigning an individual to any Key Personnel position, Contractor will notify the State of the proposed assignment, introduce the individual to the State's Program Manager, and provide the State with a resume and any other information about the individual reasonably requested by the State. The State reserves the right to interview the individual before granting written approval. In the event the State finds a proposed individual unacceptable, the State will provide a written explanation including reasonable detail outlining the reasons for the rejection.

ii. Contractor will not remove any Key Personnel from their assigned roles on this Contract without the prior written consent of the State, not to be unreasonably withheld. The Contractor's removal of Key Personnel without the prior written consent of the State is an unauthorized removal ("**Unauthorized Removal**"). An Unauthorized Removal does not include replacing Key Personnel for reasons beyond the reasonable control of Contractor, including illness, disability, leave of absence, personal emergency circumstances, resignation, or for cause termination of the Key Personnel's employment. Any Unauthorized Removal may be considered by the State to be a material breach of this Contract, in respect of which the State may elect to terminate this Contract for cause under **Section 20**.

iii. It is further acknowledged that an Unauthorized Removal will interfere with the timely and proper completion of this Contract, to the loss and damage of the State, and that it would be impracticable and extremely difficult to fix the actual damage sustained by the State as a result of any Unauthorized Removal. Therefore, Contractor and the State agree that in the case of any Unauthorized Removal in respect of which the State does not elect to exercise its rights under **Section 20**, Contractor will issue to the State the corresponding credits set forth below (each, an "**Unauthorized Removal Credit**"):

1. For the Unauthorized Removal of any Key Personnel designated in the Statement of Work, the credit amount will be $1,000.00 per individual if Contractor identifies a replacement approved by the State and assigns the replacement to shadow the Key Personnel who is leaving for a period of at least 30 calendar days before the Key Personnel's removal.

2. If Contractor fails to assign a replacement to shadow the removed Key Personnel for at least 30 Calendar Days, in addition to the $1,000.00 credit specified above, Contractor will credit the State $1,000.00 per Business Day for each day of the 30 calendar Day shadow period that the replacement Key Personnel does not shadow the removed Key Personnel, up to $30,000.00 maximum per individual. The total Unauthorized Removal Credits that may be assessed per Unauthorized Removal and failure to provide 30 Calendar Days of shadowing will not exceed $31,000.00 per individual.

iv. Contractor acknowledges and agrees that each of the Unauthorized Removal Credits assessed under **Subsection iii** above: (i) is a reasonable estimate of and compensation for the anticipated or actual harm to the State that may arise from the Unauthorized Removal, which would be impossible or very difficult to accurately estimate; and (ii) may, at the State's option, be credited or set off against any Fees or other charges payable to Contractor under this Contract.

e. **Subcontractors**. Contractor will not, without the prior written approval of the State, which consent may be given or withheld in the State's sole discretion, engage any Third Party to perform Services. The State's approval of any such Third Party (each approved Third Party, a "**Permitted Subcontractor**") does not relieve Contractor of its representations, warranties or obligations under this Contract. Without limiting the foregoing, Contractor will:

i. be responsible and liable for the acts and omissions of each such Permitted Subcontractor (including such Permitted Subcontractor's employees who, to the extent providing Services or Deliverables, shall be deemed Contractor Personnel) to the same extent as if such acts or omissions were by Contractor or its employees;

ii. name the State a third party beneficiary under Contractor's Contract with each Permitted Subcontractor with respect to the Services;

iii. be responsible for all fees and expenses payable to, by or on behalf of each Permitted Subcontractor in connection with this Contract, including, if applicable, withholding of income taxes, and the payment and withholding of social security and other payroll taxes, unemployment insurance, workers' compensation insurance payments and disability benefits

11. **Notices.** All notices and other communications required or permitted under this Contract must be in writing and will be considered given and received: (a) when verified by written receipt if sent by courier; (b) when actually received if sent by mail without verification of receipt; or (c) when verified by automated receipt or electronic logs if sent by facsimile or email.

If to State:	If to Contractor:
Sue Cieciwa DTMB Procurement Constitution Hall 525 West Allegan Street PO Box 30026 Lansing, MI 48909 Email: cieciwas@michigan.gov Phone: (517) 284-7007	Gio Constantiello Dominion Voting Systems 1201 18th Street, Suite 210 Denver, CO 80202 Email: gio.costantiello@dominionvoting.com Phone: (416) 762-8683 x 241

12. **Insurance Requirements.** Contractor must maintain the insurances identified below and is responsible for all deductibles. All required insurance must: (a) protect the State from claims that may arise out of, are alleged to arise out of, or result from Contractor's or a subcontractor's performance; (b) be primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the State; and (c) be provided by a company with an A.M. Best rating of "A" or better and a financial size of VII or better.

Insurance Type	Additional Requirements
Commercial General Liability Insurance	
Minimal Limits: $1,000,000 Each Occurrence Limit	Contractor must have their policy endorsed to add "the State of Michigan, its departments,

$1,000,000 Personal & Advertising Injury Limit $2,000,000 General Aggregate Limit $2,000,000 Products/Completed Operations Deductible Maximum: $50,000 Each Occurrence	divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds using endorsement CG 20 10 11 85, or both CG 2010 07 04 and CG 2037 07 0.
Automobile Liability Insurance	
Minimal Limits: $1,000,000 Per Occurrence	
Workers' Compensation Insurance	
Minimal Limits: Coverage according to applicable laws governing work activities.	Waiver of subrogation, except where waiver is prohibited by law.
Employers Liability Insurance	
Minimal Limits: $500,000 Each Accident $500,000 Each Employee by Disease $500,000 Aggregate Disease.	
Crime Insurance	
Minimal Limits: $1,000,000 Employee Theft Per Loss	Contractor must have their policy: (1) cover forgery and alteration, theft of money and securities, robbery and safe burglary, computer fraud, funds transfer fraud, money order and counterfeit currency, and (2) endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as Loss Payees.
Professional Liability (Errors and Omissions) Insurance	
Minimal Limits: $5,000,000 Each Occurrence $5,000,000 Annual Aggregate Deductible Maximum: $50,000 Per Loss	
Property Insurance	
The Contractor is responsible for Property Insurance covering any loss or damage to State-owned owned property that results from this agreement including cargo while in transit, and State-owned office space used by the Contractor for any reason under this Contract, together with State-owned equipment, software and other contents of the office space, including without limitation, those contents used by the Contractor to provide the Services to the State, up to its replacement value, where the property is under the care, custody and control of the Contractor.	The State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents must be endorsed on the policy as a loss payee as its interests appear.

If any of the required policies provide claim-made coverage, the Contractor must: (a) provide coverage with a retroactive date before the effective date of the contract or the beginning of Services; (b) maintain coverage and provide evidence of coverage for at least three (3) years after completion of the Services; and (c) if coverage is canceled or not renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, Contractor must purchase extended reporting coverage for a minimum of three (3) years after completion of work.

Contractor must: (a) provide insurance certificates to the Contract Administrator, containing the agreement or purchase order number, at Contract formation and within 20 calendar days of the expiration date of the applicable policies; (b) require that subcontractors maintain the required insurances contained in this Section; (c) notify the Contract Administrator within 5 business days if any insurance is cancelled; and (d) waive all rights against the State for damages covered by insurance. Failure to maintain the required insurance does not limit this waiver.

This Section is not intended to and is not be construed in any manner as waiving, restricting or limiting the liability of either party for any obligations under this Contract (including any provisions hereof requiring Contractor to indemnify, defend and hold harmless the State).

13. **Reserved**

14. **Extended Purchasing Program.** This Contract is extended to MiDEAL members. MiDEAL members include local units of government, school districts, universities, community colleges, and nonprofit hospitals. A current list of MiDEAL members is available at www.michigan.gov/mideal. Upon written agreement between the State and Contractor, this Contract may also be extended to: (a) State of Michigan employees and (b) other states (including governmental subdivisions and authorized entities).

    If extended, Contractor must supply all Services, EMS Software and Deliverables at the established Contract prices and terms. The State reserves the right to negotiate additional discounts based on any increased volume generated by such extensions.

    Contractor must submit invoices to, and receive payment from, extended purchasing program members on a direct and individual basis. ALL CONTRACTUAL OBLIGATIONS UNDER THIS CONTRACT IN CONNECTION WITH A PURCHASE ORDER PLACED BY A MIDEAL MEMBER ARE THE SOLE OBLIGATION OF THE MIDEAL MEMBER PLACING THE ORDER AND NOT THE RESPONSIBILITY OF THE STATE

15. **Independent Contractor.** Contractor is an independent contractor and assumes all rights, obligations and liabilities set forth in this Contract. Contractor, its employees, and agents will not be considered employees of the State. No partnership or joint venture relationship is created by virtue of this Contract. Contractor, and not the State, is responsible for the payment of wages, benefits and taxes of Contractor's employees and any subcontractors. Prior performance does not modify Contractor's status as an independent contractor.

16. **Assignment.** Contractor may not assign this Contract to any other party without the prior written approval of the State. Upon notice to Contractor, the State, in its sole discretion, may assign in whole or in part, its rights or responsibilities under this Contract to any other party.

17. **Change of Control.** Contractor will notify the State, within 90 calendar days of the effective date, of a change in Contractor's organizational structure or ownership. For purposes of this Contract, a change in control means any of the following: (a) a sale of more than 50% of Contractor's stock resulting in a circumstance described by (e); (b) a sale of substantially all of Contractor's assets; (c) a change in a majority of Contractor's board members; (d) consummation of a merger or consolidation of Contractor with any other entity; (e) a change in more than 50% ownership through a transaction or series of transactions; (f) or the board (or the stockholders) approves a plan of complete liquidation. A change

of control does not include any consolidation or merger effected exclusively to change the domicile of Contractor, or any transaction or series of transactions principally for bona fide equity financing purposes.

In the event of a change of control, Contractor must require the successor to assume this Contract and all of its obligations under this Contract.

18. **Liquidated Damages.** Liquidated damages, if applicable, will be assessed as described in the Statement of Work.

19. **Stop Work Order.** The State may suspend any or all activities under the Contract at any time. The State will provide Contractor a written stop work order detailing the suspension. Contractor must comply with the stop work order upon receipt. Within 90 calendar days, or any longer period agreed to by Contractor, the State will either: (a) issue a notice authorizing Contractor to resume work, or (b) terminate the Contract. The State will not pay for Services or Deliverables, Contractor's lost profits, or any additional compensation during a stop work period. The State or Authorized User, as applicable will pay for any Services or Deliverables that have been ordered, prior to the issuance of the Stop Work Order.

20. **Termination for Cause.** The State may terminate this Contract for cause, in whole or in part, if Contractor, as determined by the State: (a) endangers the value, integrity, or security of any State or Authorized User location, data, or personnel; (b) becomes insolvent, petitions for bankruptcy court proceedings, or has an involuntary bankruptcy proceeding filed against it by any creditor; (c) engages in any conduct that may expose the State or an Authorized User to liability; (d) breaches any of its material duties or obligations under this Contractor, including but not limited to obtaining and maintaining, throughout the Term of the Contract, Federal and/or State voting system certification; or (e) fails to cure a breach within the time stated in a notice of breach provided Contractor shall be afforded no less than thirty (30) days to cure any such breach under this Contract unless otherwise mutually agreed upon by the parties. Any reference to specific breaches being material breaches within this Contract will not be construed to mean that other breaches are not material.

    If the State terminates this Contract under this Section, the State will issue a termination notice specifying whether Contractor must: (a) cease performance immediately, or (b) continue to perform for a specified period. If it is later determined that Contractor was not in breach of the Contract, the termination will be deemed to have been a termination for convenience, effective as of the same date, and the rights and obligations of the parties will be limited to those provided in **Section 21**.
    The State will only pay for amounts due to Contractor for Services and Deliverables accepted by the State on or before the date of termination, subject to the State's right to set off any amounts owed by the Contractor for the State's reasonable costs in terminating this Contract. Contractor must promptly reimburse to the State any Fees prepaid by the State prorated to the date of such termination, including any prepaid Fees for support and maintenance services. Further, Contractor must pay all reasonable costs incurred by the State in terminating this Contract for cause, including administrative costs, attorneys' fees, and court costs. For purposes of clarity, Contractor will not be responsible for any transition costs or costs of obtaining substitute Services or Deliverables.

21. **Termination for Convenience.** Upon thirty (30) days prior written notice, the State may terminate this Contract in whole or in part without penalty and for any reason, including but not limited to, appropriation or budget shortfalls. The termination notice will specify whether Contractor must: (a) cease performance of the Services immediately, or (b) continue to perform the Services in accordance with **Section 22**. If the State terminates this Contract for convenience, the State will pay all reasonable costs, as determined by the State, for State approved Transition Responsibilities. The State or Authorized User, as applicable will pay for any Services or Deliverables that have been Accepted, prior to the effective date of the termination.

22. **Transition Responsibilities.** Upon termination or expiration of this Contract for any reason, Contractor must, for a period of time specified by the State (not to exceed 90 calendar days)(the "**Transition Period**"), provide all reasonable transition assistance requested by the State, to allow for the expired or terminated portion of the Services and Deliverables to continue without interruption or adverse effect, and to facilitate the orderly transfer of such Services and Deliverables to the State or its designees. Such transition assistance may include, but is not limited to: (a) continuing to perform the Services at the established Contract rates; (b) taking all reasonable and necessary measures to transition performance of the work, including all applicable Services and Deliverables, training, reports and other documentation, to the State or the State's designee; (c) taking all necessary and appropriate steps, or such other action as the State may direct, to preserve, maintain, protect, or return to the State all materials, data, property, and confidential information provided directly or indirectly to Contractor by any entity, agent, vendor, or employee of the State; (d) transferring title in and delivering to the State, at the State's discretion, all completed or partially completed Deliverables prepared under this Contract as of the Contract termination date; and (e) preparing an accurate accounting from which the State and Contractor may reconcile all outstanding accounts (collectively, "**Transition Responsibilities**"). This Contract will automatically be extended through the end of the transition period.

23. **General Indemnification.** Contractor must defend, indemnify and hold the State, its departments, divisions, agencies, offices, commissions, officers, and employees harmless, without limitation, from and against any and all actions, claims, losses, liabilities, damages, costs, attorney fees, and expenses (including those required to establish the right to indemnification), arising out of or relating to third party claims arising out of: (a) any breach by Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable) of any of the promises, agreements, representations, warranties, or insurance requirements contained in this Contract; (b) any infringement, misappropriation, or other violation of any Intellectual Property Right or other right of any third party, excluding any Third-Party Products; and (c) any bodily injury, death, or damage to real or tangible personal property occurring wholly or in part due to the negligence or misconduct of Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable).

    The State will notify Contractor in writing if indemnification is sought; however, failure to do so will not relieve Contractor, except to the extent that Contractor is materially prejudiced. Contractor must, to the satisfaction of the State, demonstrate its financial ability to carry out these obligations.

    The State is entitled to: (i) regular updates on proceeding status; (ii) participate in the defense of the proceeding; and (iii) employ its own counsel. Contractor will not, without the State's written consent (not to be unreasonably withheld), settle, compromise, or consent to the entry of any judgment in or otherwise seek to terminate any claim, action, or proceeding. To the extent that any State employee, official, or law may be involved or challenged, the State may, at its own expense, control the defense of that portion of the claim; provided that, in such event, Contractor will be relieved of its obligations under this Section with respect to that particular claim.

    Any litigation activity on behalf of the State, or any of its subdivisions under this Section, must be coordinated with the Department of Attorney General. An attorney designated to represent the State may not do so until approved by the Michigan Attorney General and appointed as a Special Assistant Attorney General.

24. **Infringement Remedies; Exclusions.** Excluding any Third-Party Products, if, in either party's opinion, any of the Services, EMS Software or Deliverables supplied by Contractor or its subcontractors, or its operation, use or reproduction, is likely to become the subject of a copyright, patent, trademark, or trade secret infringement claim, Contractor must, at its expense do one of the following at State's option: (a) procure for the State the right to continue using the Services or Deliverables, or if this option is not reasonably available to Contractor, (b) replace or modify the same so that it becomes non-infringing, or if this option is not reasonably available to Contractor, (c) accept its return by the State with appropriate credits to the State against Contractor's charges and reimburse

the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it. Contractor will not defend or indemnify the State if any claim of infringement or misappropriation (a) is asserted by an affiliate of the State; (b) results from the State's design or alteration of any Services, EMS Software or Deliverables; (c) results from use of any Deliverable or EMS Software in combination with any non-Contractor product, except to the extent, if any, that such use in combination is restricted to the EMS Software system designed by Contractor or Contractor has directed such use; (d) relates to Third-Party Products; or (e) arises from State-specified customization work undertaken by Contractor or its designees that are made in response to State specifications. THIS SECTION 24 AND THE STATE'S INDEMNIFICATION RIGHTS UNDER SECTION 23 STATES THE ENTIRE LIABILITY OF CONTRACTOR AND STATE'S SOLE AND EXCLUSIVE REMEDIES FOR INFRINGEMENT AND INTELLECTUAL PROPERTY MISAPPROPRIATION; PROVIDED THAT, THE STATE MAY ALSO TERMINATE THIS CONTRACT FOR CAUSE.

25. **Limitation of Liability.** NEITHER PARTY WILL BE LIABLE, REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR BY STATUTE OR OTHERWISE, FOR ANY CLAIM RELATED TO OR ARISING UNDER THIS CONTRACT FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT, OR SPECIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOST PROFITS AND LOST BUSINESS OPPORTUNITIES. IN ADDITION, IN NO EVENT WILL THE STATE'S OR THE CONTRACTOR'S AGGREGATE LIABILITY TO THE OTHER OR TO ANY AUTHORIZED USER UNDER THIS CONTRACT EXCEED THE MAXIMUM AMOUNT OF FEES SPECIFIED IN THE STATEMENT OF WORK WITH RESPECT TO THE STATE OR THE MAXIMUM AMOUNT OF FEES SPECIFIED IN THE APPLICABLE PURCHASE ORDER FOR SUCH AUTHORIZED USER.

26. **Disclosure of Litigation, or Other Proceeding.** Contractor must notify the State within 14 calendar days of receiving notice of any litigation, investigation, arbitration, or other proceeding (collectively, "**Proceeding**") involving Contractor, a subcontractor, or an officer or director of Contractor or subcontractor, that arises during the term of the Contract and that could reasonably be expected to affect Contractor's ability to comply with this Agreement, including: (a) a criminal Proceeding; (b) a parole or probation Proceeding; (c) a Proceeding under the Sarbanes-Oxley Act; (d) a civil Proceeding involving: (1) a claim that might reasonably be expected to adversely affect Contractor's viability or financial stability; or (2) a governmental or public entity's claim or written allegation of fraud; or (e) a Proceeding involving any license that Contractor is required to possess in order to perform under this Contract.

27. **State Data.** The State's data ("**State Data**"), which will be treated by Contractor as Confidential Information, includes all of the State's or Authorized User's data collected, used, processed, stored, or generated as the result of the Services. Contractor is provided a limited license to State Data for the sole and exclusive purpose of providing the Services, including a license to collect, process, store, generate, and display State Data only to the extent necessary in the provision of the Services. Contractor must: (a) keep and maintain State Data in strict confidence, using such degree of care as is appropriate and consistent with its obligations as further described in this Contract and applicable law to avoid unauthorized access, use, disclosure, or loss; (b) use and disclose State Data solely and exclusively for the purpose of providing the Services, such use and disclosure being in accordance with this Contract, any applicable Statement of Work, and applicable law; and (c) not use, sell, rent, transfer, distribute, or otherwise disclose or make available State Data for Contractor's own purposes or for the benefit of anyone other than the State without the State's prior written consent. This Section survives the termination of this Contract.

28. **Non-Disclosure of Confidential Information**. The parties acknowledge that each party may be exposed to or acquire communication or data of the other party that is confidential, privileged communication not intended to be disclosed to third parties. The provisions of this Section survive the termination of this Contract.

a. Meaning of Confidential Information. For the purposes of this Contract, the term "**Confidential Information**" means all information and documentation of a party that: (a) has been marked "confidential" or with words of similar meaning, at the time of disclosure by such party; (b) if disclosed orally or not marked "confidential" or with words of similar meaning, was subsequently summarized in writing by the disclosing party and marked "confidential" or with words of similar meaning; and, (c) should reasonably be recognized as confidential information of the disclosing party. The term "Confidential Information" does not include any information or documentation that was or is: (a) subject to disclosure under the Michigan Freedom of Information Act (FOIA) by the receiving party; (b) already in the possession of the receiving party without an obligation of confidentiality; (c) developed independently by the receiving party, as demonstrated by the receiving party, without violating the disclosing party's proprietary rights; (d) obtained from a source other than the disclosing party without an obligation of confidentiality; or, (e) publicly available when received, or thereafter became publicly available (other than through any unauthorized disclosure by, through, or on behalf of, the receiving party). For purposes of this Contract, in all cases and for all matters, State Data is deemed to be Confidential Information.

b. Obligation of Confidentiality. The parties agree to hold all Confidential Information in strict confidence and not to copy, reproduce, sell, transfer, or otherwise dispose of, give or disclose such Confidential Information to third parties other than employees, agents, or subcontractors of a party who have a need to know in connection with this Contract or to use such Confidential Information for any purposes whatsoever other than the performance of this Contract. The parties agree to advise and require their respective employees, agents, and subcontractors of their obligations to keep all Confidential Information confidential. Disclosure to a subcontractor is permissible where: (a) use of a subcontractor is authorized under this Contract; (b) the disclosure is necessary or otherwise naturally occurs in connection with work that is within the subcontractor's responsibilities; and (c) the receiving party obligates the subcontractor in a written contract to maintain the disclosing party's Confidential Information in confidence. At a party's request, any employee or any subcontractor may be required to execute a separate agreement to be bound by the provisions of this Section.

c. Cooperation to Prevent Disclosure of Confidential Information. Each party must use its best efforts to assist the other party in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limiting the foregoing, each party must advise the other party immediately in the event either party learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Contract and each party will cooperate with the other party in seeking injunctive or other equitable relief against any such person.

d. Remedies for Breach of Obligation of Confidentiality. Each party acknowledges that breach of its obligation of confidentiality may give rise to irreparable injury to the other party, which damage may be inadequately compensable in the form of monetary damages. Accordingly, a party may seek and obtain injunctive relief against the breach or threatened breach of the foregoing undertakings, in addition to any other legal remedies which may be available, to include, the immediate termination without penalty to the terminating party, of this Contract or any Statement of Work corresponding to the breach or threatened breach.

e. Surrender of Confidential Information upon Termination. Upon termination of this Contract or a Statement of Work, in whole or in part, each party must, within 5 calendar days from the date of termination, return to the other party any and all Confidential Information received from the other party, or created or received by a party on behalf of the other party, which are in such party's possession, custody, or control. Should Contractor or the State determine that the return of any Confidential Information is not feasible, such party must destroy the Confidential Information and must certify the same in writing within 5 calendar days from the date of termination to the other party.

29. **Data Privacy and Information Security**. Without limiting Contractor's obligation of confidentiality as further described, Contractor is responsible for establishing and maintaining a data privacy and information security program, including physical, technical, administrative, and organizational safeguards, that is designed to: (a) ensure the security and confidentiality of State Data; (b) protect against any anticipated threats or hazards to the security or integrity of State Data; (c) protect against unauthorized disclosure, access to, or use of State Data; (d) ensure the proper disposal of State Data; and (e) ensure that all employees, agents, and subcontractors of Contractor, if any, comply with all of the foregoing.

30. **Records Maintenance, Inspection, Examination, and Audit.** The State or its designee may audit Contractor to verify compliance with this Contract. Contractor must retain, and provide to the State or its designee and the auditor general upon request, all financial and accounting records related to the Contract through the term of the Contract and for 4 years after the latter of termination, expiration, or final payment under this Contract or any extension ("**Audit Period**"). If an audit, litigation, or other action involving the records is initiated before the end of the Audit Period, Contractor must retain the records until all issues are resolved.

    Within 10 calendar days of providing notice, the State and its authorized representatives or designees have the right to enter and inspect Contractor's premises or any other places where Services are being performed, and examine, copy, and audit all records related to this Contract. Contractor must cooperate and provide reasonable assistance. If any financial errors are revealed, the amount in error must be reflected as a credit or debit on subsequent invoices until the amount is paid or refunded. Any remaining balance at the end of the Contract must be paid or refunded within 45 calendar days.

    This Section applies to Contractor, any parent, affiliate, or subsidiary organization of Contractor, and any subcontractor that performs Services in connection with this Contract.

31. **Warranties and Representations.**

    a. Authority. Contractor represents and warrants to the State that:

        i. It is duly organized, validly existing, and in good standing as a corporation or other entity as represented under this Contract under the laws and regulations of its jurisdiction of incorporation, organization, or chartering;

        ii. It has the full right, power, and authority to enter into this Contract, to grant the rights and licenses granted under this Contract, and to perform its contractual obligations;

        iii. The execution of this Contract by its Representative has been duly authorized by all necessary organizational action; and

        iv. When executed and delivered by Contractor, this Contract will constitute the legal, valid, and binding obligation of Contractor, enforceable against Contractor in accordance with its terms.

    b. Pass through Warranties. Contractor further represents and warrants to the State that:

        i. it shall pass through all manufacturer supplied end-user warranties to the Authorized User or the State, as applicable, and that with respect to all of the Deliverables provided hereunder, it has obtained from manufacturers of such Deliverables provided hereunder and will assign or pass through to each Authorized User the following representations and rights from said manufacturers: that said manufacturers agree to defend, indemnify and hold

harmless Contractor and the end user customer at manufacturer's expense from and against any claim, charge, demand, proceeding, suit, liability, loss, cost, expense, order, decree, attorneys fees, court costs, trial or appeal and judgments including damages of any kind resulting from, arising out of or in connection with any actual or claimed: (a) personal injury (including death), property damage or loss of any nature whatsoever alleged to have occurred as a result of the use of any of the Deliverable, (b) any defect in material, workmanship or design and (c) patent, trademark or copyright infringement with respect to any of the Deliverables. Notwithstanding the foregoing, the State and Authorized Users acknowledge that all Third Party Products which have been purchased by the Contractor for the State or Authorized Users hereunder are owned by parties other than Contractor. The State and Authorized Users further acknowledge that except for the payment to Contractor for the Third Party Products, all of its rights, warranties and obligations with respect thereto flow from and to the Third Parties. Contractor is only obligated to pass through the foregoing rights, warranties and obligations as may be provided by the Third Party.

c. EMS Software and Deliverable Representations and Warranties. Contractor further represents and warrants to the State that:

i. except for any Third Party Products used in conjunction with the EMS Software or any Deliverable (including System Software) provided hereunder, it is the legal and beneficial owner of the entire right, title and interest in and to the EMS Software and Deliverables (including any System Software), including, all Intellectual Property Rights relating thereto necessary to perform hereunder;

ii. it has, and throughout the license term, will retain the unconditional and irrevocable right, power and authority to grant and perform the license hereunder;

iii. the EMS Software and Deliverables (including any System Software), and the State's use thereof, is and throughout the license term will be free and clear of all encumbrances, liens and security interests of any kind;

iv. when used by the State or any Authorized User in accordance with this Contract, the EMS Software or Deliverable (including any System Software) as delivered or installed by Contractor does not or will not infringe, misappropriate or otherwise violate any Intellectual Property Right or other right of any third party;

v. Contractor uses industry standard software and tools designed to ensure that the EMS Software or any System Software does not or will not at any time during the license term contain any Harmful Code;

vi. when delivered, the EMS Software and System Software shall be at the current State certified release level unless otherwise requested by the State or Authorized Users; and

vii. all Documentation is and will be complete and accurate in all material respects when provided to the State such that at no time during the license term will the EMS Software or any Deliverables (including any System Software) have any material undocumented feature.

d. Performance Warranty.

i. Contractor warrants that during the Term of the Contract: (A) the EMS Software and the Deliverables (including System Software, but, excluding any Third-Party Products) will function in conformity with this Contract, the specifications set forth in the Statement of Work, and the Documentation; and (B) all Deliverables (but excluding any Third-Party Products) will be free of damage or defect in design, material and workmanship, and will remain so under ordinary use as contemplated by this Contract, the specifications set forth in the Statement of Work, and the Documentation. Contractor will, at the State's discretion, replace or repair any Contractor hardware that does not comply with this warranty, at no additional charge to State. The foregoing warranty shall not include the repair or replacement of any Deliverable components that are consumed in the normal course of operating the Deliverables, including printer ribbons, printer cartridges, paper rolls, backup batteries, removable media storage devices or marking devices. These warranties are effective provided that (I) the State or Authorized User promptly notifies Contractor of the failure of performance or defect and is otherwise in compliance with its obligations hereunder, (II) the Deliverable, EMS Software or System Software to be repaired or replaced has not been repaired, changed, modified or altered except as authorized or approved by Contractor, (III) the Deliverable, EMS Software or System Software to be repaired or replaced is not damaged as a result of accident, theft, vandalism, neglect, abuse, use which is not in accordance with instructions or specifications furnished by Contractor or causes beyond the reasonable control of Contractor or the State or Authorized User, including, but not limited to, acts of God, fire, riots, acts of war, terrorism or insurrection, labor disputes, power failures, surges or electrical damage, transportation delays, governmental regulations and utility or communication interruptions, and (IV) the State or Authorized User has installed and is using the most recent Update, provided to it by Contractor. This warranty is void for any units of a Deliverable which: (i) have not been stored or operated in a temperature range according their specifications, (ii) have been severely handled so as to cause mechanical damage to the unit, or (iii) have been operated or handled in a manner inconsistent with reasonable treatment of an electronic product.

ii. Contractor further warrants that the EMS Software and the Deliverables (including System Software) will operate in conjunction with the Third Party Products during the Term of the Contract, provided that (i) the State or Authorized User has installed and is using the most recent State certified update provided to it by Contractor, and (ii) the Third Party Products are performing in accordance with their own specifications and documentation in all material respects and are not defective in material or workmanship. In the event of a breach of this warranty, Contractor will, in accordance with Section 1.6 of the Statement of Work, use commercially reasonable efforts to remedy or provide a suitable workaround for defects, errors or malfunctions in the EMS Software or the Deliverables (including System Software) that is causing such breach to occur. The State and Authorized Users acknowledge that Contractor has merely purchased the Third Party Products for resale to State or Authorized User, and that the proprietary and intellectual property rights to the Third Party Products are owned by parties other than Contractor. Subject to the Statement of Work, the State and Authorized User further acknowledge that except for the payment to Contractor for the Third Party Products, all of its rights and obligations with respect thereto flow from and to the Third Parties.

iii. If the Contractor breaches any of the warranties set forth in this **Subsection** d Contractor will, upon written notice from the State, remedy such breach in

accordance with its service and maintenance obligations set forth in Section 1.6 of the Statement of Work, including the time periods set forth in such section. In the event Contractor fails to remedy such breach on a timely basis, the State will be entitled to such remedies as are specified in the Statement of Work or as may otherwise be available under this Contract, at law or in equity for breach of its service and maintenance obligations. During the Initial Service Period (as that term is defined under the Statement of Work), Contractor's obligations under this section shall be at Contractor's sole cost and expense. Upon expiration of the Initial Service Period, the State will pay in accordance with the fees set forth in the Statement of Work.

e. CONTRACTOR DISCLAIMS ALL OTHER REPRESENTATIONS AND WARRANTIES, WHETHER WRITTEN, ORAL, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY BASED ON A COURSE OF DEALING, COURSE OF PERFORMANCE OR USAGE OF TRADE. OTHER THAN THE WARRANTIES SET FORTH ABOVE REGARDING COMPABITBILITY, CONTRACTOR MAKES NO REPRESENTATIONS OR WARRANTIES AS TO THIRD PARTY PRODUCTS, IF ANY, PROVIDED BY CONTRACTOR TO STATE, ALL OF WHICH IS SOLD, LICENSED, OR SUBLICENSED TO STATE "AS IS," OTHER THAN AS MAY BE PROVIDED IN ANY PASS-THROUGH WARRANTY. CONTRACTOR HAS NO RESPONSIBILITY OR LIABILITY FOR THIRD PARTY PRODUCTS, IF ANY, PROVIDED BY CONTRACTOR'S DISTRIBUTORS OR OTHER THIRD PARTIES TO STATE. STATE AND AUTHORIZED USERS ARE SOLELY RESPONSIBLE FOR ASSURING AND MAINTAINING THE BACKUP OF ALL CUSTOMER DATA. UNDER NO CIRCUMSTANCES WILL CONTRACTOR BE LIABLE TO CUSTOMER OR ANY THIRD PARTY FOR THE LOSS OF OR DAMAGE TO CUSTOMER DATA

32. **Conflicts and Ethics.** Contractor will uphold high ethical standards and is prohibited from: (a) holding or acquiring an interest that would conflict with this Contract; (b) doing anything that creates an appearance of impropriety with respect to the award or performance of the Contract; (c) attempting to influence or appearing to influence any State employee by the direct or indirect offer of anything of value; or (d) paying or agreeing to pay any person, other than employees and consultants working for Contractor, any consideration contingent upon the award of the Contract. Contractor must immediately notify the State of any violation or potential violation of these standards. This Section applies to Contractor, any parent, affiliate, or subsidiary organization of Contractor, and any subcontractor that performs Services in connection with this Contract.

33. **Nondiscrimination.** Under the Elliott-Larsen Civil Rights Act, 1976 PA 453, MCL 37.2101, *et seq*., and the Persons with Disabilities Civil Rights Act, 1976 PA 220, MCL 37.1101, *et seq*., Contractor and its subcontractors agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, or mental or physical disability. Breach of this covenant is a material breach of this Contract.

34. **Unfair Labor Practice.** Under MCL 423.324, the State may void any Contract with a Contractor or subcontractor who appears on the Unfair Labor Practice register compiled under MCL 423.322.

35. **Schedules**. All Schedules that are referenced herein and attached hereto are hereby incorporated by reference. The following Schedules are attached hereto and incorporated herein:

Schedule A	Statement of Work
Schedule B	License Agreement

Schedule C Pricing

36. **Governing Law.** This Contract is governed, construed, and enforced in accordance with Michigan law, excluding choice-of-law principles, and all claims relating to or arising out of this Contract are governed by Michigan law, excluding choice-of-law principles. Any dispute arising from this Contract must be resolved in Michigan Court of Claims. Contractor consents to venue in Ingham County, and waives any objections, such as lack of personal jurisdiction or *forum non conveniens*. Contractor must appoint agents in Michigan to receive service of process.

37. **Non-Exclusivity.** Nothing contained in this Contract is intended nor will be construed as creating any requirements contract with Contractor. This Contract does not restrict the State or its agencies from acquiring similar, equal, or like Services or Deliverables from other sources.

38. **Force Majeure.** Neither party will be in breach of this Contract because of any failure arising from any disaster or acts of god that are beyond their control and without their fault or negligence. Each party will use commercially reasonable efforts to resume performance. Contractor will not be relieved of a breach or delay caused by its subcontractors. If immediate performance is necessary to ensure public health and safety, the State may immediately contract with a third party.

39. **Dispute Resolution.** The parties will endeavor to resolve any Contract dispute in accordance with this provision (the "**Dispute Resolution Procedure**"). The dispute will be referred to the parties' respective Contract Administrators or Program Managers. Such referral must include a description of the issues and all supporting documentation. The parties must submit the dispute to a senior executive if unable to resolve the dispute within 15 business days. The parties will continue performing while a dispute is being resolved, unless the dispute precludes performance. A dispute involving payment does not preclude performance.

    Litigation to resolve the dispute will not be instituted until after the dispute has been elevated to the parties' senior executive and either concludes that resolution is unlikely, or fails to respond within 15 business days. The parties are not prohibited from instituting formal proceedings: (a) to avoid the expiration of statute of limitations period; (b) to preserve a superior position with respect to creditors; or (c) where a party makes a determination that a temporary restraining order or other injunctive relief is the only adequate remedy. This Section does not limit the State's right to terminate the Contract.

40. **Media Releases.** News releases (including promotional literature and commercial advertisements) pertaining to the Contract or project to which it relates must not be made without prior written State approval, and then only in accordance with the explicit written instructions of the State.

41. **Severability.** If any part of this Contract is held invalid or unenforceable, by any court of competent jurisdiction, that part will be deemed deleted from this Contract and the severed part will be replaced by agreed upon language that achieves the same or similar objectives. The remaining Contract will continue in full force and effect.

42. **Waiver.** Failure to enforce any provision of this Contract will not constitute a waiver.

43. **Survival.** The provisions of this Contract that impose continuing obligations, including warranties and representations, termination, transition, insurance coverage, indemnification, limitations of liability, and confidentiality (and any surviving provisions in the License Agreement), will survive the expiration or termination of this Contract.

44. **Entire Agreement.** This Contract, including its Schedules, constitutes the sole and entire agreement of the parties to this Contract with respect to the subject matter contained herein, and supersedes all prior and contemporaneous understandings and agreements, both written and oral, with respect to such subject matter. In the event of any conflict between the terms of this Contract and those of the

Statement of Work or other Schedule, the following order of precedence governs: (a) first, this Contract; and (b) second, the Statement of Work or other Schedule. NO TERMS ON CONTRACTOR'S WEBSITE, BROWSE-WRAP, SHRINK-WRAP, CLICK-WRAP, CLICK-THROUGH OR OTHER NON-NEGOTIATED TERMS AND CONDITIONS PROVIDED WITH ANY OF THE SERVICES, EMS SOFTWARE, DELIVERABLES, OR DOCUMENTATION HEREUNDER WILL CONSTITUTE A PART OR AMENDMENT OF THIS CONTRACT OR IS BINDING ON THE STATE OR ANY AUTHORIZED USER FOR ANY PURPOSE. ALL SUCH OTHER TERMS AND CONDITIONS HAVE NO FORCE AND EFFECT AND ARE DEEMED REJECTED BY THE STATE AND THE AUTHORIZED USER, EVEN IF ACCESS TO OR USE OF SUCH SERVICE, EMS SOFTWARE, DELIVERABLE OR DOCUMENTATION REQUIRES AFFIRMATIVE ACCEPTANCE OF SUCH TERMS AND CONDITIONS.

STATE OF MICHIGAN

Voting System Hardware, Firmware, Software and Service

SCHEDULE A
STATEMENT OF WORK
CONTRACT ACTIVITIES

This Contract is for voting systems approved for use in Michigan for the Michigan Department of State (MDOS) and includes hardware and firmware (tabulators and all related components, including those for use by voters with disabilities); related Election Management System (EMS) software provided to counties and select local jurisdictions; initial and extended service and maintenance; training and training documentation for county/local jurisdiction clerks and election staff and replacement components/consumables.

This is a multiple-vendor contract award with vendor selection coordinated at the county level and will be a gradual rollout. The rollout is anticipated to begin in conjunction with the August 2017 election, with the anticipated statewide completion by the August 2018 primary election. These schedules will be coordinated at the county level. The accessible voting system component will be rolled out in conjunction with the new voting system. Ownership will be granted directly to the counties and local jurisdictions. Upon agreement with jurisdictions in a county, ownership may be granted to the county for jurisdictions within the county.

A detailed list of the voting system components covered by this Contract, along with associated firmware and EMS software (including version numbers), is included in Exhibit 1 to Schedule A, Federal Voting System Testing / Certification Matrix.

BACKGROUND

In Scope:

This Contract includes:

- Purchase of voting system tabulators and all related components (Election Day precincts: one tabulator per precinct; and Absent Voter Counting Board, based on a formula determined by the State.) In addition, one tabulator per county.
- Purchase of accessible voting system components, for use by voters with disabilities (one per Election Day polling location [with some exceptions]). In addition, one accessible device per county.
- Related Election Management System or 'EMS' software. Two EMS software options will be available at the county level:
    - 1) **Full EMS ("Program Your Own")**, for counties that fully program their elections internally (without reliance on the voting system Contractor/subcontractor for programming); and
    - 2) **Accumulation-Only EMS**, for counties that rely on the voting system Contractor/subcontractor for programming; the accumulation-only functionality for these counties includes the capability to burn media, read media, transmit results and produce accumulation reports.
- Initial training and training documentation for county/local jurisdiction clerks and election staff.
- Voting System component / consumables costs (replacement or additional components not already covered in initial purchase).

- Initial system/software service and maintenance (acquisition year + four years).
- Extended service and maintenance (after the expiration of the initial service and maintenance period, + 5 years). Note: in the absence of a State appropriation, local counties and jurisdictions will be solely responsible for the cost of extended service and maintenance.
- Preventative maintenance (every two years).
- NOTE: The Contractor shall provide the State with one full set of all system components at no charge (precinct tabulator; AVCB tabulator; accessible voting device; full EMS software ("Program Your Own" version); all related training and documentation).

Anticipated Key Implementation Timeframes:

Initial acquisition and implementation is expected to progress over the following anticipated planned phases:

- Early to Mid 2017: For counties / jurisdictions that plan to implement the new system's first use in Michigan's August 8, 2017 election;
- Mid-2017: For counties / jurisdictions that plan to implement the new system's first use in Michigan's November 7, 2017 election;
- Early 2018: For counties / jurisdictions that plan to implement the new system's first use in Michigan's May 8, 2018 election;
- Mid-2018: For counties / jurisdictions that plan to implement the new system's first use in Michigan's August 7, 2018 primary election.
- Statewide implementation is expected to be completed by August 2018.

Detailed Specifications

1. Specifications **Exhibit 2, Attachments 1.1 – 1.4 to Schedule A** contain detailed technical specifications and requirements for Michigan's next generation voting system.
1.1 Voting System HARDWARE Technical Requirements **Exhibit 2, Attachment 1.1 to Schedule A** lists detailed voting system **hardware** technical specifications and requirements. This attachment is broken into several categories, including: A. Ballot Counter / Tabulator Requirements B. Ballot Requirements C. Memory Device Requirements D. Ballot Box Requirements E. COTS (Commercial Off the Shelf) Options F. Reliability Requirements G. Security Requirements
Refer to Exhibit 2, Attachment 1.1 to Schedule A for additional details of these requirements.
1.2 Voting System ELECTION MANAGEMENT SYSTEM (EMS) SOFTWARE Technical Requirements **Exhibit 2, Attachment 1.2 to Schedule A** lists detailed voting system **Election Management System (EMS) software** technical specifications and requirements. This attachment is broken into several categories, including: A. Election Management System (EMS) General Requirements B. EMS Programming Requirements C. Ballot Programming and Layout Requirements

D. Election Night Reporting (ENR) Capabilities / Requirements
E. Reports Requirements
F. Audit Capabilities / Requirements
G. System / Software Ownership Requirements

Refer to Exhibit 2, Attachment 1.2 to Schedule A for additional details of these requirements.

1.3 Voting System ABSENTEE VOTING (AV) Technical Requirements

Exhibit 2, Attachment 1.3 to Schedule A lists detailed voting system **absentee voting (AV)** technical specifications and requirements. This attachment is broken into the following categories:
A. AV Processing General Requirements
B. High Speed AVCB Tabulator Requirements

Refer to Exhibit 2, Attachment 1.3 to Schedule A for additional details of these requirements.

1.4 Voting System ACCESSIBLE VOTING SYSTEM COMPONENT Technical Requirements

Exhibit 2, Attachment 1.4 to Schedule A lists detailed voting system **Accessible Voting System Component** technical specifications and requirements. This attachment is broken into several categories, including:
A. Accessible Voting System General Requirements
B. Accessible Voting System – Use of Touch Screen Interface Requirements
C. Accessible Voting System – Use of Paper Ballots (Requirements related to 3 possible scenarios)
D. Reliability Requirements

Refer to Exhibit 2, Attachment 1.4 to Schedule A for additional details of these requirements

1.5 State and Federal Testing / Certification Requirements

A. Federal Testing and Certification Requirements

Contractor's system shall have been tested and successfully completed all certification steps required by the U.S. Election Assistance Commission (EAC) before the system will be approved for implementation in Michigan. Documentation detailing the system to be implemented in Michigan is included in **Exhibit 1 to Schedule A, Federal Voting System Testing / Certification Matrix**.

For systems still in the process of obtaining EAC certification, the Contractor shall provide a copy of the EAC certification prior to final State certification and prior to a Purchase Order being placed for the system in any county. If the Contractor's system is not EAC certified by March 31, 2017, the State reserves the right to terminate this Contract and remove it from the program.

Contractor authorizes the State of Michigan to independently verify the status of any system's (or upgrades) Federal testing and certification status with the identified VSTL and the EAC, and authorize the identified VSTL and the EAC to provide information to the State of Michigan.

NOTE: Also see Section **1.5 D – Modification Requirements** (below), related to compliance requirements with future Federal standards.

B. State Testing and Certification Requirements

All voting systems approved for use in Michigan must complete the State voting system certification process, as required by Michigan Election Law. For systems that have not yet completed EAC certification, the State will coordinate the details and timeframes for completing final State certification and testing.

In sum, this process is designed to ensure that that all voting systems approved for use in Michigan comply with all applicable requirements of Michigan Election Law, 1954 PA 116, MCL 168.1 *et seq*., and related Rules for Electronic Voting Systems, Mich Admin Code R 168.771 *et seq*.

C. State Uniform Data Format

Contractor agrees and will comply with Michigan-specific uniform data format requirements and Federal IEEE Standards. **Exhibit 6 to Schedule A, Michigan QVF Export File Format** contains the State's current uniform data structure for use with Contractor's voting system EMS software.

Federal IEEE Standards: Upon finalization of voting system uniform data format standards currently under development at the Federal level (commonly referred to as IEEE standards), Contractor shall work with the State to seamlessly convert the State uniform data structure to comply with and implement the IEEE uniform data format at an agreed-upon time.

D. Modification Requirements

In the event that any modifications become available and/or necessary after delivery due to changes in the applicable Federal and/or State certification standards and/or laws that occur during the Contract period, the Contractor and the State will jointly review and agree upon the scope of, and cost for, any modifications required by such subsequent changes in Federal and/or State certification requirements and/or law. As part of this determination process, the Contractor shall thoroughly review the impact of such changes and develop a scope of work and cost analysis for review and approval by the State before proceeding with any applicable modifications.

System changes that are implemented through this process shall be accepted through the change notice process and included in the Contract as described in **Section 4** in the Contract Terms.

The Contractor shall provide written notice to the State Program Manager of any system modifications made on behalf of jurisdictions outside the State of Michigan. Such notice shall be provided no later than one month after the modification is made available.

1.6 Service and Maintenance

The Contractor shall maintain a physical presence in Michigan. The Contractor must include a proposed regional office structure and regional service and maintenance plan. This plan shall include the number and names of support personnel and geographic location/region assigned to each.

If a subcontractor is to be used for service and maintenance, the subcontractor must be identified, along with any Key Personnel (see **Section 3.3**); as well as relevant experience the subcontractor has with relation to the service and maintenance of the system being proposed.

In order to achieve the best possible level of service for Michigan customers, the Contractor will utilize two subcontractors. The two subcontracting companies, Grand Rapids-based ElectionSource and Governmental Business Systems (GBS), have an existing footprint in the State of Michigan, having provided services and support to a wide range of county customers for many years. The Contractor, together with ElectionSource and GBS, will work to ensure that the regional office structure, service and maintenance plan meets the needs of Michigan county customers.

In order to ensure adequate service coverage, ElectionSource proposes to open up an additional office located in South-East Michigan, which will add at least four new positions including - but not limited to - experienced service technicians, an elections programmer, and customer services liaisons for counties in the region.

Similarly, Governmental Business Services (GBS) Michigan-based personnel possess extensive experience in election supply/services in Michigan. Every GBS account manager's office will be equipped with back-up voting equipment, spare parts and any other ancillary supply items germane to the ImageCast product line. All GBS staff (based and/or assigned to Michigan) have been thoroughly trained on every aspect of the Democracy Suite system. A larger inventory of Dominion Voting products will also be maintained at GBS' corporate office in Lisle, Illinois, a 90-minute drive to the Michigan state line.

The Contract includes initial, ongoing and extended service and maintenance to include all of the following:

A. Service and Maintenance

The Contract shall cover an initial service and maintenance period on all Deliverables, System Software, and EMS Software (as those terms are defined under the Contract Terms) that shall be in effect throughout the acquisition

year + 4 years (the "**Initial Service Period**"), and shall be provided be at no additional cost. Extended service and maintenance on all Deliverables, System Software, and EMS Software shall cover the time period from the expiration of the Initial Service Period + 5 years (the "**Extended Service Period**"). Both the Initial Service Period and the Extended Service Period must cover all Deliverables, System Software and EMS Software, including any parts and labor. During the contract period, the Contractor shall repair or replace any Deliverable, System Software and/or EMS Software that becomes inoperable, is defective in material or workmanship, or otherwise fails to perform substantially in accordance with the Documentation and Contract requirements.

Deliverables and System Software:

During the term of the Contract, Contractor shall provide the following support and maintenance services (including unlimited telephonic support and all necessary travel and labor) to maintain the Deliverables and associated System Software in accordance with the Documentation and Contract requirements:

1. Upgrades to System Software. Make available to the State and any Authorized User no later than the first day of general release, or such other time as may be mutually agreed upon by the parties, copies of the System Software and documentation revised to reflect any enhancements (including New Versions and upgrades) to the System Software. Acceptance of system upgrades will proceed as outlined in **Section 1.5D, Modification Requirements.**

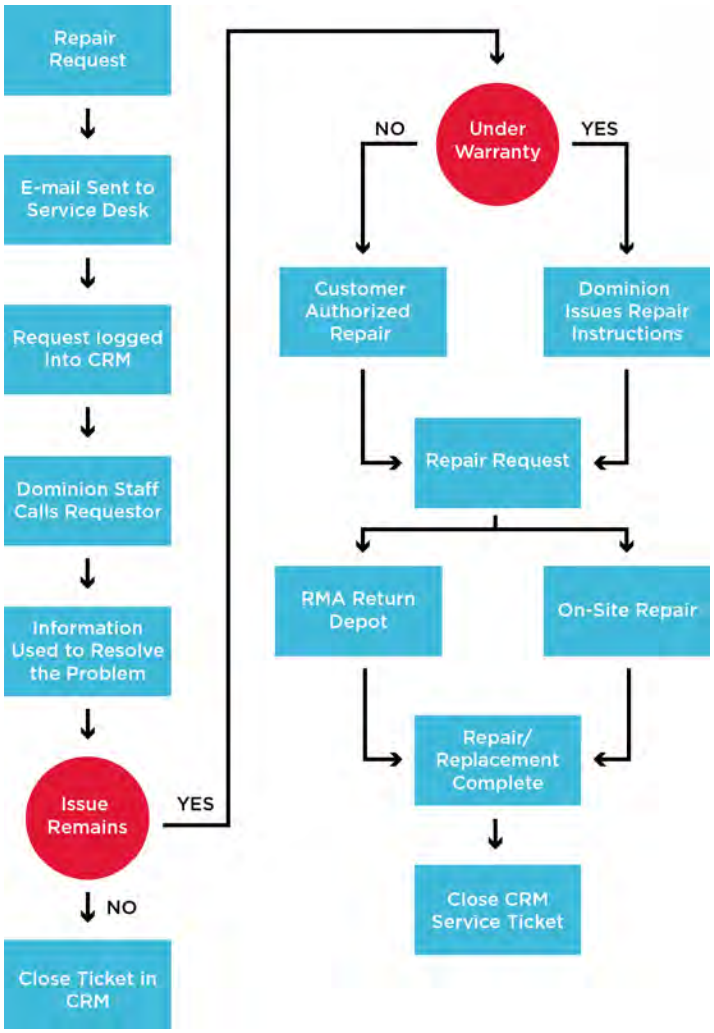
2. Known Defects. Contractor shall promptly notify the State and any Authorized User of any defects or malfunctions in the Deliverable, associated System Software or Documentation of which it learns from any source, correct any such defects or malfunctions or provide a workaround until corrected within five (5) Business Days of knowledge of such defect or malfunction and provide the State or Authorized User with corrections of same, at no additional cost to the State or Authorized User. If the correction of known defects requires Federal or State certification, acceptance of the correction will proceed as outlined in **Section 1.5D, Modification Requirements.**

3. Coverage. See Section 1.6(C)(1) below.

4. Service Levels. Respond to problems with the Deliverable identified by the State or an Authorized User in no more than two (2) hours after notification. Resolve all problems as specified in Section 1.6(C)(2) below. For purposes of this section, "resolve" means that Contractor has provided all parts, components and services required to correct the defect and restore such Deliverable so that it functions as warranted, and the State or Authorized User has confirmed such correction and its acceptance of it in writing; or Contractor shall replace it, so that it functions as warranted, and the State or Authorized User has confirmed such replacement and its acceptance of it in writing. Services provided by Contractor to correct the defect shall be on-site, and Contractor shall be solely responsible for any shipping cost to return any Deliverable to Contractor.

Contractor and its subcontractors address warranty, repair, and maintenance in a comprehensive and effective manner as characterized by the following:

- **Engineering** – Key components are designed with redundancy.
- **Manufacture Quality** – All components are manufactured using ISO 9001 practices.
- **Design** – The solution architecture is redundant (redundant servers, redundant storage, etc.)
- **Warranty** – We provide hardware and software warranty to meet customer specification.
- **Preventative Maintenance** – Contractor and its subcontractors provide preventative maintenance as required by the Contract and as presented in this section.
- **Repair** – Contractor maintains distributed warehouse of spare parts. Contractor maintains spare systems in depots as contingency replacements.
- **Readiness** – During the identified pre-election period, Contractor and its subcontractors will comply with all requirements for enhanced response time to all repair requests. All staff are available as required in the Contract. These technicians are well trained, experienced, and have spare systems available to them to ensure required timelines can be met.
- **Tracking and Reporting** – Contractor and its subcontractors utilize its Automated Ticket Tracking (ATT) system to manage repair and maintenance tickets. This is the same ticket tracking system that is used for problem escalation.



Since voting systems are unique in that they must be available and fully operational on every voting day, the Contractor and its subcontractors will offer only one level of service to all of its customers. This is the highest possible level of service. Every problem or issue will be addressed as high priority.

The Contractor and its subcontractors use a CRM database to capture service calls so no issue is overlooked. The CRM system tracks service request from the initial point of contact to issue resolution. It provides us with a management control tool as well as a status/historical reporting capability. The CRM system will also be used to retain/reference repair orders, maintenance checklists and all other documents reflecting any work performed on any voting system component. Once a call/email is received, a work ticket is created and the initiating party will be contacted by a member of the service team.

Initial contact will be established no more than two hours after notification. At that time, additional troubleshooting instructions may be provided to help the service team better respond to the failure or defect. If the defect or failure cannot be addressed in this manner, the service representative will make the appropriate arrangements for resolution. The diagram on the previous page summarizes this process.

If a failed component is under warranty, Contractor's subcontractors will schedule an onsite visit by a technician to repair / rectify the defective or failed component. Where a failed or defective component is not covered by warranty, the State or Authorized User may request an on-site visit to assess and repair the failed / defective component. Normal rates will apply.

5. Remedies. If Contractor is unable to make the Deliverable conform, in all material respects, to the Contract requirements and Documentation within thirty (30) calendar days following written notification by the State or an Authorized User, Contractor shall, at the State's or such Authorized User's request, return all monies paid by the State or such Authorized User per the direction of the State Program Manager for the non-conforming Deliverable and Documentation and such other related Service(s) rendered unusable, including any prepaid maintenance fees associated with that Deliverable.

   Contractor will accept return of the Deliverable and refund to the State a pro rata portion of the purchase price paid to Contractor for the defective Deliverable, such refund based on a straight line depreciation over a ten (10) year term beginning on the date of purchase.

EMS Software: During the term of the Contract, Contractor shall provide the following support and maintenance services (including unlimited telephonic support and all necessary travel and labor) to maintain the EMS Software in accordance with the Documentation and Contract requirements:

1. Maintenance Releases and New Versions. Contractor shall provide to the State and Authorized Users, at no additional charge, and no later than the first day of general release or such other time as may be mutually agreed upon by the parties, with all Maintenance Releases and New Versions (as those terms are defined in the Contract Terms) of the EMS Software. Acceptance of maintenance releases and new versions will proceed as outlined in **Section 1.5D, Modification Requirements.**

2. Known Defects. Promptly notify the State and all Authorized Users of any defects or malfunctions in the EMS Software or Documentation of which it learns from any source other than the State or an Authorized User and provide to all Authorized Users a correction of any such defects or malfunctions, or a work around until a correction is available, within five (5) days of Contractor's knowledge of such defect or malfunction. If the correction of known defects requires Federal or State certification, acceptance of the correction will proceed as outlined in **Section 1.5D, Modification Requirements.**

3. Coverage. See Section 1.6(C)(1) below.

4. Service Levels. Respond to problems with the EMS Software identified by the State or an Authorized User in no more than two (2) hours after notification. Resolve all problems according to the following:

   - Priority 1 (EMS Software inoperable) within one week.
   - Priority 2 (certain processing interrupted or malfunctioning but EMS Software able to process) within two weeks.
   - Priority 3 (minor intermittent malfunctioning, EMS Software able to process data) within 30 days.

   The level of severity (e.g., Priority 1, 2, or 3), shall be defined by the State or Authorized User. For purposes of this section, "resolve" means that Contractor has corrected the problem that prompted the support request so that the EMS Software functions as warranted, and that the State or Authorized User has confirmed such correction and its acceptance of it in writing; or Contractor shall reinstall the EMS Software, so that it functions as warranted, and the State or Authorized User has confirmed such reinstallation and its acceptance of it in writing.

   Should the EMS Software be found inoperable (following priority 1 standards) and cannot be repaired, a new installation of the EMS Software will be performed on-site and all testing of the software will be performed.

   When responding to priority 2 issues, the Contract and its subcontractors will ensure that on-site testing is performed on the computer system and EMS Software to determine the cause of the problem with the EMS Software. Contractor may provide assistance to perform programming for Authorized User in the event that they cannot use the software while testing is being performed.

   Similarly with priority 3 problems (minor intermittent malfunctioning, EMS Software able to process data), on-site testing will be performed on the system to determine the cause of the problem with the EMS

Software within 30 days. Contractor may also provide assistance to perform programming for Authorized Users in the event that they cannot use the software while testing is being performed.

Service Requests will be completed for each Priority type. The Service Request will consist of the following information:

- Authorized User information
- Date the Service Request was submitted
- Reason for the Service Request
- Technician performing the service/repair
- Explanation of diagnosis and service performed
- Length of time service/repair was performed
- Date Service Request was completed
  - Copies of Service Requests will be given to the Authorized User and to the State for record keeping.

5. Remedies. If Contractor is unable to make the EMS Software conform, in all material respects, to the Contract requirements and Documentation within thirty (30) calendar days following written notification by the State or an Authorized User, Contractor shall, at the State's or such Authorized User's request, cancel the license to such EMS Software, accept return of such EMS Software and Documentation, if applicable, rendered unusable, and return all monies paid by the State or such Authorized User per the direction of the State Program Manager for the non-conforming EMS Software and Documentation and such other related Service(s) rendered unusable, including any prepaid maintenance fees associated with the EMS Software.

   Contractor will accept return of the EMS Software and refund to the State a pro rata portion of the license fee paid to Contractor for the EMS Software, such refund based on a straight line amortization over a ten (10) year term beginning on the date of purchase.

B. Preventative Maintenance (Tabulators/accessible voting system components only)

- Biennial (every two years) preventative maintenance package
- Preventative maintenance must consist of standard steps and checklists for each tabulator/accessible voting system component

Service and maintenance also includes preventative maintenance (PM) for tabulators / accessible voting system components throughout the contract term. Preventative maintenance includes both remedial and preventative maintenance services, including all labor and parts except consumables such as printer cartridges, paper rolls, and backup batteries that can be accessed/changed by the local jurisdiction. NOTE: batteries associated with the system motherboard shall be covered by warranty.

Refer to Schedule C-Pricing for pricing on all consumables, as well as information on how and when to obtain replacement consumables, and consumables that are available commercially off-the-shelf (COTS).

Contractor and its subcontractors shall provide preventative maintenance on a biennial basis (every two years). Preventative maintenance schedules for individual counties shall be finalized with input and approval by the individual counties. See **Section 1.6C(4)** below.

Preventative maintenance must consist of standard steps and checklists for each ImageCast precinct tabulator, ImageCast X accessible voting system component and ImageCast Central high speed AVCB tabulator. Refer to **Exhibit 3 to Schedule A Preventative Maintenance Checklist**s. The State has final approval over all preventative maintenance checklists.

Preventative maintenance for Contractor's Democracy Suite is designed to minimize all maintenance, and is primarily focused on the mechanical components.

The State of Michigan requires assurances from the Contractor that the purchased system has high availability, will be well maintained, and repaired promptly. The Contractor shall provide these assurances as follows:

The Contractor's subcontractors will be responsible for repairing Voting System components and performing preventative maintenance during the warranty period. Warranty and repair parts shall be new. The Contractor's subcontractors will track and retain documentation on maintenance and repair activities. The Contractor will coordinate all repair and maintenance actions with the State or Authorized User. The jurisdictions will be given written documentation to confirm completion of work performed and status of the Voting System.

The Contractor provides standard costs for all consumables as well as information on how and when to obtain replacement consumables, and consumables that are available COTS. Refer to **Schedule C – Pricing.**

C. Technical Support Response Requirements

- Help Desk Telephone Support
- Equipment Repair/Replace
- Reporting Requirements
- Support Personnel

NOTE: counties and local jurisdictions may contract and pay separately for Election Day Support, which will entail dedicated Election Day support resources and specific additional requirements beyond what is listed here. Counties and local jurisdictions will not be limited in the number of help desk calls.

1. Help Desk Telephone Support

a. Toll-Free Number: 1-886-654-8683 (VOTE)

Contractors must provide a single toll-free number for Help Desk Support.

This toll-free number must allow callers to speak directly to live support representatives that are equipped to handle Michigan customer service, technical support, and other needs identified in the Contract.

In addition, the Contractor and its subcontractors will also provide local ongoing technical support. Each county, depending on the specifics of their contract agreement, will have the option of having an Election Day support team in their county that they can contact directly.

b. Timeframe availability: Help Desk support is available during regular business hours (Mon-Fri, 8 am – 5 pm, Michigan local time) and 6 am – midnight on Election Day. In addition, support personnel have company cell phones for after-hours support.

c. Response time for calls: Response to calls is required within two hours of receipt of the call.

Contractor's process for escalating and ensuring all Election Day support calls are handled and resolved as expeditiously as possible, is as follows:

The Contractor and its subcontractors will use an automated ticket tracking system. The target resolution time serves as a trigger point for escalation of the problem. The following table characterizes types, severity, and response times for problems.

Phase	Initial Response	Estimation Response	Subsequent Responses	Target Resolution Time
Election Day	Immediate	30 minutes	30 minutes	1 Hour
Ballot Programming[1]	Immediate	1 Hour	Every 2 hours	4 Hours
Pre-Election Period[2]	Immediate	4 hours	Each Calendar Day	1 Business Day
Non-Election Period	Immediate	Next Business Day	Each Business Day	As Agreed

1. The period beginning with the release of final geopolitical data for a given election, and ending with the creation of the approved ballot images and election files.
2. The period beginning 60 days prior to a scheduled election and ending on certification of official results reports.

d. For local jurisdictions contracting for Election Day support, an after-hours "emergency" toll-free number must be available for on-call service and support.

Contractor's toll-free number for support is 1-886-654-8683 (VOTE). The Contractor shall provide Election Day support from 6:00 am until all counties report in, with live call center to dispatch technician, if needed.

2. Equipment Repair/Replace

a. Contractor must maintain a reasonable supply of certified manufacturer replacement parts and components at distributed warehouses necessary to repair malfunctioning equipment and return it to service as soon as possible. Contractor's subcontractor, ElectionSource, for example, maintains spare systems in its Grand Rapids office and in depots as contingency replacements. Technicians must be equipped with all commonly required spare parts.

b. Equipment repair shall occur on-site, unless there is a demonstrable need to ship the equipment off-site for service, repair, or replacement. (See paragraph e. below.)

c. Equipment shall be repaired or replaced within ten business days. On Election Day, equipment shall be repaired or replaced as soon as possible that day. Contractor shall have a process for escalating and ensuring all Election Day equipment problems are handled and repaired/replaced as expeditiously as possible. Prior to Election Day, repaired/replaced equipment shall be available to allow for adequate time for pre-election testing and successful use on Election Day.

d. In the event of inoperability on Election Day, the Contractor and its subcontractors will have technicians strategically placed throughout the state in order to be no more than one hour away from trouble calls on Election Day. Technicians will have parts and loaner equipment available at no cost to the local jurisdictions.

e. If a demonstrable need exists to ship equipment for service, repair, or replacement, the Contractor shall pay the full cost of shipping and all related expenses, including packing materials.

3. Reporting Requirements

a. Contractor shall promptly provide the counties and local jurisdictions with written information on any tabulator/accessible voting system hardware, firmware and/or EMS software problems that are encountered wherever the equipment is in use (inside or outside of Michigan), along with written instructions explaining the solution to those problems. Copies of these communications shall also be provided to the State's Contract Administrator and Program Manager at the time of issuance to the counties and local jurisdictions. The State's Contract Administrator and Program Manager shall also receive prompt written notice whenever a problem exists that may affect multiple jurisdictions.

b. Contractor shall provide written reports on a monthly basis (or on a regular timeframe mutually agreed upon between the State and the Contractor) that summarize all service and maintenance work completed during the reporting period; all service and maintenance work scheduled for the upcoming reporting period; and any unresolved problems or other issues that may affect multiple jurisdictions. These reports shall be submitted via email to the State's Program Manager.

c. Contractor shall promptly notify the State's Contract Administrator and Program Manager in writing of any material errors or defects in the tabulator/accessible voting system hardware, firmware, software and/or EMS software deliverables known, or made known to Contractor from any source (inside or outside of Michigan) during the Contract term that could cause the production of incomplete, inaccurate, or otherwise materially incorrect, results. Contractor shall immediately initiate actions as may be commercially necessary or proper to effect corrections of any such errors or defects.

4. Support Personnel

The Contractor shall provide well-trained and knowledgeable election service technicians for all activities that are the Contractor's responsibility. The Contractor must maintain election service technicians in various areas of the state to meet the counties' and local jurisdictions' service and maintenance needs and to conform with response time requirements. Counties and local jurisdictions have the right of approval for any support personnel provided at the county/local level.

The Contractor and its subcontractors will provide qualified technicians and a range of necessary parts on-site to enable immediate repairs to commonly identified problems. Technicians are factory trained and can handle most repairs on-site. However, the sophisticated nature of the ImageCast system may require that some systems are repaired in Contractor's depot facility. In this event, a spare will be provided if needed to meet an election deadline. Technicians will have cell phones and company vehicles.

For preventative maintenance visits and when service and maintenance needs require an in-person visit by an election service technician, Contractor staff must work with counties and local jurisdictions to establish mutually agreeable timeframes and locations for repairs and preventative maintenance services. The Contractor must develop a proposed preventative maintenance schedule for review and approval by the counties and local

jurisdictions; counties/local jurisdictions are not responsible for developing this schedule. It will be up to the counties and/or local jurisdiction to select on-site vs. centralized locations for preventative maintenance.

While on-site, election service technicians must establish contact with the designated jurisdiction representative upon arrival and before leaving. Contractor staff must provide jurisdiction staff with a copy of the completed Preventative Maintenance Checklist, a written status report upon completion of support/maintenance work, indicating the work that was completed, any outstanding issues and the plan for resolving those issues.

All service technicians shall:

a. Be well trained, professional, knowledgeable and experienced in the maintenance and repair of tabulators, accessible voting components, firmware and EMS software; and capable of replacing malfunctioning equipment in county/local jurisdiction offices, storage facilities and/or the polling place.
b. Have reliable dedicated transportation of sufficient size to accommodate the transport of voting equipment as needed.
c. Maintain a reasonable supply of certified manufacturer replacement parts and components necessary to repair malfunctioning equipment and return it to service.
d. Have cellular telephones or other means of real-time communication, and must provide this information to the designated jurisdiction representatives.

1.7 Product Recall Requirements and Procedures

Any issues with the voting system will always be immediately addressed by working directly with the Bureau of Elections and the State. In the case of a recall, Contractor's response plan starts with defining a plan that is acceptable to all parties, performing the recall, and repeating acceptance testing.

Contractor's procedures related to product recall, covering how and when it is determined that a product recall is needed, how information on product recalls is communicated to customers and how product recalls are tested, scheduled, deployed and completed are described as follows:.

Firstly, to communicate and formulate a product recall plan:

1. Notify Contractor's communications assigned contact with the State by telephone without delay to discuss the recall situation, and begin to create the recall plan which would cover scheduling, retesting, and redeployment
2. Provide the State with a Product Advisory Notice document so the information is in writing
3. Notify the counties by telephone and then in writing
4. Notify remaining jurisdictions by telephone and then in writing
5. Finalize recall plan

Finally, execute the agreed recall plan with the State, which could follow the following suggested steps:

1. Provide release notes and test results to the State
2. Repeat certification testing
3. If the recall is on physical units:
    a. Return units that are being recalled to the repair facility
    b. Update the units at repair facility
    c. Return units to customer sites
    d. Perform acceptance testing
4. If the recall is on software:
    a. Distribute the software to customer sites
    b. Reinstall the software
    c. Perform acceptance testing

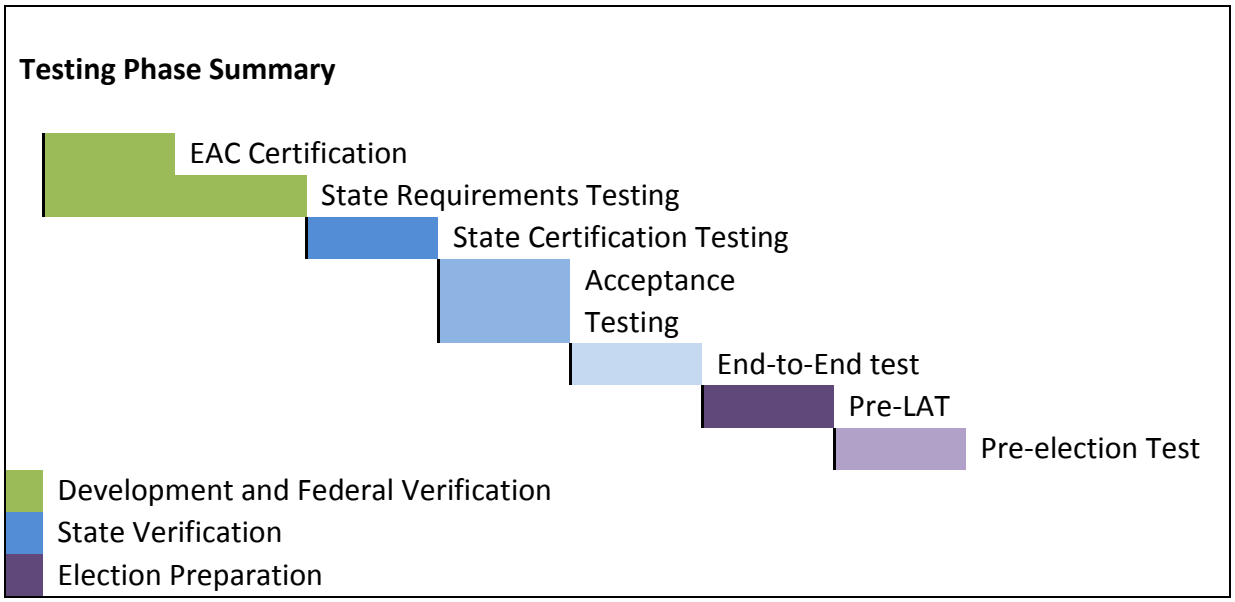
1.8 Quality Assurance Program

Contractor must have Quality Assurance programs in place for the voting system, accessible voting system components and related EMS software products, covering ongoing programs that test, validate and upgrade hardware, firmware, software and other key components.

Contractor uses multi-level quality assurance and quality control processes to ensure that all elements of its integrated voting system perform properly with every use. Contractor uses a top tier contract manufacturer, based in the United States, and recognized as a leader in the industry for manufacturing. Internal acceptance testing is performed on each voting system on receipt from the manufacturer. By the time its products are purchased by the State or Authorized End User, they have gone through three full rounds of acceptance testing. Independent reviews of election databases are

conducted prior to Logic & Accuracy testing. Contractor recommends (and supports their customers to conduct) precinct-level pre-election testing.

In addition to this rigorous testing and control program designed to catch errors, Contractor regularly conducts process audits of our acceptance testing, and programming processes to ensure that errors never occur.



Contractor tests its equipment to the highest standards in the industry. Contractor's test plan is multi-layered, and designed to complement County tests. Key attributes of the test plan are as follows:

1. EAC Certification – Contractor's products are certified as EAC compliant. This is the highest certification standard in the industry and is your assurance that all products have undergone the highest level of testing.
2. State Requirements Testing – Contractor's Engineers work to configure the EAC certified platform to meet Michigan's specific certification requirements.
3. State Certification Testing – Contractor's team works with the State board to demonstrate compliance of the system with state requirements.
4. Acceptance Testing – Each component of the system is tested for functionality on site at the customer warehouse. Contractor's subcontractor will provide training and documentation to county officials to assist them in undertaking this task.
5. End-to-End test – Contractor and its subcontractors will work with the county to conduct end-to-end testing. Contractor recommends that this test is completed following EMS training on a project reflecting Election Day requirements. In this test, an election project is created, and a representative sample of tabulators is programmed. Test ballots with known results are prepared and cast. Results are uploaded into the election management system and reports generated. The results are then compared to the expected outcomes to verify the system is performing properly. This test is performed on site at the customer warehouse.
6. Pre-Election Logic & Accuracy Testing – In advance of all elections Dominion Voting recommends that Logic & Accuracy Testing of each voting system is tested with final Election Day ballots. This complete end-to-end test provides certainty that the system will perform as planned on Election Day. This test is performed on site at the customer warehouse.
7. Pre-election test – Contractor advocates the use of a pre-election system readiness test. Prior to the beginning of voting, following the distribution of election systems to the precincts, customers have the option to run a small, mock-election. This test familiarizes poll staff in election night procedures, and provides additional assurance that all elements of the system are functioning properly after transport.
8. Automated Test Deck Creation – The creation of automated, comprehensive test decks is an optional service provided by Contractor to assist customers in conducting Logic & Accuracy testing. Using the Election Day database a series of pre-marked ballots are generated based on a computer algorithm designed to provide the highest assurance of system accuracy. When scanned these decks create known outcomes that can be compared with tabulated results. The elimination of error due to mistakes in hand-marking provides a higher degree of confidence in test results.

Available system upgrades shall be communicated and offered through the life of this Contract as described in **Section 1.5 D** (State Certification Process, Modification Requirements).

1.9 Incentives

Contractor offers a trade-in allowance incentive program for legacy tabulators and ballot marking devices, whereby the Contractor would take possession and ownership of existing voting systems, to assist counties and local jurisdictions in disposing of voting systems currently in place in the State of Michigan. **Refer to Schedule C, Pricing** for trade-in discount program available under this Contract.

2. Service Levels

2.1 Time Frames – Order Placement and Processing

Refer to the Background and Purpose section (under *KeyTimeframes),* for detail on the planned multiple purchasing phases.

After Contract execution, a vendor selection process will occur at the County level. Counties, in consultation with their local jurisdictions, will select a single system for the county. MCL 168.771a. Counties will also work with their local jurisdictions to determine a local funding plan (if necessary) and select a purchase phase for each jurisdiction.

Given the State's proposed implementation approach and timeframes, Contractor has provided details on the planned timeframes for delivery, testing and training for each purchase phase.

The State of Michigan requires a comprehensive implementation that is based on well-established principles of project management. The structure of the plan includes key milestones, which allow Michigan to see tangible progress.

Procurement and Delivery
Initiation of the procurement and delivery phase begins immediately on receipt of a signed purchase order from the State (POs will be issued for each county.

Contractor maintains a moderate inventory of all components, consumables, and parts that are available for immediate delivery. Through a network of suppliers, Contractor is able to procure supplies and consumables within 15-30 days to replenish inventory. When hardware orders are received, production is increased accordingly.

During the procurement phase of the project, all of the commercial off the shelf components used in Contractor's election system are purchased.

Hardware Manufacturing – Tabulators provided to counties in Michigan will be newly manufactured by Flextronics in their Plano, Texas manufacturing facility. Approximately ninety (90) days is required to procure all necessary components and complete manufacturing of the first tabulator, with the final system ready for delivery to the client approximately 14 days later. At this time purchase orders for ancillary equipment (i.e., buttons, additional compact flash cards, etc.) and any election consumables are generated.

Responsibility – County

Documentation
Finalize user documentation – All Dominion products are supplied with comprehensive technical documentation used by local election officials in the process of certifying and accepting voting systems. In addition, user documentation, forms and quick reference guides will be provided to reflect the specific needs of Michigan users.

Responsibility – County

Acceptance Testing of Election Equipment
County officials must formally accept all tabulators. To ensure complete functionality at the time of delivery, Dominion Voting follows a rigorous acceptance testing process.

County Acceptance – Counties are responsible for system acceptance testing. However, Dominion subcontractors will provide support to individual counties for acceptance testing. Acceptance testing involves:

Tabulator Acceptance Testing:
1. Physical inspection of tabulator
2. Functional testing using provided test materials, including the State-provided Acceptance Checklist

EMS Acceptance Testing:
1. Utilization of the EMS system to restore or create a simple election project

2. Creation of sample election files and ballots for the tabulator
3. Record sample ballot audio
4. Directly load sample results from tabulator memory cards
5. Create Election Results Reports

County representatives will verify that the acceptance test has been successful, and complete a *Receipt/Acceptance* form to be submitted to the State.

Acceptance testing is an essential part of the quality assurance process. Dominion's goal is that all election equipment arrives at the client warehouse in perfect condition, however it is normal to see a small number of tabulators that fail initial acceptance. Where the equipment in question can easily be repaired, the on-site Dominion subcontractor hardware technician will address these deficiencies immediately. When this is not possible, the equipment in question will be returned to our central depot and replaced.

Responsibility – County, Subcontractor

System Training
EMS Training – Dominion and its subcontractors will provide on-site training to County officials in the use of the election management system.
Responsibility – Dominion, Subcontractor

Tabulator and Accessible Voting System Training – Dominion and its subcontractors will provide on-site training to County officials in the use of the tabulator(s) and the accessible voting devices.
Responsibility – Dominion, Subcontractor

Refer to **Section 9.9 Project Plan** for further details. Also refer to **Section 2.2 (Delivery), Section 2.6 (Training) and Section 5 (Ordering)** for additional details.

2.2 Delivery

Contractor shall develop a county-by-county implementation plan for delivering and conducting acceptance testing in each county/jurisdiction prior to each purchasing phase. Delivery plans, timeframes and locations must be mutually agreed upon between the Contractor and the County.

Voting systems, accessible voting system components, related EMS software and all related components must be delivered and acceptance testing completed no later than 90 calendar days prior to the system's first use. Acceptance testing will consist of accuracy tests as prescribed under the Electronic Voting System Promulgated Rules, Mich Admin Code R 168.771 *et seq*. and State standard test deck processes, for both primary and general elections.

2.3 RESERVED

2.4 RESERVED

2.5 RESERVED

2.6 Training

Training Plan Overview

The State of Michigan requires a robust state-of-the-art training approach to fully internalize the new voting system solution into the voting operations of the state. All levels of staff - from poll workers to highly technical IT personnel - need to not only understand the new technology, but also how it integrates with the procedures and practices of Michigan elections.

Contractor and its subcontractors also understand that some election jurisdictions may have additional or special needs. For instance, a large County with a full time IT department will have different training requirements than a small County where there may not be a full time Elections Director. Given the unique circumstances of each Michigan county customer, Dominion and its subcontractors will work closely with each jurisdiction to ensure that the training program is customized to meet the County's specific needs.

Training is the primary tool for organizational change integration. The voting system solution will require election workers to learn a new suite of hardware, software, and procedures. Our suite of training materials (documents, presentation, guides,

reference cards, web resources, and self-paced learning) all contribute to integrating the new solution into the day-to-day routine of the organization.

A. Training Documentation - within 30 calendar days after Contract execution, the Contractor shall provide 10 copies of user manuals and step-by-step procedures for using the voting system and all components, accessible voting system components and EMS software to the State Program Manager or designee. Contractor and its subcontractors prepare all needed training material, which includes training manuals, training videos, quick reference guides, website instructional courses, and technical reference manuals when necessary. This material shall be provided both in paper and electronic (e.g., pdf) form. Delivery of equipment and software to the Counties and local jurisdictions must include at least one complete set of training documentation (both electronic (e.g. pdf) and paper form) for each County and local jurisdiction. Contractor and its subcontractors understand that training must support the local county election process. Contractor works in conjunction with county election staff to define training for each county so it will fit into the county's normal election process.

B. Electronic Training Modules – Within 30 calendar days after Contract execution, the Contractor shall provide an electronic training course (e.g., video, web-based, etc.) that can be viewed, downloaded, and published online by the State, county and local election officials, covering end-to-end operation of the system; step-by-step procedures covering equipment set up, processing and close-down procedures; and other relevant information related to the use of the voting system and its components, and accessible voting system components. The electronic training module must be no longer than 30 minutes in length and be suitable for use as part of a training program for election inspectors (Election Day precinct workers). The electronic training modules must be provided in a format that allows the State to utilize the content (in whole or in part) in State-specific online training courses.

The Contractor offers flexibility to deliver training in multiple formats that gives the State or Authorized End User a choice of many different delivery methods for training. One aspect of the customization is utilizing different formats when creating training, including instructor-led classes in person, instructor-led classes online, and self-paced online eLearning.

Often, election preparation schedules prevent the delivery of training at the optimal time for retention on Election Day. This can be particularly apparent in small counties, where a very limited team is responsible for all election related activities. In these situations the use of in person, instructor-led hands-on training, complemented with self-paced online eLearning courses not only allows the benefit of practical hands-on equipment experience to users (and their supervisors) but also provides the opportunity to refresh knowledge immediately prior to the election. Similarly, the Contractor has made extensive use of video training for locations where eLearning was not felt to be practical.

Self-Paced e-learning –Contractor offers a complete library of self-paced e-learning courses which includes both hardware and software training. These courses are designed to deliver training in a unique format while still keeping the student engaged and active.

Contractor’s online training courses provide step-by-step explanations of the needed information. Contractor uses eLearning tools such as Captivate and Articulate to create interactive and engaging training. At the end of a course, a student is required to pass an assessment in order to receive a certificate of completion.

C. In-Person Training – Contractor's plan for training State staff and local election officials (including but not limited to county and local clerks) on the operation and use of the new voting system, accessible voting system components and EMS software, includes, but will not be limited to the following:
   a. Use of the EMS to set up an election and design and layout ballots
   b. Programming of tabulators and related component(s)
   c. Programming of accessible voting system component(s)
   d. Programming and use of tabulators and related component(s) used in AVCBs
   e. Preparation of tabulators and accessible voting system components, including setup and pre-election testing
   f. Election day operations from the opening to the closing of the polls
   g. Processing of voters and absentee ballots
   h. Processing write-in votes
   i. Adjudicating ballots that may require manual review
   j. Troubleshooting – identifying and resolving basic problems (issues that do not require a service call)
   k. Security, including safeguards to prevent and detect tampering
   l. Tabulation of results
   m. Electronic transmission of election results
   n. Printing standard reports
   o. Customizing reports
   p. Checks and balances – methods for ensuring the accuracy of precinct results
   q. Full understanding of audit procedures

r. Any special requirements related to conducting a recount using the tabulator
s. Records preservation
t. How and when to place service calls
u. Any other pertinent processing steps as recommended by the Contractor

Through each stage of the implementation process, Contractor and its subcontractors' support staff assigned to the implementation project will provide hands-on training to election staff for the operation of the election management system.

State Staff and Local Election Officials Training
Contractor and its subcontractors will provide in-depth and hands-on training to elections staff personnel in all functional areas of the voting system(s) implementation. Dominion and its subcontractors will work with the State and local elections staff to determine which key staff members need specialized training. It is recommended that all department personnel receive training on how to operate the Democracy Suite system so that they will understand the implementation and can answer questions from the general public.

With regards to specific functional areas, it is recommended to limit the training to those departmental personnel with responsibilities specific to those functional areas. Cross training can be performed at a later date.

Poll Worker Training
Contractor and its subcontractors recommend that each jurisdiction divide the poll worker training program into classes with as few poll workers as is feasible given the available trainers, training facilities, and the limited time on the election calendar. Past implementations have proven that it is very important for all poll workers to have a chance to operate the machines "hands-on" in class, or at least participate in a small group and review. This allows poll workers to operate equipment while others observe and ask questions.

Contractor and its subcontractors will assist each jurisdiction in integrating the new voting system training into its current poll worker-training program's content and format, as well as in the development of training materials, and providing "train the trainers" courses.

Such a change in voting systems requires a change in polling place forms and procedures and as such, Dominion and its subcontractors will provide sample forms from previous implementations and will assist in redesigning forms and procedures accordingly.

The goal is to assist in training poll workers to comfortably, confidently operate voting machines and readily provide voters with simple instructions and assistance in voting on them.

Curriculum
Contractor's standard course offerings include the full range of the Democracy Suite classes. Training agendas and curriculum particular to the resources, staff and needs of each jurisdiction will be developed as part of the implementation meetings.

Precinct Tabulator and Accessible Voting Systems Training
This course provides an introduction to the Contractor's ImageCast Precinct tabulator and the ImageCast X used for accessible voting. Topics include:

- Setup of the equipment
- Security, including safeguards to prevent and detect tampering
- Opening polls
- Processing ballots
- Processing write-in votes
- Accessible voting
- Closing polls
- Electronic transmission of election results
- Acceptance testing
- Troubleshooting - identifying and resolving basic problems (issues that do not require a service call)
- Performing Logic & Accuracy testing

Absentee Voter Counting Board Systems Training

This course provides an introduction to the ImageCast Central. Topics include:

- Setup of the equipment
- Security, including safeguards to prevent and detect tampering
- Opening polls
- Processing ballots
- Adjudicating ballots that may require manual review
- Processing write-in votes
- Closing polls
- Acceptance testing
- Troubleshooting - identifying and resolving basic problems (issues that do not require a service call)
- Performing L&A

Democracy Suite EMS Training:
This course introduces election programming concepts in EMS. Topics include:

- System security
- Creating and editing geo-political data (if applicable)
- Creating and editing offices and contests (if applicable)
- Adding choices (if applicable)
- Creating and editing ballot layout (if applicable)
- Programming tabulators (if applicable)
- Creating Audio Files for accessible voting (if applicable)
- Records preservation
- Creating Memory Cards
- Tabulating Results
- Election Night Reporting (Results Tally & Reporting, including customizing and printing reports)
- Checks and balances – methods for ensuring the accuracy of precinct results
- Full understanding of audit procedures
- Any special requirements related to conducting a recount using the tabulator

D. Refer to Contractor's course descriptions in the training plan below for details related to the conduct of in-person training, including the length of the training session; proposed structure for the sessions (e.g., multiple day training; separate courses covering specific topics, such as EMS-only training; number of contractor staff hours per session; recommended number of participants per session; and use of alternative training formats, such as *train-the-trainer*).

Contractor's standard course offerings include the full range of the Democracy Suite classes. As noted above, training agendas and curriculum particular to the resources, staff and needs of each jurisdiction will be developed as part of the implementation meetings.

The following is the Contractor's class listings with the recommended target audience, number of hours or days for the training, and the recommended number of participants per session. Train-the-trainer courses are recommended for larger counties, and include additional topics such as training techniques and presentation skills.

Precinct Tabulator and Accessible Voting Systems Training

Training Class	Target Audience	Number of Days/ Hours	Max Number of Students
Precinct Tabulator and Accessible Voting Systems Training	Election Administrators, Clerks, Poll Workers' Trainers, Poll workers, Election Day Technicians	3 Days / 24 hours	25 students with two trainers
Train the Trainer (recommended for larger counties)	Poll Workers' Trainers, Clerks, Election Administrators	3 Days / 24 hours	15 students with two trainers

Poll Worker Training (optional)	Poll Workers, Election Administrators	1 Day / two 4-hour sessions	25 students with one trainer

Absentee Voter Counting Board Systems Training

Training Class	Target Audience	Number of Days/ Hours	Max Number of Students
Absentee Voter Counting Board Systems Training	Election Administrators, Clerks	1 Day / 8 hours	8 students with one trainer

Democracy Suite Election Management System

Training Class	Target Audience	Number of Days/ Hours	Max Number of Students
Democracy Suite EMS Training – including Election Event Designer and Results Tally & Reporting	Election Administrators, Clerks	5 Days / 40 hours	8 students with one trainer
Results Tally & Reporting training (optional)	Election Administrators, Clerks	1 Day / 8 hours	8 students with one trainer
Results Transfer Manager training (optional)	Election Administrators, Clerks	1 Day / 8 hours	10 students with one trainer
ImageCast Communications Manager training (optional)	Election Administrators, Clerks	3 Days / 24 hours	8 students with one trainer

E. Counties shall have final approval of their individual Contractor-conducted training plans, including the number of sessions, locations and participants per session.

Contractor and its subcontractors' staff will work closely with the counties to determine the best location(s) to accommodate all attendees. Training can be held at a County office location, local school, and/or town hall. The location of training will be determined by a series of factors such as the number of attendees, proper resources available to conduct the training effectively, and the County's personal preference.

In addition to onsite County training, Contractor and its subcontractors will offer training in its Grand Rapids and planned South-East Michigan office locations. These centers provide a classroom setting where qualified instructors reinforce classroom training with hands-on lab exercises conducted on operating equipment and software.

F. The Contractor shall assist county and local election officials (if requested) in conducting comprehensive training for election inspectors (Election Day precinct workers) prior to the primary and general elections in the first year of use.

As each jurisdiction's implementation may comprise the full 2017 or 2018 election cycles, Contractor and its subcontractors' support staff will continue to be dedicated to the counties and jurisdictions in the provision of training and hands-on application for each election through 2017 or 2018 as applicable. Election personnel will be provided repetitive practice and experience in practical application over election cycles, building confidence in the system and their abilities.

2.7 RESERVED

2.8 Meetings, Project Updates and Reports

The Contractor's State Project Manager and other identified Key Personnel must attend the following meetings:

- Initial contract kick-off meeting within 10 business days of Contract execution.
- Weekly update meetings after the initial kick-off meeting through the completion of the first planned implementation phase. Decisions on whether these updates take place via phone vs. in person meetings shall be at the discretion of the State.
- Monthly update meetings after the completion of the first implementation phase, through the life of the contract. Decisions on whether these updates take place via phone vs. in person meetings shall be at the discretion of the State.
- Written weekly updates, after the initial kick-off meeting through the completion of the first planned implementation phase. Written weekly updates will summarize work completed during the reporting period; planned work for the upcoming reporting period; issues affecting the timely and/or successful completion of planned milestones, along with the effect on planned timelines and resolution plan for each issue.
- Written monthly updates, after the completion of the first implementation phase, through the life of the contract. Written monthly updates will summarize work completed during the reporting period; planned work for the upcoming reporting period; issues affecting the timely and/or successful completion of planned milestones, along with the effect on planned timelines and resolution plan for each issue.
- Written updates after each Election Day, which identify and categorize service calls, equipment failures and resolution for all issues identified 14 calendar days prior to each election (up to and including Election Day), for each election in which the Contractor's voting system is used. These updates must be provided within 14 calendar days after each election.
- Annual reports prior to billing - during the extended service/maintenance period, a listing of all counties and jurisdictions and associated annual charges shall be provided to the State Program Manager at least 30 calendar days prior to the annual billing cycle.

The State may require other meetings and reports as it deems appropriate.

3. Staffing

3.1 Contractor Representatives

The Contractor shall appoint a **State Project Manager**, specifically assigned to State of Michigan accounts, that will respond to State inquiries regarding the Contract Activities, answering questions related to ordering and delivery, ongoing service and maintenance, warranties, Election Day support, and other key requirements covered by the Contract (the "Contractor Representative"). The State Project Manager shall maintain a presence in the State of Michigan.

State Project Manager
Gio Costantiello
State Project and Contract Manager
Phone: (416) 762-8683 x241, Mobile: (416) 580-0084
Email: gio.costantiello@dominionvoting.com

The Contractor shall also appoint a designated **State Customer Service Manager**, who will maintain a presence in the State of Michigan and shall work with and support counties and local jurisdictions on an ongoing basis through the life of the Contract.

State Customer Service Manager
Nicole Nollette
Executive Vice President, Operations
Phone: 866-654-8683 x9223
Mobile: 702-786-7131
Email: nicole.nollette@dominionvoting.com

The Contractor shall provide written notice to the Contract Administrator at least 30 calendar days before removing or assigning a new Contractor Representative.

3.2 Customer Service Toll-Free Number

In addition to the requirements listed in **Section 1.6 (Service and Maintenance)**, the Contractor shall provide a Customer Service toll-free number for the State, counties and local jurisdictions to make contact with the Customer Service Support personnel. See other support requirements lists in **Section 1.6.**

In addition to the requirements listed in **Section 1.6 (Service and Maintenance)**, the Contractor must specify its Technical Support toll-free number for the State, counties and local jurisdictions to make contact with the Contractor for technical support, repairs and maintenance. The Contractor must be available for calls and service during the hours of 8 am to 5 pm local time. These availability hours must be expanded during key Election Day support timeframes as identified in **Section 1.6.**

NOTE: A single toll-free number will be used for both overall Customer Service, Help Desk Support and Technical Support.

Customer Service, Help Desk Support and Technical Support
Toll-Free Number: 1-886-654-8683 (VOTE)

3.3 Disclosure of Subcontractors

The Contractor intends to utilize the following subcontractors to fulfill the requirements of this Contract. The Contractor must provide prior written notice of all of the following:

The legal business name; address; telephone number; a description of subcontractor's organization and the services it will provide; names and titles of all subcontractor staff that will be assigned to the Michigan contract, along with each individual's role and responsibilities; and information concerning subcontractor's ability to provide the Contract Activities.

The relationship of the subcontractor to the Contractor.

Whether the Contractor has a previous working experience with the subcontractor. If yes, provide the details of that previous relationship.

A complete description of the Contract Activities that will be performed or provided by the subcontractor.

A complete description of the subcontractor's prior experience that illustrates the subcontractor's relevant qualifications for completing the planned work they will be assigned under this Contract.

Any planned change to subcontractor staff must be communicated to the State Contract Administrator and Program manager at least 30 calendar days prior to the planned change. The State has the right of approval for any subcontractors provided.

Of the total Contract value, the price of the subcontractor's work.

ElectionSource

Legal Business Name	Miller Consultations & Elections, Inc. DBA -ElectionSource
Address and telephone number	4615 Danvers Dr. SE Grand Rapids, MI 49512 phone: 616.464.2283, 888.742.8037 fax: 616.464.0926 www.electionsource.com
Organization description	ElectionSource is a leader in the election industry, providing turnkey election services, support and products. Our experienced staff has over 100 years of combined experience working on elections with governments, unions, homeowners associations and fraternal organizations all across the nation.
Working experience with Contractor	ElectionSource and Contractor have been providing the best in innovation, integration, and accessibility, while providing simplicity of use and the transparency to meet customer's election needs for over 16 years.
Contract activities' description	Preventative maintenance, EMS support services, poll worker training, staff training, project management reporting, product installation, and acceptance testing. EMS and tabulator support.
A complete description of the subcontractor's prior experience that illustrates the subcontractor's relevant qualifications for completing the planned work they will be assigned under this Contract.	ElectionSource currently employs 15 full time people and another 5 part time people that have a combined total of over 150 years' experience in elections. During peak election times, ElectionSource employs up to 30 people in the State of Michigan. Many of these employees will provide service and support to this Contract. Several people will play a key role in each jurisdiction. Refer below to the ElectionSouce staff members assigned to the Michigan contract, their roles, and responsibilities.

Names and titles of all subcontractor staff that will be assigned to this Contract, along with each individual contract, along with each individual's role and responsibilities.	Jeff DeLongchamp – President Oversee all staff to ensure deadlines and tasks are met. Provide additional support for software, testing, product implementation, project management, and delivery. Steve DeLongchamp – Vice President Provide additional support to Project Managers. Assist with planning and the resolution of issues that can arise during project implementation. Act as an internal, oversight mechanism monitoring project implementation. Andrea Richardson – Elections Administrator Provide additional support to Project Managers. Assist with planning and the resolution of any issues that may arise during project implementation. John Keefer – Technical Services/Testing Manager Provide scheduling and performing state-wide biannual maintenance. Assist with product installation, acceptance testing, and act as resolution mechanism for issues that arise with hardware. Amy Burns – Executive Assistant & Sales Support Provide assistance to the President of ElectionSource with projects, commissions, reports, clients and scheduling. Provide sales and scheduling support. Gerrid Uzarski – Regional Sales Manager Will help maintain current points of contact and establish new points of contact. Work closely with Commissioners, Election Directors, County Clerks, Local Clerks, and other personnel responsible for carrying out elections. Assist in testing equipment. Additional Testing, Implementation, Training and Programming support: Mike Kelava – IT Manager Assist with training, programming, software installation, server set up, programming, software support and training, and ordering of PC equipment Logan McGregor – Technician Provide testing and implementation support Matt Bosker – Elections Specialist Provide training support, software support, and programming
Relationship of subcontractor to Contractor	Sales representative/distributor for Contractor.
Complete descriptions of the Contract Activities that will be perform or provided by the subcontractor.	**Project Management and Product Implementation:** The Lead Project Team Manager is a key part of ElectionSource's organizational structure. The Lead Project Team Manager will work with Dominion to coordinate the shipping of equipment and software for each jurisdiction. The Lead Project Manager will then turn over coordination of setup and training of voting equipment to the County assigned Project Managers who will then oversee this process. Our County Project Managers will work with each county to develop and implement a plan that best suits the needs of all the municipalities within the county. ElectionSource will then provide progress reports to each of the counties on a regular basis. Our County Project Managers will work with all our team leaders and support technicians to provide

	the necessary training and support needed by each county. Their goal is to provide a level of training that will allow the municipalities to be self-sufficient needing only minimal support from our technicians. **Other activities provided by subcontractor, but not limited to, are:** • Equipment Training • EMS/Software Training • On-site Election Day Support • Programming/Coding Support • Consultations • Computer Equipment Set-Up/Installation • Maintenance • Acceptance Testing • Election Data Delivery • Equipment Installation
Governmental Business Systems	
Legal Business name	Governmental Business Systems
Address and telephone number	4995 Varsity Dr., Unit C Lisle, IL 60532 Phone: 888.640.8683 Fax: 630.241.4295 Website: www.gbsvote.com
Organization description	Supplier of election related supplies, voting hardware and software.
Working experience with Dominion	Market and support DVS election related products.
Contract activities' description	Provide local Level 1 hardware support & preventative maintenance, EMS support, poll worker training, Logic & Accuracy support.
A complete description of the subcontractor's prior experience that illustrates the subcontractor's relevant qualifications for completing the planned work they will be assigned under this proposal.	Currently support 35 counties in Michigan using AccuVote optical scan. GBS provides a multitude of election services to the vast majority of these accounts including programming/coding support, ballot printing, precinct kits, election supplies, equipment maintenance, pollworker training and related support services. GBS' account managers possess an aggregate of over 50 years of hands-on election experience working with election officials from every entity who assume a role & responsibility in this process.
Names and titles of all subcontractor staff that will be assigned to the Michigan contract, along with each individual's role and responsibilities	Tim Allshouse - Account Manager Account Manager responsible for customer account management, sales, and support of the Democracy Suite voting system in Southern Michigan Kurt Knowles - Account Manager Account Manager responsible for customer account management, sales, and support of the Democracy Suite voting system in Northern Lower Michigan Dave Carmody - Account Manager Account Manager responsible for customer account management, sales, and support of the Democracy Suite voting system in the Upper Peninsula of Michigan Larry Calvert - Director of Election Services Direct staff and provide customer support, consulting and election programming / coding Tiffany Tuominen - Manager of Customer Service Will assist with election programming, pre-press file preparation, customer/technical support, and ensuring timely delivery of election products/services to meet federal requirements.

Relationship of subcontractor to Contractor A complete description of the Contract Activities that will be performed or provided by the subcontractor	Dealer for DVS products and services. **Activities provided by subcontractor, but not limited to, are:** • Equipment Training • EMS/Software Training • On-site Election Day Support • Programming/Coding Support • Consultations • Computer Equipment Set-Up/Installation • Maintenance • Acceptance Testing • Election Data Delivery • Equipment Installation

3.4 Security

The Contractor will be subject to the following security procedures:

On a case-by-case basis, the State may investigate the Contractor's personnel before they may have access to State facilities, data and systems. The scope of the background check is at the discretion of the State and the results shall be used to determine Contractor personnel eligibility for working within State facilities and systems. The investigations shall include Michigan State Police Background checks (ICHAT) and may include the National Crime Information Center (NCIC) fingerprints. Proposed Contractor personnel may be required to complete and submit an RI-8 Fingerprint Card for the NCIC Fingerprint Check. Any request for background checks shall be initiated by the State and shall be reasonably related to the type of work requested.

All Contractor personnel shall also be expected to comply with the State's security and acceptable use policies for State IT equipment and resources. Furthermore, Contractor personnel shall be expected to agree to the State's security and acceptable use policies before the Contractor personnel shall be accepted as a resource to perform the work for the State. It is expected the Contractor shall present these documents to the prospective employee before the Contractor presents the individual to the State as a proposed resource. Contractor staff shall be expected to comply with all physical security procedures in place within the facilities where they are working.

The Contractor's staff may be required to make deliveries to or enter State, county and local jurisdiction facilities. The Contractor must: (a) ensure the security of State, county and local jurisdiction facilities, (b) use uniforms and ID badges, etc., (c) perform background checks as requested by the State and/or Authorized User through services such as Checkmate, www.intantcheckmate.com , and (d) determine the scope of the background checks, which will include detailed information such as arrest records, phone numbers, contact information, previous arrests, criminal convictions, traffic citations, and sex offender status, in accordance with applicable laws.

The Contractor will provide the following additional security measures to ensure the security of State, county and local jurisdiction facilities.

Prior to making deliveries the local jurisdiction and or county facilities will be contacted by phone. Through consultation, a time and date along with who will be making the deliveries will be established. At that time, what we will be delivering, how we will be making the delivery and how we will be transporting the delivery product will be finalized, setting a clear picture of who and what to expect.

Contractor and its subcontractors will implement all necessary securities to ensure the protection of the complete election system and processes involved. At the beginning of the project planning, along with the State, County and local jurisdictions, the Contractor and its subcontractors will contract, if necessary, with an accredited securities firm to conduct a site survey and assessment of the security and safety of the buildings and all election related facilities to determine the necessary measures to be taken. In addition to physical security and access, personnel background checks will be conducted as needed.

4. Pricing

4.1 Price Term

Refer to the Pricing Matrix included in **Schedule C for all pricing.** Prices listed in Schedule C are fixed for the contract term, and represent the maximum prices per item. Notwithstanding the foregoing, the Contractor is authorized to negotiate pricing with individual counties that are lower than the prices listed in Schedule C. Any and all lower negotiated prices must be communicated to the Program Manager immediately as they are finalized.

4.2 Price Changes

Aside from negotiations as outlined in Section 4.1 Price Term, price changes may only be considered after the expiration of the initial service/maintenance period (acquisition year + 4 years); and **only for component replacement/additional parts** (applicable to Cost Table 4 only – see **Schedule C**.) Adjustments will be based on changes in actual Contractor costs. Any request must be supported by written evidence documenting the change in costs. The State may consider sources, such as the Consumer Price Index; Producer Price Index; other pricing indices as needed; economic and industry data; manufacturer or supplier letters noting the increase in pricing; and any other data the State deems relevant.

Following the presentation of supporting documentation, both parties will have 30 calendar days to review the information and prepare a written response. If the review reveals no need for modifications, pricing will remain unchanged unless mutually agreed to by the parties. If the review reveals that changes are needed, both parties will negotiate such changes, for no longer than 30 days, unless extended by mutual agreement.

The Contractor remains responsible for Contract Activities at the current price for all orders received before the mutual execution of a Change Notice indicating the start date of the new Pricing Period.

5. Ordering

5.1 Authorizing Document

The appropriate authorizing document for the Contract will be a written Purchase Order, which will be initiated at the State level for each county for each planned purchase period. All orders are subject to the State's standard contract terms.

Initial purchase orders will be placed by State purchasing officials. Counties and local jurisdiction election officials (county, city and township clerks) will be eligible to purchase additional voting systems and voting system components, over and above what is included in the State-issued purchase order at the established Contract prices and terms. Refer to **Contract Terms, Section 14 Extended Purchasing Program.** Also**,** Refer to Section 7.1 Acceptance, Inspection and Testing "Counties will work with the State to finalize the list of jurisdictions that will accept delivery and implement the new voting system for each planned purchase phase. The State will initiate each county-based Purchase Order (PO) for each purchase phase based on this plan."

The State will generate each Purchase Order only after a finalized funding plan has been established for each county and local jurisdiction in the county; after a Grant Agreement has been executed with the county and each local jurisdiction which specifies ownership and payment obligations for the county and each local jurisdiction; and the State has received payment from the county and each local jurisdiction for their individual portions of the county/local funding plan.

As an alternative to counties and local jurisdictions making direct payments to the State for the local funding component, the Contractor may execute an agreed upon payment plan between the Contractor, county, and local jurisdictions within the county. Any separate agreements of this type must be transmitted to the State Program Manager prior to issuance of the Purchase Order.

Upon issuance of each State-issued PO on behalf of the county, the Contractor will work with each county to finalize each jurisdiction's delivery plan, including timeframes and locations.

5.2 Order Verification

The Contractor must have internal controls to verify abnormal or excessive orders and to ensure that only authorized individuals place orders.

5.3 Minimum Order

There is no minimum order requirement.

6. Delivery

6.1 Delivery Programs

Contractor will provide delivery programs tailored to the needs of the State and Authorized End Users in delivery of the Contract Activities.

Contractor's standard service is "ground", which typically delivers in five (5) days. However, Contractor uses a variety of carriers allowing flexibility in choosing the delivery method required by both the size of the shipment and the State or Authorized End User's specific dock/receiving setup.

A full truckload is approximately 25 full pallets of machines/accessories or 56 ballot boxes.
Contractor uses truckload and LTL (less than truckload) carriers, FedEx and US mail to ship products.

Moreover, should more expedited shipping be requested by the State or Authorized End User, this will be available at an additional cost. Contractor will make every effort to ensure that the State or Authorized End User's expedited delivery time-

frame is met and that additional charges to the State or Authorized End User for the expedited delivery, if any, will be minimized.

With regards to providing expedited shipping, the State or Authorized End Users will have the option to request it at an additional cost. Limitations on expedited service include timing of receipt of requests, the size of the shipment, and location of customer. Any requests received after noon (12:00pm) will not be typically shipped until the following day. However, depending on the location/zip code of the customer's warehouse/office, FedEx may not be able to deliver early the following day/next day.

Shipments requiring pallets generally do not deliver the following day. Contractor uses standard pallets in various sizes to accommodate the size of the merchandise/packages. These are typically made of wood and are stackable and re-useable. The transportation method used will depend on the size of the order/number of pallets.

The Contractor ensures the best transportation rates for every order since they receive bids from multiple carriers at the time. The Contractor can deliver to warehouses with standard loading docks as well as to smaller offices that require inside deliver/white glove service.

6.2 Packaging and Palletizing

Packaging must be optimized to permit the lowest freight rate. Shipments must be palletized whenever possible using manufacturer's standard 4-way shipping pallets.

7. Acceptance

7.1 Acceptance, Inspection and Testing

Counties will work with the State to finalize the list of jurisdictions that will accept delivery and implement the new voting syste for each planned purchase phase. The State will initiate each county-based Purchase Order (PO) for each purchase phase based on this plan.

Upon issuance of each State-issued PO on behalf of the county, the Contractor will work with each county to finalize each jurisdiction's delivery plan, including timeframes and locations.

With respect to delivery and installation of EMS, the Contractor shall provide an EMS delivery/installation plan that allows for EMS software installation to be handled by the counties and local jurisdictions. If such an arrangement is proposed and mutually agreed upon, Contractor must provide detailed software installation instructions to counties and local jurisdictions at the time of EMS delivery. In addition, Contractor must provide technical phone support to assist counties and local jurisdictio with software installation.

The Contractor's minimum system requirements, including the required/relevant Operating System, to ensure successful operation of the EMS are listed as follows. Contractor provides these requirements for both the full EMS and the accumulatic only EMS options.

The following table includes the minimum requirements for the recommended express hardware configuration:

EMS EXPRESS HARDWARE CONFIGURATION

Component	Minimum	Recommended
Motherboard	Motherboard with integrated sound controller and SATA controller	Motherboard with integrated sound controller and SATA controller. RAID functionality **or** separate hardware RAID controller
CPU	Intel i5 series	Intel i7 series
RAM	4GB	8GB
HDD	Single 500GB	Dual 500GB in RAID 1 mode (mirror)
Additional	USB Compact Flash card reader	USB Compact Flash card reader
	USB iButton Security Key reader	USB iButton Security Key reader
	19" or higher monitor for desktop PCs	19" or higher monitor for desktop PCs
	Keyboard and mouse	Keyboard and mouse
	Headset or headphones with microphone	Headset or headphones with microphone
	Internal or external DVD R/W	Internal or external DVD R/W

The following tables include the minimum requirements for the standard recommended hardware and software configuration:

EMS STANDARD HARDWARE CONFIGURATION: CLIENT		
Component	**Minimum**	**Recommended**
Motherboard	Motherboard with integrated sound controller and SATA controller	Motherboard with integrated sound controller and SATA controller
CPU	Intel i5 series	Intel i7 series
RAM	4GB	8GB
HDD	Single 500GB	Single 500GB
Additional	USB Compact Flash card reader	USB Compact Flash card reader
	USB iButton Security Key reader 19" or higher monitor for desktop PCs	USB iButton Security Key reader 19" or higher monitor for desktop PCs
	Keyboard and mouse	Keyboard and mouse
	Headset or headphones with micro-phone	Headset or headphones with microphone
	Internal or external DVD R/W	Internal or external DVD R/W

EMS STANDARD HARDWARE CONFIGURATION: SERVER		
Component	**Minimum**	**Recommended**
Motherboard	Single core CPU with integrated SATA controller	Dual quad core CPU with integrated SATA controller and RAID functionality or separate hardware RAID controller
CPU	Intel Xeon L5500 series	Intel Xeon E5 series
RAM	8GB	16GB
HDD	Dual 500GB	Dual 500GB in RAID 1 mode, and 4x 500GB in RAID 10 mode
Additional		PCI-E card SATA controller with RAID 10 functionality, or compatible
	Internal or external DVD R/W	Internal or external DVD R/W
	Single or dual power supply	Single or dual power supply
	Optional monitor, keyboard, and mouse	Optional monitor, keyboard, and mouse

Note: Express and Standard refer to the hardware architecture for EMS (either Full or Accumulation only). Express is for smaller jurisdictions with less server infrastructure requirements (desktop and tower servers) and Standard is for larger jurisdictions that require higher performance IT infrastructure (rack servers for example). Contractor can install either version of software on either Express or Standard however performance is what determines which IT infrastructure Contractor recommends.

EMS SOFTWARE CONFIGURATION						
EMS Software Configurations	**Express Software Configuration**	**Standard Server Configuration**	**Standard Client Configuration**	**Enterprise Application Server**	**Enterprise Database Server**	**Enterprise Client**
Adobe Acrobat Reader 10.1.1	X		X			X
Cepstral Voices	X	X	X	X		
Dallas 1-Wire Device Driver 4.0.3	X					X
EMS Client components	X		X			X
EMS Server components	X	X		X		
Java Runtime Environment 6.0.290	X	X	X	X		X
Microsoft .NET Framework 4.0	X	X	X	X	X	X
Microsoft Access Database Engine	X		X			X
Microsoft IIS 7.5	X	X		X	X	
Microsoft SQL Server 2008 R2 Express	X					
Microsoft SQL Server 2008 R2 Reporting Services only and Service Pack 2 (SP2) Installed				X		
Microsoft SQL Server 2008 R2 Standard with Service Pack 1 (SP1) Installed		X			X	
Microsoft SQL Server 2008 R2 with Advanced Series and Service Pack 1 (SP1) Installed	X					
Microsoft Visual C++ x86 Redistributable	X	X	X	X		X
Microsoft Visual J# 2.0	X	X	X	X		X
Optional additional fonts	X	X	X	X		X
Optional Avast! antivirus software	X	X	X	X	X	X
Optional eSATA card		X				
Optional Excel 2010	X		X			X
Optional printer drivers	X		X			X
Optional Uninterruptable Power Supply drivers	X	X		X	X	
Windows 7 Professional x64 with Service Pack 1 (SP1) Installed	X		X			X
Windows Server 2008 R2 with Service Pack 1 (SP1) Installed		X		X	X	

For more information about the EMS configuration options, including operating system and hardware/software requirements, see **Schedule C, Pricing; Cost Table 5**.

Upon receipt of the systems at the county and local jurisdiction level, each jurisdiction will be responsible for testing and accepting their designated systems, based upon a checklist developed by the State. Each county and jurisdiction receiving voting systems, accessible voting system components and related EMS software will be required to complete a *Receipt/Acceptance* form and submit it to the State. Acceptance test criteria will include a logic/accuracy test (for tabulators/accessible devices) and a confirmation of successful installation of the approved version of EMS software (where applicable). If defects are uncovered during testing that result in an unsuccessful test, affected system component(s) will be rejected and Contractor must replace and re-test the component(s) within 10 business days. Once all voting systems and EMS software is tested and accepted a completed *Receipt/Acceptance* form (developed by the State) will be completed and returned by each jurisdiction in in the county for each purchase phase documenting

successful completion of required testing; at which point, the State will release payment on the State-issued county-based PO.

7.2 Final Acceptance

Final acceptance of each local county and jurisdiction order will be accomplished via the receipt/acceptance process described in **Section 7.1** and **Section 8e** in the Standard Contract Terms.

8. Invoice and Payment

8.1 Invoice Requirements

All invoices submited to the State must include: (a) contract number; (b) Purchase Order number; (c) county name; (d) listing of all delivered components, itemized and listed by jurisdiction; (e) unit prices; (f) total price per item, per jurisdiction; (g) ship to address; (h) jurisdiction contact; (i) total price per jurisdiction; and (k) total price per county / Purchase Order (less any agreed upon payment arrangement made between the Contractor and the County).

Invoices must be forwarded to the State only after all equipment and components listed on the Purchase Order have been delivered. The State will release payment to the Contractor for the State portion of the invoice amount, upon the successful completion of acceptance testing and submission of completed Receipt/Acceptance forms from the county and each local jurisdiction listed on the Purchase Order. Note that the State portion of the invoice amount will equal 100% of the total invoice if the State has collected the local funding component up front.

8.2 Payment Methods

The State will make payment for Contract Activities as outlined in **Sections 5.1, 7.1 and in Section 9, Invoicing and Payment, in the Standard Contract Terms.** Payment will be made by Electronic Funds Transfer (EFT).

9. Additional Requirements

9.1 Environmental and Energy Efficient Products

The Contractor has identified the following energy efficient, bio-based, or otherwise environmental friendly products used in the products, including relevant third-party certification.

Contractor's Products

Some materials used in Contractor's product line are RoHS (Restriction of Hazardous Substances) and Energy Star compliant.

Contractor's plastic ballot boxes and covers are made from polypropelyne and ABS which are recyclable. Units have a 10-year+ lifespan, and are either recycled in specialized facilities, or donated to a non-profit organization which uses them in the developing world.

Units are shipped in recyclable corrugated cardboard boxes. Contractor reuses these boxes as many times as possible before recycling.

Fedex Packaging is both recyclable and can be re-used for shipping. Labels are printed on 100% Recycled FSC-Certified Copy Paper. It is recycled without using chlorine or chlorine compounds, acid free, 100% post-consumer recycled content.

9.2 Hazardous Chemical Identification

In accordance with the federal Emergency Planning and Community Right-to-Know Act, 42 USC 11001, *et seq.*, as amended, the Contractor must provide a Material Safety Data Sheet listing any hazardous chemicals, as defined in 40 CFR §370.2, to be delivered. Each hazardous chemical must be properly identified, including any applicable identification number, such as a National Stock Number or Special Item Number.

The Contractor identifies the following hazardous chemicals that will be provided under this Contract.

The ImageCast Precinct tabulator uses leaded solder paste. There are two types of battery backup systems that the Contractor's voting systems use. The first is based off Lithium Ion technology. The second battery is based off of sealed Lead Acid technology. The Contractor will provide more detailed information and the MSDS for both these materials upon request.

9.3 Mercury Content

Pursuant to MCL 18.1261d, mercury-free products must be procured when possible. The Contractor does not intend to provide products containing mercury under this Contract.

9.4 Brominated Flame Retardants

The State prefers to purchase products that do not contain brominated flame retardants (BFRs) whenever possible. The Contractor must disclose whether the products contain BFRs. The electronics circuit boards contained in the Contractor's product contain flame retardant bromine **Tetrabromobisphenol A** (TBBPA). This bromine is a part of the polymer of the circuit board and it is not regulated by RoHS or WEEE directives under their listing of restricted chemicals. This bromine

(TBBPA) is complexed in the resin of almost all PCB's produced today. Please see the Exhibit A – 9.4. TBBPA Factsheet included for more details.

9.5 License Agreement

The State and Counties that receive and use EMS software will be required to sign a software license agreement. Refer to Schedule B-Software License Agreement.

9.6 Key Personnel

The Contractor must appoint a **State Project Manager** and **State Customer Service Manager.** See other details in **Section 3.1.** These individuals shall be directly responsible for the day to day operations of the Contract ("Key Personnel"). Key Personnel must be specifically assigned to the State account, be knowledgeable on the contractual requirements, and respond to State inquires within 24 hours.

State Project Manager
Gio Costantiello
State Project and Contract Manager
Phone: (416) 762-8683 x241, Mobile: (416) 580-0084
Email: gio.costantiello@dominionvoting.com

State Customer Service Manager
Nicole Nollette
Executive Vice President, Operations
Phone: (866) 654-8683 x9223, Mobile: (702) 786-7131
Email: nicole.nollette@dominionvoting.com

Contractor's Key Personnel must be available for meetings and updates as outlined in **Section 2.8.**

The Contractor may not remove or assign Key Personnel without the prior consent of the State. Prior consent is not required for reassignment for reasons beyond the Contractor's control, including illness, disability, death, leave of absence, personal emergency circumstances, resignation, or termination for cause. The State may request a résumé and conduct an interview before approving a change. The State may require a 30 calendar day training period for replacement personnel. Also refer to **Section 10** in the Standard Contract Terms.

9.7 Non-Key Personnel

The Contractor must notify the Contract Administrator at least 10 calendar days before removing or assigning non-key personnel.

Team Member	Role
Alex Soto Vasquez	Product Support Specialist
Nick Mantzios	Product Support
Xenofon Marangos	Senior Systems Manager
Goran Obradovic	Product Development
Ronald Morales	Product Support
Penelope Starr	Marketing and Voter Outreach Support
Steve Moreland	Manufacturing & Delivery
James Hoover	Printer Liaison, General Project Support
Steve Popoulias	Customer Service Manager

9.8 Organizational Chart
The Contractor has provided the following overall organizational chart that details staff members, by name and title, including subcontractors, as well as each member's area of responsibility.

	DOMINION	ELECTION SOURCE	GBS
ACCOUNT MANAGEMENT	**Gio Costantiello** *State Project and Contract Manager* **Mike Frontera** *State Customer Service Manager*	**Jeff DeLongchamp** *President* **Steve DeLongchamp** *Vice-President* **Amy Burns** *Sales Support* **Gerrid Uzarski** *Regional Sales Manager*	**Tim Allshouse** *Account Manager* **Kurt Knowles** *Account Manager* **Dave Carmody** *Account Manager*
INSTALLATION & TECHNICAL SUPPORT	**Xen Marangos** *Solutions Integrator* **Ronald Morales** *Product Support* **Nick Mantzios** *Product Support*	**John Keefer** *Technical Services/ Testing Manager* **Mike Kelava** *IT Manager* **Mitch Erwin** *Technician* *Other staff as required*	**Larry Calvert** *Director of Election Services* *Other staff as required*
ELECTION SERVICES SUPPORT	**Steve Papoulias** *Customer Service Manager* **Alex Soto Vasquez** *Product Support Specialist* *Other staff as required*	**Matt Bosker** *Elections Specialist* **Andrea Richardson** *Elections Administrator* *Other staff as required*	**Tiffany Tuominen** *Manager of Customer Service* *Other staff as required*

CORPORATE SUPPORT	**Waldeep Singh** *Executive Sponsor*	**Goran Obradovic** *Product Development*	**Steve Moreland** *Manufacturing and Delivery*	**James Hoover** *Printer Liaison General Project Support*

9.9 Project Plan
The Contractor will carry out this project under the direction and control of the State Program Manager. Within 30 calendar days of the Effective Date, the Contractor will submit a project plan to the Program Manager for final approval. The plan must include: (a) the Contractor's organizational chart with names and titles of personnel assigned to the project, which must align with the staffing stated in accepted proposals; and (b) the project breakdown showing sub-projects, tasks, and resources required.

Exhibit 1 to Schedule A

Federal Voting System Testing / Certification Matrix

Contractor has provided the following detailed information on currently certified voting systems and the voting system(s) for use in Michigan.

Definitions:

- EAC: United States Election Assistance Commission
- VSTL: Voting System Test Laboratory, accredited by the US Election Assistance Commission
- Currently Certified System(s) (Table A): These are your company's end-to-end voting system(s) for which EAC certification has already been obtained, if any.
- Michigan Proposed Voting System Configuration (Seeking Federal Certification) (Table B): This is the end-to-end base voting system proposed for use in Michigan, if the proposed Michigan system has not yet obtained EAC certification.
- Proposed Modification to Base Michigan Voting System Configuration (Table C): Voting system that allows for secure electronic transmission of unofficial Election Night results from the precincts to the local counties/jurisdictions and the State. If the base voting system proposed for Michigan (Table A or B) allows for electronic transmission, please state this in your response, and leave Table C blank.

A) Currently Certified System(s)

Does your company have an existing end-to-end voting system that has completed Federal testing and the U.S. Election Assistance Commission (EAC) certification process? For these purposes, an end-to-end voting system includes use of a paper ballot, tabulator, accessible voting device (for use by individuals with disabilities) and related Election Management System (EMS) software.

Yes ■ No ☐

If you answered "Yes", complete the following table to provide information on your company's currently-certified system(s) that utilize a paper ballot – attach additional tables/pages if necessary. If you answered "No", proceed to Table B:

	Contractor Response
Product / System Name	Democracy Suite 4.14-D
Model or Version #	4.14-D
Components – list all system components of the currently certified end-to-end voting system(s) as described above, including Software/Firmware version or Hardware version of each component. Add lines if necessary, or provide a separate attachment, clearly labeled 'CURRENTLY CERTIFIED VOTING SYSTEM COMPONENTS'	Please see pp. 7-9 in the attached EAC Scope of Certification document for Democracy Suite 4.14-D.
Name / Location of VSTL	National Technical Systems, Huntsville, AL
Date VSTL testing completed	October 20, 2014
Date EAC certification issued	November 25, 2014
EAC Certification Number	DVS-DemSuite4.14-D
List the U.S. state(s) in which this system is in use, if any	Iowa, Minnesota, Missouri, Nevada, New York, Ohio, Puerto Rico, Tennessee, Washington, Wisconsin, Utah

Is a currently-certified system proposed for use in Michigan?	Yes ☐ No ■ If 'Yes', list the model or version number proposed for use in Michigan: _____ If 'No', complete Table B.

B) Michigan Proposed Voting System Configuration (Seeking Federal Certification)
Provide information on the base voting system proposed for use in Michigan, if Federal certification has not yet been obtained:

	Bidder Response
Product / System Name	Democracy Suite 5.0
Model or Version #	5.0
Components – list all system components of the proposed base Michigan voting system configuration, including Software/Firmware version or Hardware version of each component. Add lines if necessary, or provide a separate attachment, clearly labeled 'PROPOSED BASE MICHIGAN VOTING SYSTEM COMPONENTS'	Please see the attached D-Suite 5.0 System Configuration List document for details on the system components of the proposed base Michigan voting system configuration.
Name / Location of VSTL	Pro V&V, Huntsville, AL
VSTL Testing Status*	Complete 1 OR 2 below: **1) VSTL testing completed**: December 1, 2017 Date **2) VSTL testing not yet complete:** a) Date submitted or will be submitted to VSTL: _____ b) Estimated VSTL testing completion date: _____ This estimated date was determined / provided by (check one): Vendor ☐ VSTL ☐ c) Current status (summarize, in detail, the proposed system's status with respect to VSTL testing): **Dates and testing status updates can be provided on a bi-weekly basis after submission of this bid.**
EAC Certification Status*	a) Date submitted or will be submitted to EAC: **April 15, 2016**

	b) Estimated EAC certification date: **January 27, 2017** This estimated date was determined / provided by: Vendor ☐ EAC ■ c) Current status (summarize, in detail, the proposed system's status with respect to EAC certification): **EAC is finalizing paperwork.**

*NOTE: If VSTL and/or EAC reports have been issued, also attach the report(s).

C) Proposed Modification to Base Michigan Voting System Configuration

Provide information on the proposed voting system for use in Michigan that provides for secure electronic transmission of unofficial Election Night results (if different from the proposed base Michigan voting system described in Table A or B):

	Bidder Response
Product / System Name	Democracy Suite 5.0-S
Model or Version #	5.0-S
Components – list all system components of the proposed modification to the base Michigan voting system configuration, including Software/Firmware version or Hardware version of each component. Add lines if necessary, or provide a separate attachment, clearly labeled 'PROPOSED MODIFICATION TO BASE SYSTEM COMPONENTS'	Please see the attached D-Suite 5.0-S System Configuration List document for details on the system components of the proposed base Michigan voting system configuration.
Name / Location of VSTL	**Pro V&V, Huntsville, AL**
VSTL Testing Status*	Complete 1 OR 2 below: **1) VSTL testing completed: January 13, 2017** Date **2) VSTL testing not yet complete:** a) Date submitted or will be submitted to VSTL: _____ b) Estimated VSTL testing completion date: _____ This estimated date was determined / provided by: Vendor ☐ VSTL ☐ c) Current status (summarize, in detail, the proposed system's status with respect to VSTL testing):
Differences between proposed base Michigan voting system and the proposed modification to the base system – list, in detail, all substantive differences between the proposed BASE SYSTEM	The modification to the base system, Democracy Suite 5.0-S, adds dial-up and wireless results transmission capabilities to the ImageCast Precinct and results transmission using the Democracy Suite EMS Results Transfer Manager module. Additionally, the COTS Canon M160II scanner is added with the 5.0-S system configuration.

and proposed MODIFICATION TO BASE SYSTEM	The ImageCast Listener add-on component incorporates with the Democracy Suite EMS Server and adds a dedicated server, using an encrypted TCP/IP-based protocol, to receive results data. An industry-standard firewall appliance is used to isolate the EMS network from the external network. Both ImageCast Precinct tabulators and the Results Transfer Manager module communicate with the ImageCast Listener server. The Results Transfer Manager can also transmit data to shared folders on a network. The ImageCast Precinct model 321-C contains an internal dial-up modem; wireless 3G modems are available as external devices. The ImageCast Precinct requires a different Device Configuration File to enable the results transmission capabilities. **No other functional differences exist between the two versions.**

*NOTE: If VSTL report has been issued, also attach the report.

Exhibit 2 to Schedule A

Technical Requirements

See separate Excel spreadsheet document.

Exhibit 3 to Schedule A

Preventative Maintenance Checklists

ImageCast Precinct Sample Preventative Maintenance Checklist

ElectionSource

Image Cast Precinct Optical Scanner
Maintenance Checklist
Version 2.1

Serial # Printer Serial #

Date: 8/13/2015 Tech: John Keefer

Step #	Description	Expected Results	Pass	Fail	Comments
		Inspection Stage			
1	Inspect ICP-BMD	No scratches, dents or cracks			
2		ICP has all labels/ No Extra			
3		CF Card, AVS, Ports, and Printer Doors			
4		Headphones, ATI and cables Present			
5		Approved AC/DC Power Adapter Present			
		Power Up, and Verification			
6	System Power Up	Insert 2 CF cards with FN Election			
7		Connect ATI, Headphones and Printer			
8		Verify Paper Roll and Print Cart. Loaded			
9		Connect Approved AC/DC Power Adapter			
10		LCD Software Version	NA	NA	Version:
11		Loader Software Version	NA	NA	Version:
12		O/S Software Version	NA	NA	Version:
13		Verify Correct Time and Date			
		Diagnostics			
14	Complete Diagnostics	Clean Scan Heads with Cleaner Ballot			
15		Enter Diagnostics Mode			
16		Run Complete Diagnostics			
17		Memory Diagnostics			
18		Compact Flash Diagnostics			
19		EEPROM Diagnostics			
20		Thermal Printer Diagnostics			
21		LCD Diagnostics			
22		ATI Diagnostics			
23		Audio Diagnostics			
24		USB Printer Diagnostics			
25		Internal Clock Diagnostics			
26		Power Diagnostics			
27		Unplug AC Adapter	NA	NA	
28		Insert Blank Ballot/Scanner Diagnostics			
29		Observe Battery Status			
30		Print Diagnostic Report			
31		Exit Diagnostics and Restore AC Power			
		Functionality			
32	Election Project Testing	Open Polls and Print Status Report			
33		Verify Ballots cast are Zero			
34		Insert 1 OV Ballot, Override Warning			
35		Insert 1 Blank Ballot, Override Warning			
36		Insert 1 Wrong Pct. Ballot, Try to Override			
37		Insert 1 Marked Ballot from ADA Session			
38		Process Remainder of Test Deck			
39		Close Polls, Verify Results, Re-Zero			
40		Power Down and Store Unit			

Please list any repairs or required follow-up:

Tech: John Keefer Signature of Clerk/Auditor

FM-201ICP Version 2.1 Property of ElectionSource All Rights Reserved ElectionSource www.ElectionSource.com 1-888-742-8037

ImageCast Central Sample Preventative Maintenance Checklist

ElectionSource

ImageCast Central Count
Maintenance Checklist
Version 2.1

Serial:

Date: 8/13/2015 Tech:

Step #	Description	Expected Results	Pass	Fail	Comments
		Inspection Stage			
1	Inspect ICC	No scratches, dents or cracks			
2		ICC has all labels/ no extra			
3		USB Cable Type A to Type B present			
4		Approved AC/DC Power adapter present			
5		Laptop with current ImageCast Central			
6		ibutton Reader/Writer			
		Power Up			
7	System Power Up	Connect USB cable to scanner/laptop			
8		Connect ibutton reader to laptop			
9		Connect AC adapter to scanner			
10		Connect AC adapter to laptop			
11		Power Up Scanner before laptop			
12		Power on laptop			
13		Insert FN ibutton			
14		Connect AC adapter to scanner			
15		Connect AC adapter to laptop			
16		Power Up scanner before laptop			
17		Power on laptop			
18		Insert FN ibutton			
19		Open Image Cast Central Software			
		Cleaning			
20	ICC Cleaning	Clean scanner exterior			
21		Clean Document Feed Inlet			
22		Clean Transport Path			
23		Clean Sensors Top and Bottom			
24		Open Upper Unit, clean scanning glass			
25		Remove pickup, feed, and retard rollers			
26		Clean pad on retard roller cover			
27		Clean rollers and re-install			
28		Close scanner			
		Election Project Testing			
29	Scanning	Load Famous Names Election			
30		Load FN ICC Test Deck			
31		Navigate to **CONFIGURATION**			
32		Hit **Scan options**			
33		Deselect all Stop Scan on options			
34		Select **Continuous Scan**			
35		Select **Only one scan per batch**, hit **OK**			
36		Return to **SCANNING** hit **SCAN**			
37		After scanning hit **ACCEPT BATCH**			
38		Navigate to FN Election Folder			
39		Verify images are clear and accurate			
40		Navigate to CONFIGURATION			
41		Hit CLOSE TABULATOR, click OK			
42		Navigate to STATUS			
43		Click SHOW RESULTS			
44		Verify totals			
45		Shutdown software, scanner, then Laptop			

Please list any required follow-up:

Tech: 0 Signature of Clerk/Auditor

FM-203ICC Version 2.1 Property of ElectionSource All Rights Reserved ElectionSource www.ElectionSource.com 1-888-741-8011

DOMINION ICX PREVENTATIVE MAINTENANCE CHECKLIST
SID-XXV
Preventative Maintenance Checklist

Items to Test / Inspect	*OK*	*Not OK*	*Notes*
1. Top Door (Larger)			
A. Confirm Hinges Swing Freely	◯	◯	
B. Inspect/Test Magnet on Side of Door for Proper Operation	◯	◯	
C. Inspect Hasp/Staple for Proper Operation	◯	◯	
D. Inspect USB & MicroSD Connectors	◯	◯	
2. Battery Inspection			
A. Inspect Battery PCB Connection with Battery	◯	◯	
B. Inspect Battery is Secure Under Bracket	◯	◯	
C. Inspect Battery PCB Cable Connection to Main Unit	◯	◯	
3. Bottom Door (Smaller)			
A. Confirm Hinges Swing Freely	◯	◯	
B. Inspect/Test Magnet on Side of Door for Proper Operation	◯	◯	
C. Inspect Hasp/Staple for Proper Operation	◯	◯	
D. Inspect Cable Routing through Plastic Bushing	◯	◯	
E. Confirm DC-IN Power is Properly connected to Main Unit	◯	◯	
4. VESA Stand / General			
A. Inspect Cable Routing Inside I/O Cover	◯	◯	
B. Inspect Cables for Any Wear or Damage	◯	◯	
C. Inspect Card Reader in Base (Front)	◯	◯	
D. Confirm System can Tilt on Stand	◯	◯	
5. Electrical / Technical			
A. Confirm Main Power Cable Connection Between Base and Outlet	◯	◯	
B. Confirm Button under Bottom Door Turns Green when Power is Applied	◯	◯	
C. Confirm the LCD Touch is Functional	◯	◯	
D. Confirm the Battery is Fully Charged and has at Least 2 Hours of Runtime Available. If not, it is Recommended to Replace the Battery (Refer to Battery Test Procedure)	◯	◯	
E. Confirm Input Connectors Functionalities (I.e. USB's, LAN, Audio, etc.)	◯	◯	

Exhibit 4 to Schedule A

Voting System Description

Table of Contents

Paper Ballot – Providing a Permanent Record of Voter Intent 70
- Highlights 70
- Ballot artwork 71
  - Ballot artwork – Optical Scan Paper Ballots 71
  - Ballot artwork and style – ImageCast X electronic ballot and Verifiable Choice Summary Ballots 71
- Optical Scan Paper Ballot 72
- ImageCast X Verifiable Choice Summary Ballot 73
- Ballot Printing 74
  - Ballot Printing – Optical Scan Paper Ballots 74
  - Ballot Printing – ImageCast X Verifiable Choice Summary Ballots 74
- Ballot Printer Qualification 74
- Ballot Paper 74
- ImageCast Security Paper 75
- Sample Ballots 75

Democracy Suite Election Management System – The engine that powers your entire election 76
- Highlights 77
- Benefits of Democracy Suite 78
- Election Event Designer 79
- Results Tally and Reporting 80

Core Technology - Ensuring Accurate & Transparent Elections 82
- Highlights 82
- Dual Threshold Technology (Marginal Marks) 83
- Dominion's Exclusive Digital Ballot AuditMark 84
  - Hand-marked Ballot Image with Audit Trail: 84
  - Verifiable Choice Summary Ballot Image with Audit Trail: 85
  - The AuditMark Advantage 86

ImageCast Precinct – The world's most reliable optical scan tabulator 87
Highlights 87
Standard features 88
Sample ImageCast Precinct Screenshots 90
ImageCast Precinct Report Tapes 92
ImageCast Precinct Zero Tape 92
ImageCast Precinct Results Tape 94
ImageCast Precinct Simple and Complete Diagnostics Reports 96
ImageCast Precinct Tabulator Information Report 97
ImageCast Precinct Sample Preventative Maintenance Checklist 64
ImageCast Ballot Box 99
Standard Features 99
ImageCast X – It's everything you want it to be 100
Highlights 100
Accessibility 104
ImageCast Central – Scalable & Efficient High Speed Scanning 106
Highlights 106
ImageCast Central Reports 108
ImageCast Central Sample Preventative Maintenance Checklist 65
Mobile Ballot Printing Module 110
Highlights 110
Results Accumulation 112
Method 1 – Returning memory cards from each tabulator to the Elections Office 112
Method 2 – Dial-up and Cellular Modem transmission 112
ImageCast Listener 114
Method 3 – Results Transfer Manager 115
Election Night Reporting 116
Electronic Ballot Delivery – Dominion's ImageCast Remote (UOCAVA) 118
System Security Overview 119
Maintaining Data Integrity 119
EMS Security 119
Role-based Access Controls 119

Hardware Access Controls 120
Communications 120
Effective Password Management 120
EMS Audit Log 121
Tabulator Security 122
Electronic Safeguards and Security 122
Internal Battery 122
Results Storage Media 123
Media Storage Security 123
Tabulator Audit Trail 124

Paper Ballot – Providing a Permanent Record of Voter Intent

Highlights

- Dominion's Democracy Suite Election Management System (EMS) creates **tabulator-ready PDF optical scan ballot artwork files** and **election files for the ImageCast X and ImageCast Precinct.**
- These optical scan paper ballot artwork files are full-sized press-ready ballots generated in industry-standard PDF format and containing **all required ballot elements and the unique ballot ID barcode** that distinguishes each ballot style.
- A range of modern printing technologies can easily print ImageCast optical scan and verifiable choice summary ballots.
- The optical scan paper ballot is 8.5" inch wide and can vary between 11"-22" in length. It can be printed in four colors and has been tested and **certified for use up to its maximum length of 22".** The ImageCast X prints a verifiable choice summary ballot that is 8.5" wide and 11" in length.
- The optical scan paper ballot can also be **double sided and, if necessary, can be made up of multiple pages** to accommodate a ballot with offices and candidates that might exceed one double-sided page.
- Dominion also offers **optional infrared security paper** for additional peace of mind.

Ballot artwork

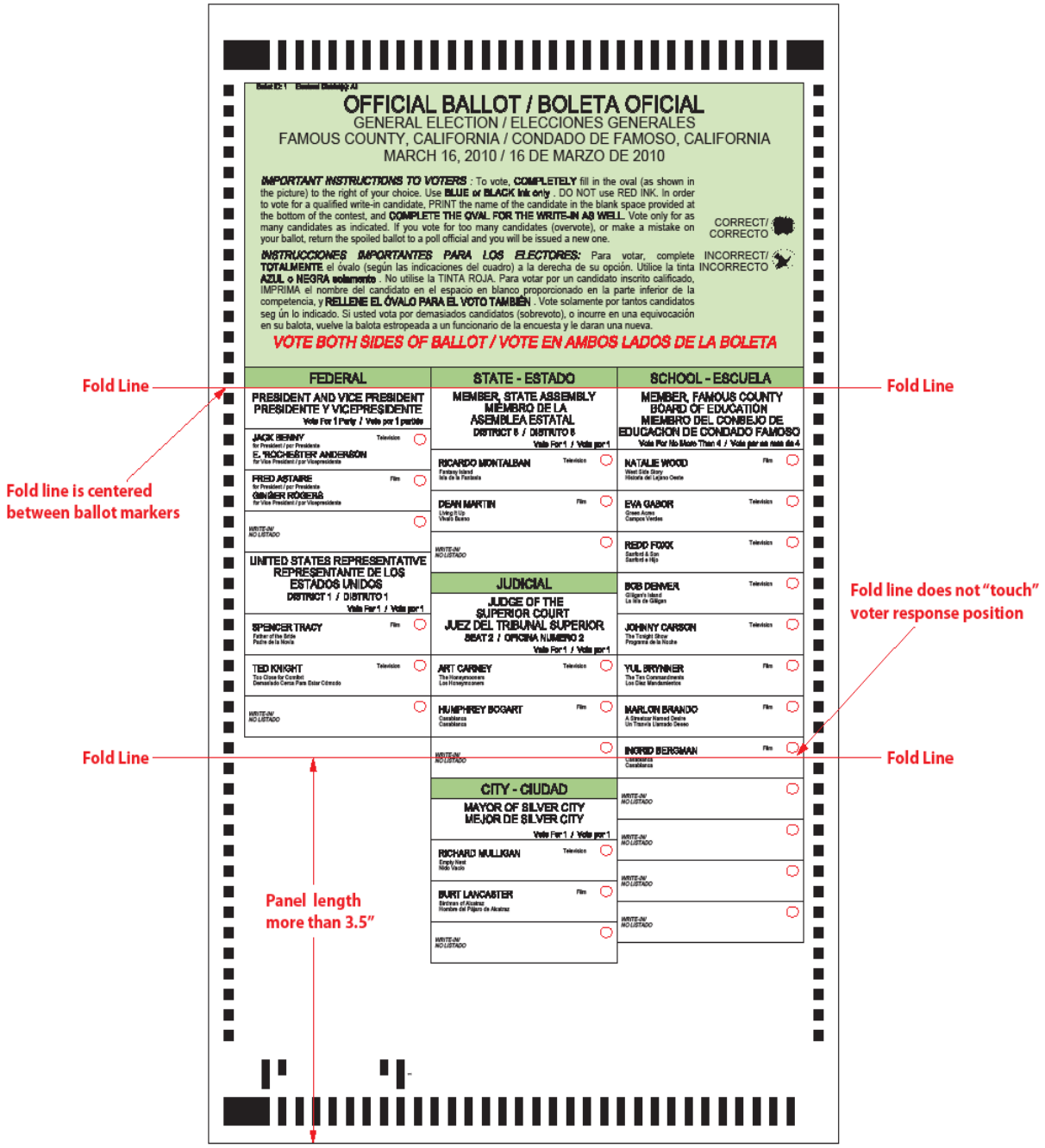
Ballot artwork – Optical Scan Paper Ballots

Dominion's Democracy Suite Election Management System (EMS) creates tabulator-ready PDF ballot artwork files for hand-marked ballots. Ballot artwork files are created as complete ballot images, without trim lines or crop marks, and are designed to directly print on digital 4-color sheet-fed xerographic or other electro-photographic printers (most B-sized laser printers). Ballot artwork is generated in industry-standard PDF format and CMYK color space. Ballot artwork files are full-sized press-ready ballots containing all required ballot elements and the unique ballot ID barcode that distinguishes each ballot style. Each file contains one or two ballot images: a front image (if the ballot is single-sided) or paired front and back ballot images. All fonts used in the ballot artwork are embedded in the PDF file. Ballot artwork files are digitally-signed (X.509) and tied to the election project files produced by Democracy Suite EMS to allow for authentication and revision control.

Ballot artwork and style – ImageCast X electronic ballot and Verifiable Choice Summary Ballots

Dominion's Democracy Suite Election Management System (EMS) creates the electronic ballots for the ImageCast X as well as the verifiable choice summary ballots that are printed at the end of the voting session on the ImageCast X. The verifiable choice summary ballot PDF files are generated for each ballot style with ballot headers only, and the voter's choices are printed once they have completed their voting session on the ImageCast X.

Optical Scan Paper Ballot



Example of Fold Line placement

ImageCast X Verifiable Choice Summary Ballot

Ballot Header: Contains relevant election event information as well as the ballot style

2D Barcode: The voter's choices are encrypted and digitally signed in the barcode. This barcode can only be scanned and decrypted by an ImageCast Tabulator.

Verifiable Choice Summary: The ballot contains a list of all contests and a summary of the voter's selections and non-selections (undervote or blank contest).

Ballot Style: 109

Official Ballot
City and County of Denver
Municipal General Election
Tuesday, May 3, 2011

Boleta Oficial de Votación
Ciudad y Condado De Denver
Elección General Municipal
3 de mayo del 2011

Office of Mayor
Vote for Doug Linkhart
Office of Auditor
Vote for Dennis Gallagher
Office of Clerk and Recorder
BLANK CONTEST
Office of Councilmembers At-Large
BLANK CONTEST
Office of Councilmember District 2
BLANK CONTEST

Ballot Printing

Ballot Printing – Optical Scan Paper Ballots

ImageCast paper ballots can be easily printed by a range of modern printing technologies.

- Small quantities of tabulator-ready ballots can be printed with a conventional B-size laser printer (600 dpi min., pre-calibrated), directly onto pre-cut blank ballot stock. ImageCast ballot artwork files are pre-configured for this use. In-house laser printing of ImageCast proofing and test ballots allows a jurisdiction to quickly and easily test the Democracy Suite EMS election project setup and tabulation options.
- Most jurisdictions choose a Dominion-certified print vendor to produce the ballots that will be used for their election. ImageCast ballots are produced by conventional offset lithographic presses, or high-speed digital xerographic or other electro-photographic presses.
- Ink jet printers, from small desktop units to high-speed web print engines, have produced millions of ImageCast ballots.

Common to all successful ballot printing methods is the strict adherence to Dominion's ImageCast ballot specifications, which have been provided to the State of Michigan as part of this RFP response.

Ballot Printing – ImageCast X Verifiable Choice Summary Ballots

The ImageCast X comes with a commercial off-the-shelf conventional laser printer that prints the verifiable choice summary ballot at the end of the voting session. The Canon LBP151dw laser printer is currently used with the ImageCast X.

Ballot Printer Qualification

Dominion licenses and qualifies ballot printers to produce and sell ballots for Dominion ImageCast tabulators. Dominion will be happy to work closely with a ballot printer of the counties' choice to ensure they receive the qualification and are able to print Dominion's licensed ImageCast optical scan paper ballots.

The printer training and qualification program is designed to ensure the production of high quality ballots, with low defect rates and high-levels of customer satisfaction. Qualification includes on-site ballot production instruction, ballot inspection procedures and tools, ballot QA programs and ballot printing tests. The program offers a fair and open ballot printer training and certification process, geared for range of commercial or governmental print operations. Dominion encourages customers to require the use of certified ballot printers for all print contracts.

Ballot Paper

The text and cover paper stocks that have been tested and approved for manufacturing ImageCast optical scan paper ballots are:

Approved Papers			
- Cascades Fine Paper **- International Paper**	- Rolland Opaque 50 - Accent Opaque	80# and 100# Text	Bright White, Smooth Finish
- Cascades Fine Paper **- International Paper**	- Rolland Opaque 50 - Accent Opaque	65# cover	Bright White, Smooth Finish

We recommend 100# text paper stock for use with the ImageCast X.

ImageCast Security Paper

Dominion's custom ballot authentication system is built around an (optional) secure ballot paper stock and in-tabulator authenticators that include:

- Custom ballot stock that incorporates an invisible infrared-reactive agent, built into the paper as it is manufactured.
- Matching non-contact paper sensor/authenticators are built into the ImageCast tabulators.

This combination of technologies assures that:

- Secure ballots cannot be counterfeited or duplicated, yet can be simply printed by our certified printers and by our customers.
- An ecologically-sound paper product will put us in the vanguard of responsible paper users.

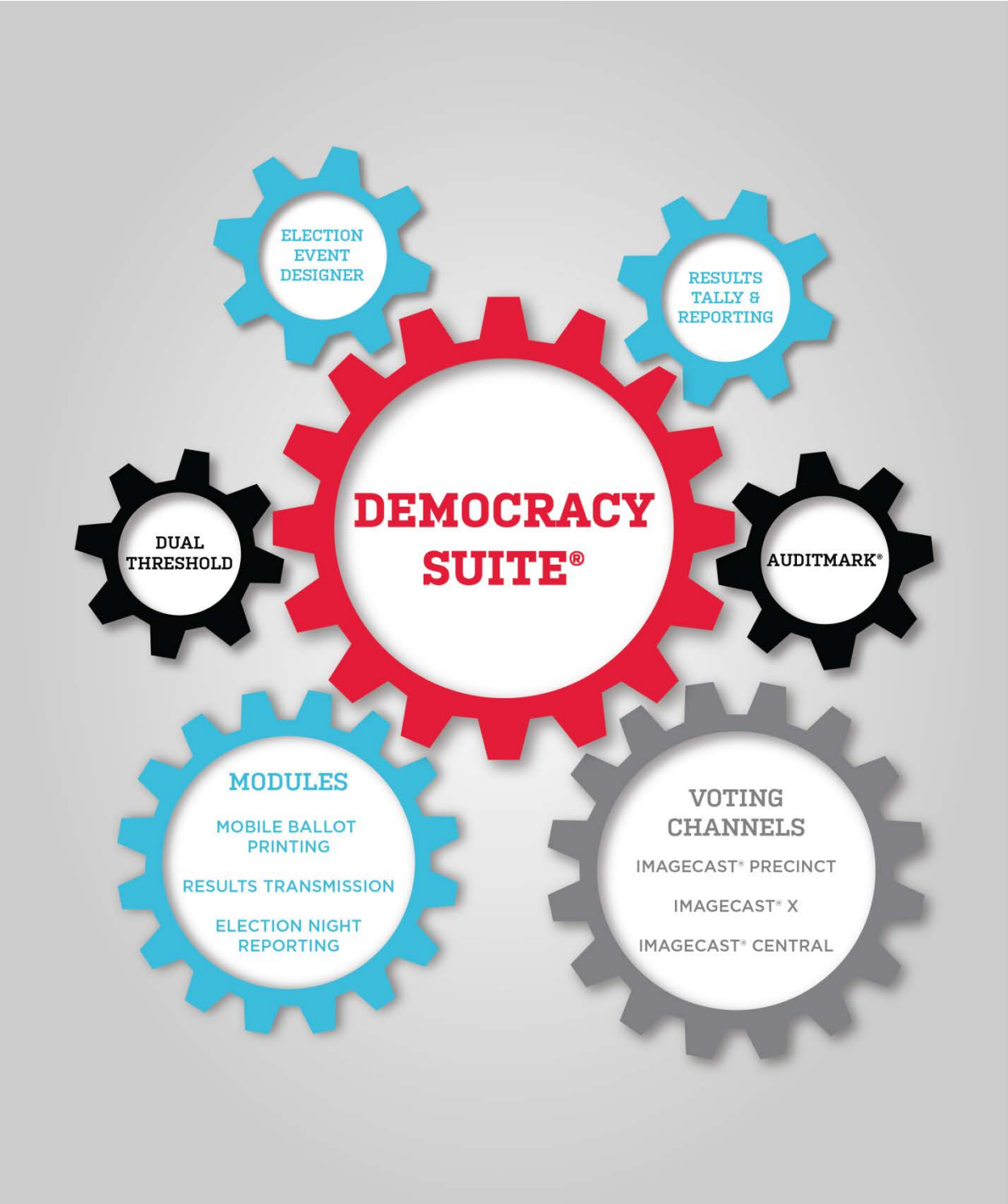
Additional Security Paper Features:

- Special coating to improve toner adhesion
- Reduced porosity to limit pen bleed-through
- Binders to limit curl induced by xerographic printers
- Improving fold tear strength
- Improving ballot stacking

Sample Ballots

Sample ballots can be found in Appendix 2 – Sample Ballots and Reports

Democracy Suite Election Management System – The engine that powers your entire election



Highlights

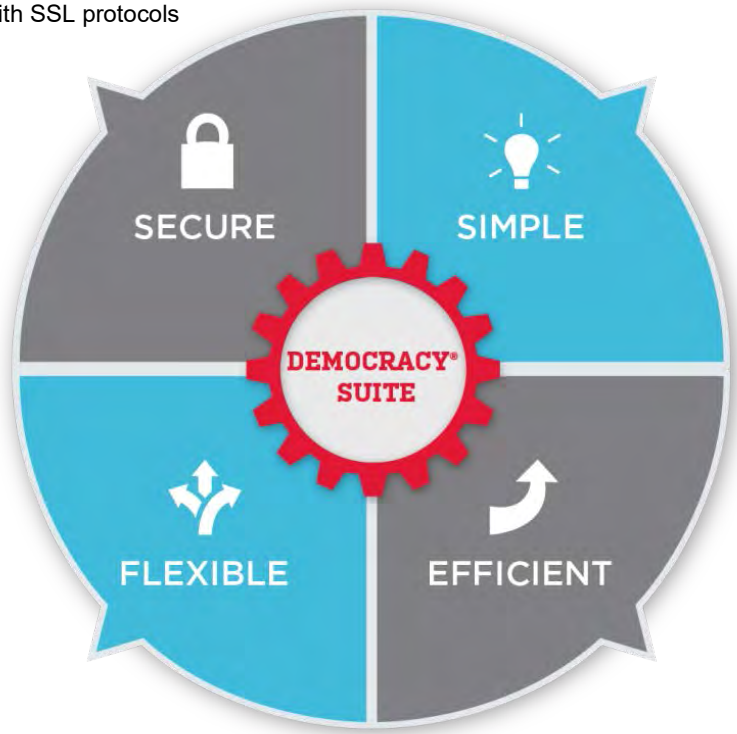
- Democracy Suite powers the entire voting system out of a **single comprehensive database**, with all the tools needed to simplify and streamline the process.
- All voting channels – whether absentee ballots, accessible voting, or precinct-based voting – are supported and powered by Democracy Suite.
- All pre-election and post-election tasks take place out of the same database – from ballot programming to results reporting on Election Night, **Democracy Suite is a complete, end-to-end elections solution.**
- It is designed to **suit the needs and requirements of jurisdictions large and small**, and can be easily scaled to support any size jurisdiction.
- The **counties will be equipped with Dominion's Democracy Suite Election Management System**, which is comprised of several modules to manage an election project from start to finish. Democracy Suite is composed of two main modules:
  - Through the **Election Event Designer (EED)**, the election definitions of each jurisdiction such as districts, races, and candidates can be input or imported. The Election Data Translator utility allows the import of the election definition from the Michigan QVF file further simplifying the election definition process for the County Administrator.
  - Through the **Results Tally and Reporting (RTR),** the counties can easily and quickly receive and accumulate election results from their precincts and rapidly report them to the State for accumulation and distribution of State-wide election results. The module exports results in a data format compliant with the Michigan Standard Results File Format.
- The system allows for the **configuration and creation of a wide range of reports** that can be easily accessed or customized.

Benefits of Democracy Suite

The Democracy Suite technology platform delivers an improved experience for the voter, long-term sustainability, operational efficiencies, transparency and cost-savings.

- Designed to meet the latest EAC VVSG requirements with industry leading FIPS 140-2 compliant security protocols
- Complete end-to-end system auditability
- Symmetric and asymmetric encryption for data confidentiality
- All communications channels are encrypted with SSL protocols

- Reduced complexity for election officials, as programming and results consolidation takes place out of a single unified database
- With easy-to-use, intuitive user interfaces across the entire product line, your staff and poll workers are able to confidently carry out the tasks in their workflow
- Improved and user-friendly experience for voters



- Capable of handling many types of elections, voting rules (i.e. straight party, open or closed primaries, etc.), and a range of jurisdiction sizes
- A diverse range of EMS modules and voting channel singular devices with flexible configurations to meet jurisdictional needs

- Built-in tools to help you simplify and streamline your process, increase productivity, and save you time and money
- Save and re-use ballot templates, election event definitions, and report templates so you can quickly and easily generate future election projects

Election Event Designer

The Election Event Designer module manages all of the information needed to define an election. Definition of an election is a complex task, and the event definition module allows for the easy entry and tracking of districts, precincts, contests, candidate names, voting locations and ImageCast tabulators. Election Event Designer allows jurisdictions to choose from a variety of language options for an election project.

Election definition data may be entered manually, or imported using the Election Data Translator utility. The Election Data Translator utility allows the import of the election definition from the Michigan QVF file further simplifying the election definition process for the County Administrator. Election definition data from may be exported or copied from prior election databases to speed up the process of coding subsequent elections. Sample Election Data Translator import files can be found in Appendix 2a – Sample Election Data Translator Imports.

Election Event Designer uses the County's geopolitical and election event data to automatically calculate the required ballot styles and generate full-sized press-ready ballots in industry-standard PDF format. EMS lays out contests on the ballot in the most space-efficient manner possible, in order to minimize printing costs. Election Event Designer offers extensive options for ballot styling with full user control - choose fonts, line weights, number of columns, multiple languages, multi-card or double-sided, landscape or portrait-style, variety of voting target options, colored headers, etc. A unique ballot ID barcode distinguishes each ballot style. The ballot is 8.5” wide and can vary between 11”-22” in length.

The ballot can be double sided and, if necessary, can be made up of multiple pages (up to 15) to accommodate a ballot with offices and candidates that might exceed one double-sided page. ImageCast Optical Scan Ballots can be easily printed by a range of modern printing technologies. All fonts used in the ballot artwork are embedded in the PDF file and ballot artwork files are digitally-signed (X.509) and tied to the election project files produced by Democracy Suite EMS to allow for authentication and revision control.

The EMS system uses Cepstral, a third-party text-to-audio synthesizer, to automatically generate audio ballots for the ImageCast X Ballot Marking Device. Users also have the option to import human-recorded audio, with or without the help of the EMS Audio Studio module, or fine tune pronunciation of the synthesized audio using Cepstral's Swifttalker application. The system outputs audio ballots (PNG images, SPX audio files and XML definition files), definition reports (XML, Excel or HTML files), and election definition files required to program the ImageCast Precinct, ImageCast X, and ImageCast Central.

The ImageCast Precinct tabulators are defined and configured in the Election Project and these parameters are passed to the voting machines via the election files on the

Compact Flash memory card. Tabulators are automatically configured to know which ballot styles to accept, how the unit should interact with voters and where results files are uploaded. The poll worker only needs to follow the Election Day procedures established by the County and never needs to make a decision regarding the tabulator's settings at the voting location.

The ImageCast X Ballot Marking Devices are also defined and configured in the Election Project and these parameters are passed to the ImageCast X devices via the election files on a USB. The ImageCast X will store all available ballot styles, and will present the correct ballot style to the voter when the voter inserts their Smart Card and activates the voting session. No results are stored on the ImageCast X. The ImageCast X prints a paper Verifiable Choice Summary Ballot at the end of the voting session, which the voter inserts into the ImageCast Precinct. All results files are stored on the ImageCast Precinct.

Sample Election Event Designer reports can be found in Appendix 2b – Sample Election Event Designer Reports.

Results Tally and Reporting

The EMS Results Tally and Reporting (EMS RTR) module is used on Election Night upon close of polls to accumulate results from tabulators and generate results reports. The application allows for the direct transmission of results to the ImageCast Listener server from the precinct or the AVCB through secure wireless or dial-up modem transmission, or from a designated hub using the Results Transfer Manager. For more information on transmission options, please see the Results Accumulation section below.

For the EMS RTR module, inputs represent encrypted and signed election result files (proprietary format), log files (plain text) and scanned ballot images with AuditMark, produced by the Precinct and Central tabulators (PNG and TIFF images). Outputs represent a variety of election result reports, as well as auditing information (XML, HTML, CSV, MS Excel and PDF formats).

The program automatically uploads the result files into the results tally module, and consolidated results are verified, tabulated, and published. Once the vote data is uploaded into the result tally module, the flow of results to the public and media can be controlled.

RTR allows election officials to review the results before releasing them, and the system provides a number of reporting methods, including but not limited to Summary and Precinct-level (Statement of Votes Cast) result reports. In addition to the static, pre-defined reports found in most reporting systems, RTR's Summary and Precinct-level reports use the Microsoft SQL Server Reporting Services engine to offer maximum flexibility to user. These reports feature a variety of configurable options and filters,

including detailed breakdowns of provisional ballots cast, ballots cast during early voting, on Election Day, and by mail. Election administrators may use the default settings, or configure the data fields included in the reports depending on the target audience. Reports may be filtered by precinct, district, contest, tabulator, or voting location, to narrow in on specific results data of interest contained within the election database.

RTR features a one-click results export in CSV format that is fully compliant with the Michigan Standard Results File Format. In addition, the module features numerous export types for compatibility with third-party web-based Election Night Reporting software. As is currently the case in states such as Florida and New Mexico – which also have state-standardized export formats - Dominion will stay current and compliant with the Michigan Bureau of Elections' evolving standard, and releases updates to the export file as the standard changes. After approval from the Bureau of Elections, an independent update file is easily imported into the EMS Server, eliminating the need for recertification or reinstallation of the entire application.

Sample Results Tally and Reporting reports can be found in Appendix 2c – Sample Results Tally & Reporting reports.

Core Technology - Ensuring Accurate & Transparent Elections

Highlights

- The Democracy Suite Election Management System handles all activities related to your election. It produces ballots and tabulator information, and is enhanced by Dominion's Core **Dual Threshold and AuditMark technologies**.
- Dual Threshold technology has a user-defined low and high marginal mark threshold to ensure that each and every voter's ballot will be read the same every time. If a voter does not properly fill in the oval while marking their ballot and their oval mark falls in the marginal mark zone, the system will inform the voter of the Marginal Mark and the **onus of clearly defining their intent is on the voter**, not the Election Official.
- The AuditMark auditing system is, however, what makes the Dominion difference and sets us apart from other vendors in this industry. **It is the only system that digitally stores an image of every ballot cast along with a record of how the ImageCast tabulator interpreted each vote**, ensuring a completely transparent and auditable election.
- Administrators find it a great comfort when reviewing ballot images during recounts and every image is accompanied by this **clear, digital, human-readable AuditMark record**.
- We take particular pride in this unique feature, because it demonstrates how seriously Dominion takes **our policy of being 100% accountable** for each and every vote cast.

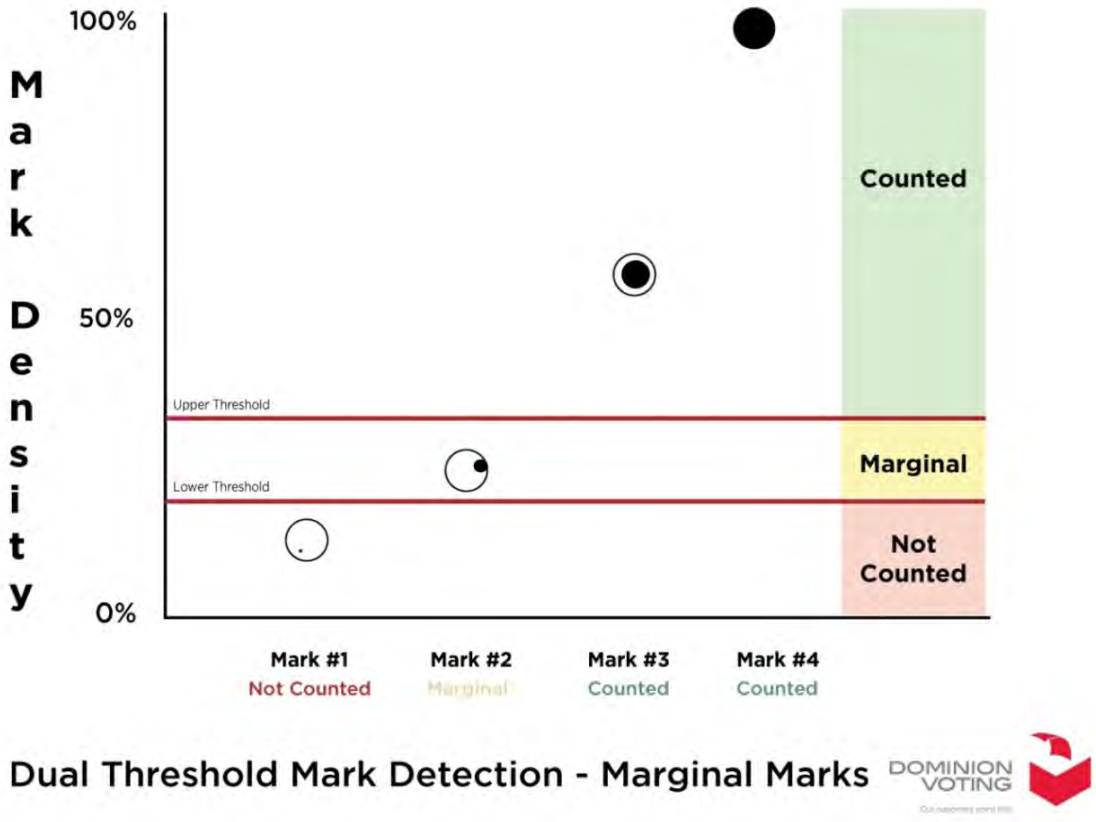
Dominion Voting Systems has invested in the development of proprietary technology that truly sets its products apart from the competition. Dominion's core technologies focus on ensuring two key aspects of the electoral process – **accuracy and transparency.**

Dual Threshold Technology (Marginal Marks)

From its early beginnings, Dominion Voting has emphasized the use of digital scanning, and continues to set the standard in digital image acquisition and analysis in the tabulation of digitally scanned ballots. When a hand-marked ballot is scanned by an ImageCast tabulator – at the precinct level or centrally - a complete duplex image is created and then analyzed for tabulation by evaluating the pixel count of a voter mark. The pixel count of each mark is compared with two thresholds (which are defined through the Election Management System by the Election Official) to determine what constitutes a vote.

If a mark falls above the upper threshold, it is determined to be a valid vote. If a mark falls below the lower threshold, it will not be counted as a vote. However, if a mark falls between the two thresholds (known as the "ambiguous zone"), it will be deemed as a marginal mark and the ballot will be returned to the voter for corrective action (please see diagram below).

With this feature, the voter is given the ability to determine his or her intent at the time they cast their ballot, not an inspection or recount board after the fact, when it is too late. The chart below illustrates the Marginal Mark threshold interpretation.



Dominion's Exclusive Digital Ballot AuditMark

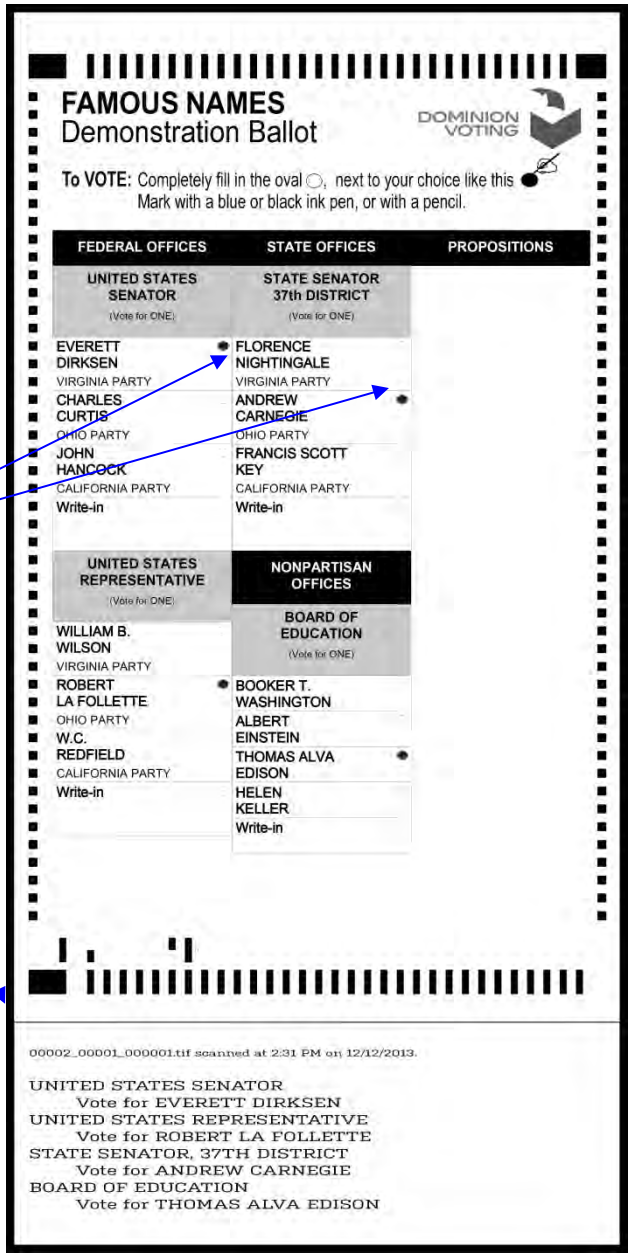
Dominion's AuditMark technology will allow the State of Michigan to provide greater transparency in the electoral process. Every single ballot in the election is imaged and appended with Dominion's patented AuditMark, a record of how the system interpreted the voter's intent. The **AuditMark is the only technology that provides a clear and fully auditable single vote cast record for every ballot cast.**

This ballot-level audit trail allows election officials and other stakeholders to review not only the ballot images, but also the tabulator's interpretation of each ballot.

Hand-marked Ballot Image with Audit Trail:

This is a sample ballot image for a centrally-processed ballot. All ballots are imaged and stored for auditing purposes. The image contains:

1. Image of front side of ballot (if the reverse side of the ballot is used, the image is also captured)
2. Clear image of all text, ballot identifiers, candidates and voter markings.
3. **AuditMark**: Ballot-level audit trail feature showing the results interpreted by the system for this ballot.



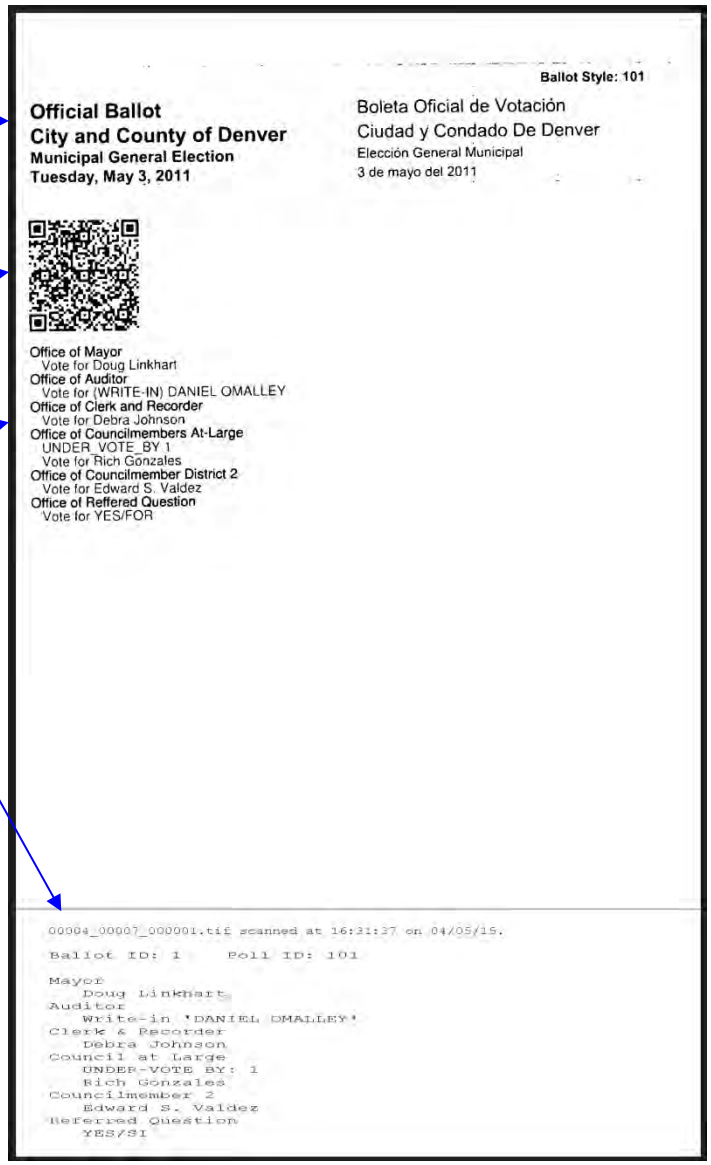
00002_00001_000001.tif scanned at 2:31 PM on 12/12/2013.

UNITED STATES SENATOR
Vote for EVERETT DIRKSEN
UNITED STATES REPRESENTATIVE
Vote for ROBERT LA FOLLETTE
STATE SENATOR, 37TH DISTRICT
Vote for ANDREW CARNEGIE
BOARD OF EDUCATION
Vote for THOMAS ALVA EDISON

Verifiable Choice Summary Ballot Image with Audit Trail:

This is a sample ballot image for a centrally-processed verifiable choice summary ballot. All ballots are imaged and stored for auditing purposes. The image contains:

1. Image of the Verifiable Choice Summary Ballot.
2. Voter's choices are encrypted and digitally signed in the secure barcode image that can only be scanned and decrypted by Dominion's ImageCast tabulators.
3. Clear image of all text, ballot contest headings, and voter choices.
4. **AuditMark**: Ballot-level audit trail feature showing how the tabulator decrypted the barcode image and counted the voter's choices. Comparing the AuditMark to the written summary verifies that the system accurately recorded the voter's selections.



Ballot Style: 101

Official Ballot
City and County of Denver
Municipal General Election
Tuesday, May 3, 2011

Boleta Oficial de Votación
Ciudad y Condado De Denver
Elección General Municipal
3 de mayo del 2011

Office of Mayor
Vote for Doug Linkhart
Office of Auditor
Vote for (WRITE-IN) DANIEL OMALLEY
Office of Clerk and Recorder
Vote for Debra Johnson
Office of Councilmembers At-Large
UNDER_VOTE_BY 1
Vote for Rich Gonzales
Office of Councilmember District 2
Vote for Edward S. Valdez
Office of Reffered Question
Vote for YES/FOR

00004_00007_000001.tif scanned at 16:31:37 on 04/05/15.

Ballot ID: 1 Poll ID: 101

Mayor
Doug Linkhart
Auditor
Write-in 'DANIEL OMALLEY'
Clerk & Recorder
Debra Johnson
Council at Large
UNDER-VOTE BY: 1
Rich Gonzales
Councilmember 2
Edward S. Valdez
Referred Question
YES/SI

00004_00007_000001.tif scanned at 16:31:37 on 04/05/15.

Ballot ID: 1 Poll ID: 101

Mayor
Doug Linkhart
Auditor
Write-in 'DANIEL OMALLEY'
Clerk & Recorder
Debra Johnson
Council at Large
UNDER-VOTE BY: 1
Rich Gonzales
Councilmember 2
Edward S. Valdez
Referred Question
YES/SI

The AuditMark Advantage

Transparency: Our system is the only one that stores a complete image of every ballot cast, along with the audit trail for that ballot visually affixed to the image.

Accuracy: The audit trail shows how the tabulator interpreted the voted ballot markings or the secure barcode, at the time the ballot was cast. By viewing this image, an election official can easily verify that the tabulator has correctly interpreted the voter's selections on the ballot.

Trust: Furthermore, by randomly opening a small number of image files and verifying that the audit trail displays the correct results, the election official can quickly develop a high level of confidence that all of the ballots have been interpreted correctly.

In practice, the AuditMark feature can be used as:

- a method to test machine integrity before an election
- a method of obtaining confidence that the equipment is functioning properly
- a method to completely audit the entire election
- a method to enhance re-counts

ImageCast Precinct – The world's most reliable optical scan tabulator

Highlights

- The ImageCast Precinct is one of the most widely used tabulators with over **100,000 units deployed worldwide**
- It is one of **the most reliable optical scan tabulators**, that safely stores and tabulates each vote from every ballot – including hand-marked ballots and verifiable choice summary ballots
- It is designed to be easy-to-use for both voters and poll workers
- Lightweight (14lbs), easy to store, carry and set-up
- Designed by engineers to withstand the most challenging environments

The ImageCast Precinct tabulator is a lightweight, robust and easy-to-use optical scan tabulator. With major deployments including 82,000 units in Philippines, 11,000 units in New York, and 2,500 units in Mongolia, the ImageCast Precinct is the most reliable optical scanner ever developed.

The system scans marked paper ballots, interprets voter marks on the paper ballot and safely stores and tabulates each vote from each paper ballot. The ImageCast Precinct is also designed to read and tabulate verifiable choice summary ballots produced on the ImageCast X, which include a 2D barcode read by the scanner, as well as a human-readable text summary of the voter's selections.

The ImageCast Precinct reads single and double-sided ballots in four orientations, and accepts striping and colored headers to distinguish ballots.

The ImageCast Precinct is designed to be "plug and play," making it very straightforward and quick to set up for poll workers. The ImageCast Precinct will power on upon plugging in the AC power cord. The poll worker will apply their iButton and enter their credentials to open the polls and print the zero tape, and the ImageCast Precinct tabulators are ready to commence standard voting and accept ballots.

At the polling place, the voter makes their selections by filling in the voting targets next to their choices, or makes their selections on the ImageCast X ballot marking device which then prints a paper ballot. The voter then inserts their ballot directly into the ImageCast Precinct, which performs the following functions:

- Scans the ballot and interprets the digital image to tabulate the voter's choices
- Appends to the bottom of the ballot image a record of how that ballot was counted on Election Day (known as the AuditMark)
- Redundantly stores and tallies the results
- Prints cumulative totals of all votes cast after the polls have been closed

Standard features

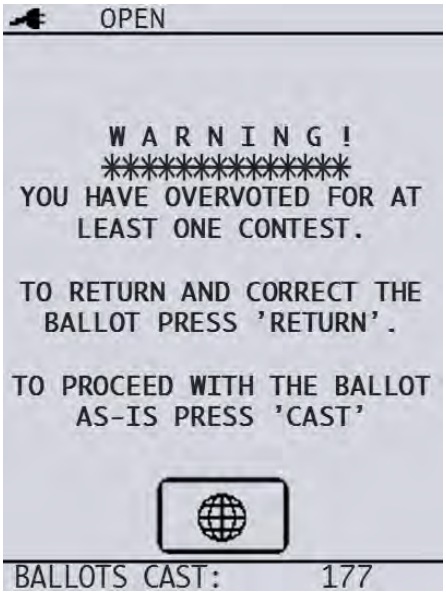
- 200 dpi scanner
- Security detector (optional)
- Internal diverter
- VVSG 2005 security
- 2 memory cards
- AuditMark capability
- Ultra-sonic multi-feed detector that prevents the device from accepting more than one ballot a time.

ImageCast Precinct on the Dominion Ballot Box

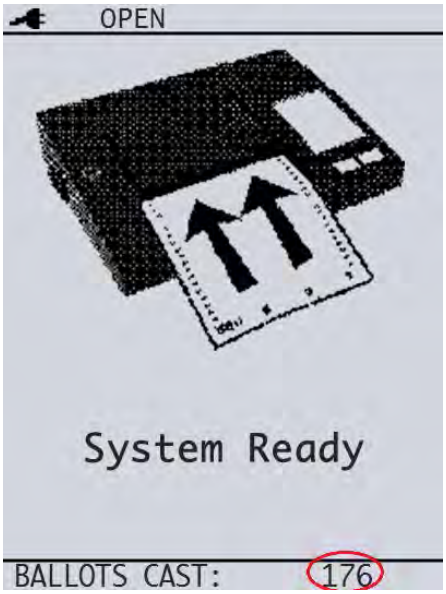
The ImageCast Precinct – a lightweight but robust and versatile tabulator

Sample ImageCast Precinct Screenshots

The ImageCast Precinct tabulator provides feedback, messages, and instructions to voters and poll workers.



*As discussed in response to requirement **1.1.A.8 in Exhibit A – Attachment 1.1**, the ImageCast Precinct display alerts voters to any and all voter/ballot errors with clear language describing the error, before accepting the ballot for tabulation. The example at left shows the tabulator's message after detecting an overvoted contest, giving the option for the voter to either cast their ballot as-is, or return it for correction.*

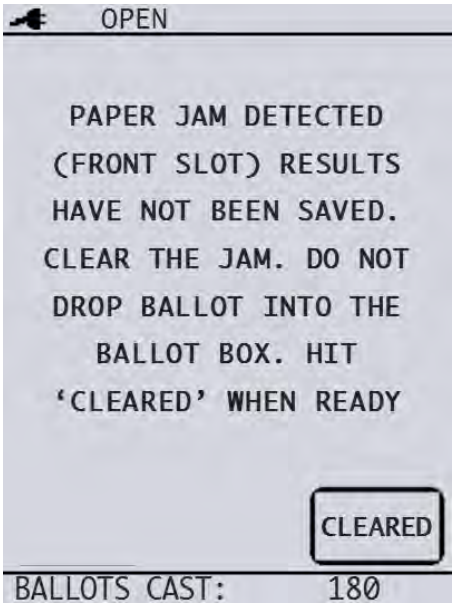


*As discussed in response to requirement **1.1.A.13 in Exhibit A - Attachment 1.1**, the ImageCast Precinct display shows the total number of ballot cards cast.*

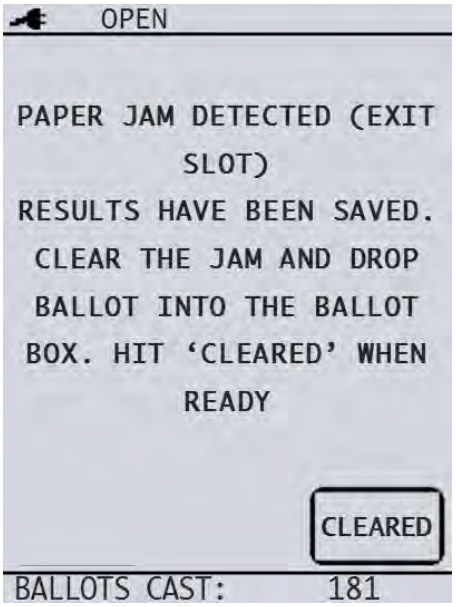
*As discussed in response to requirement **1.1.A.27 in Exhibit A - Attachment 1.1**, the ImageCast Precinct has a fitted, lockable, and sealable hard plastic lide (the ballot box cover) that completely covers the unit, protecting it from direct water contact.*

*As discussed in response to requirement **1.1.F.3 in Exhibit A – Attachment 1.1**, the ImageCast Precinct tabulator presents clear messages to the user if a paper jam is detected. Paper jams in the ImageCast Precinct tabulator are rare, but can occur due to such reasons as wrinkled or bent edges on the ballot.*

When a paper jam occurs, the screen displays the message "PAPER JAM DETECTED…" with a button labeled "CLEARED" at the bottom-right corner. Paper jams can occur at the ballot entry slot as soon as the ballot is fed into the tabulator or at the exit slot when the ballot is being dropped into the ballot box. In each scenario, the screen will display the relevant message as shown below:



Paper jam message (entry slot)



Paper jam message (exit slot)

ImageCast Precinct Report Tapes

ImageCast Precinct Zero Tape

****

Lenawee County

MI Lenawee 2012
Primary 20150825
Tuesday, August 07, 2012

Tabulator Name
City of Adrian, P1 ICP

Tabulator ID
601

Voting Location
City of Adrian, Precinct 1

- - - - - - - - - - - -

Unit Model: PCOS320A (Rev 107)
Unit Serial: WLDAFBH0010
Protective Counter: 5643
Software Version: 4.14.17-US

- - - - - - - - - - - -

Total Scanned: 0
Total Voters: 0

REP US Senator (1)	
Clark Durant (Republican):	0
Gary Glenn (Republican):	0
Randy Hekman (Republican):	0
Pete Hoekstra (Republican):	0
Write-in:	0
Total Votes:	0

REP D7 Rep in Congress (1)	
Dan Davis (Republican):	0
Tim Walberg (Republican):	0
Write-in:	0
Total Votes:	0

REP D57 Representative (1)	
Nancy Jenkins (Republican):	0
Write-in:	0
Total Votes:	0

REP Prosecuting Attorney (1)	
Burke Castleberry (Republican):	0
Write-in:	0
Total Votes:	0

REP County Sheriff (1)	
Jack Welsh (Republican):	0
Write-in:	0
Total Votes:	0

REP County Clerk (1)	
Roxann Holloway (Republican):	0
Write-in:	0
Total Votes:	0

REP County Treasurer (1)	
Marilyn J. Woods (Republican):	0
Write-in:	0
Total Votes:	0

REP Register of Deeds (1)	
Carolyn S. Bater (Republican):	0
Write-in:	0
Total Votes:	0

REP Road Commissioner (1)	
Write-in:	0
Total Votes:	0

REP Drain Commissioner (1)	
Stephen R. May (Republican):	0
Write-in:	0
Total Votes:	0

REP County Surveyor (1)	
Kevin L. Pickford (Republican):	0
Write-in:	0
Total Votes:	0

REP D5 Commissioner (1)	
William Hoffman (Republican):	0
Write-in:	0
Total Votes:	0

REP C Adrian 1 Delegate (3)	
Jeffrey R. Drake (Republican):	0
Miguel Irizarry (Republican):	0
Write-in:	0
Total Votes:	0

DEM US Senator (1)	
Debbie Stabenow (Democratic):	0
Write-in:	0
Total Votes:	0

DEM D7 Rep in Congress (1)	
Kurt Richard Haskell (Democratic):	0
Ruben Marquez (Democratic):	0
Write-in:	0
Total Votes:	0

DEM D57 Representative (1)	
Jim Berryman (Democratic):	0
Harvey E. Schmidt (Democratic):	0
Write-in:	0
Total Votes:	0

CONTRACT #071B7700117

DEM Prosecuting Attorney (1)	
Write-in:	0
Total Votes:	0

DEM County Sheriff (1)	
Write-in:	0
Total Votes:	0

DEM County Clerk (1)	
Write-in:	0
Total Votes:	0

DEM County Treasurer (1)	
Write-in:	0
Total Votes:	0

DEM Register of Deeds (1)	
Sharon L. Wimple (Democratic):	0
Write-in:	0
Total Votes:	0

DEM Road Commissioner (1)	
Stan Wilson (Democratic):	0
Write-in:	0
Total Votes:	0

DEM Drain Commissioner (1)	
Write-in:	0
Total Votes:	0

DEM County Surveyor (1)	
Write-in:	0
Total Votes:	0

DEM D5 Commissioner (1)	
Karol J. Bolton (Democratic):	0
James Daly (Democratic):	0
Write-in:	0
Total Votes:	0

DEM C Adrian 1 Delegate (2)	
Write-in:	0
Total Votes:	0

County Medical Care (1)	
YES:	0
NO:	0
Total Votes:	0

County Senior Millage (1)	
YES:	0
NO:	0
Total Votes:	0

Certification

WE, THE UNDERSIGNED, WERE PRESENT DURING THE OPENING OF THE POLLS AND PRINTING OF THIS RECORD AND CAN VERIFY THAT ALL CANDIDATE VOTE TOTALS ARE ZERO AT THIS TIME.

Name

Signature

Name

Signature

Name

Signature

Name

Signature

Results are zero. Unit ready.
Wed Aug 26 18:07:15 2015

ImageCast Precinct Results Tape

****

Lenawee County
MI Lenawee 2012
Primary 20150825
Tuesday, August 07, 2012

Tabulator Name
City of Adrian, P1 ICP

Tabulator ID
601

Voting Location
City of Adrian, Precinct 1

- - - - - - - - - - - -

Unit Model: PCOS320A (Rev 107)
Unit Serial: WLDAFBH0010
Protective Counter: 5653
Software Version: 4.14.17-US

- - - - - - - - - - - -

Total Scanned: 10
Total Voters: 10

REP US Senator (1)	
Clark Durant (Republican):	1
Gary Glenn (Republican):	1
Randy Hekman (Republican):	1
Pete Hoekstra (Republican):	1
Write-in:	1
Total Votes:	5

REP D7 Rep in Congress (1)	
Dan Davis (Republican):	1
Tim Walberg (Republican):	1
Write-in:	1
Total Votes:	3

REP D57 Representative (1)	
Nancy Jenkins (Republican):	1
Write-in:	1
Total Votes:	2

REP Prosecuting Attorney (1)	
Burke Castleberry (Republican):	1
Write-in:	1
Total Votes:	2

REP County Sheriff (1)	
Jack Welsh (Republican):	1
Write-in:	1
Total Votes:	2

REP County Clerk (1)	
Roxann Holloway (Republican):	1
Write-in:	1
Total Votes:	2

REP County Treasurer (1)	
Marilyn J. Woods (Republican):	1
Write-in:	1
Total Votes:	2

REP Register of Deeds (1)	
Carolyn S. Bater (Republican):	1
Write-in:	1
Total Votes:	2

REP Road Commissioner (1)	
Write-in:	1
Total Votes:	1

REP Drain Commissioner (1)	
Stephen R. May (Republican):	1
Write-in:	1
Total Votes:	2

REP County Surveyor (1)	
Kevin L. Pickford (Republican):	1
Write-in:	1
Total Votes:	2

REP D5 Commissioner (1)	
William Hoffman (Republican):	1
Write-in:	1
Total Votes:	2

REP C Adrian 1 Delegate (3)	
Jeffrey R. Drake (Republican):	1
Miguel Irizarry (Republican):	1
Write-in:	3
Total Votes:	5

DEM US Senator (1)	
Debbie Stabenow (Democratic):	1
Write-in:	1
Total Votes:	2

DEM D7 Rep in Congress (1)	
Kurt Richard Haskell (Democratic):	1
Ruben Marquez (Democratic):	1
Write-in:	1
Total Votes:	3

DEM D57 Representative (1)	
Jim Berryman (Democratic):	1
Harvey E. Schmidt (Democratic):	1
Write-in:	1
Total Votes:	3

DEM Prosecuting Attorney (1)	
Write-in:	1
Total Votes:	1

DEM County Sheriff (1)	
Write-in:	1
Total Votes:	1

DEM County Clerk (1)	
Write-in:	1
Total Votes:	1

DEM County Treasurer (1)	
Write-in:	1
Total Votes:	1

DEM Register of Deeds (1)	
Sharon L. Wimple (Democratic):	1
Write-in:	1
Total Votes:	2

DEM Road Commissioner (1)	
Stan Wilson (Democratic):	1
Write-in:	1
Total Votes:	2

DEM Drain Commissioner (1)	
Write-in:	1
Total Votes:	1

DEM County Surveyor (1)	
Write-in:	1
Total Votes:	1

DEM D5 Commissioner (1)	
Karol J. Bolton (Democratic):	1
James Daly (Democratic):	1
Write-in:	1
Total Votes:	3

DEM C Adrian 1 Delegate (2)	
Write-in:	2
Total Votes:	2

County Medical Care (1)	
YES:	1
NO:	1
Total Votes:	2

County Senior Millage (1)	
YES:	1
NO:	1
Total Votes:	2

Certification

WE, THE UNDERSIGNED ELECTION OFFICIALS, HEREBY CERTIFY THAT THE ABOVE ELECTION WAS HELD IN ACCORDANCE WITH THE LOCAL AUTHORITY ELECTION ACT AND REGULATIONS OF THIS JURISDICTION.

Name

Signature

Name

Signature

Name

Signature

Name

Signature

Poll closed.
Wed Aug 26 18:35:07 2015

ImageCast Precinct Simple and Complete Diagnostics Reports

*** DIAGNOSTICS PRINTER TEST,
PLEASE DISCARD! ***

Aug 26/2015 18:03:13
SIMPLE DIAGNOSTICS
MEMORY PASSED
COMPACT FLASH PASSED
EEPROM PASSED
THERMAL PRINTER PASSED
LCD PASSED
INTERNAL CLOCK PASSED
POWER PASSED
SCANNER PASSED
DIAGNOSTICS DONE
MACHINE IS READY FOR USE.

00601

Unit Model: PCOS320A (Rev 107)
Unit Serial: WLDAFBH0010
Protective Counter: 5643
Software Version: 4.14.17-US

*** DIAGNOSTICS PRINTER TEST,
PLEASE DISCARD! ***

Aug 26/2015 18:05:42
COMPLETE DIAGNOSTICS
MEMORY PASSED
COMPACT FLASH PASSED
EEPROM PASSED
THERMAL PRINTER PASSED
LCD PASSED
INTERNAL CLOCK PASSED
POWER PASSED
SCANNER PASSED
DIAGNOSTICS DONE
MACHINE IS READY FOR USE.

00601

Unit Model: PCOS320A (Rev 107)
Unit Serial: WLDAFBH0010
Protective Counter: 5643
Software Version: 4.14.17-US

ImageCast Precinct Tabulator Information Report

TABULATOR INFO

PROTECTIVE COUNTER: 5643

TOTAL DIVERTED: 568

TOTAL PAPER JAMS: 206

IMAGE MEMORY USAGE: 0.01%

SERIAL NUMBER: WLDAFBH0010

Top CIS Calibration: 0x0

Bottom CIS Calibration: 0x0

Printer Intensity: 0xc0

OS: 4.14.17-US

Cfload: 4.14.17-US

Application: 4.14.17-US

Digital Signature:

74 dc 1a 1f 69 3e 2c cc

db 64 ea 6a fa 8e 65 b1

bb a9 11 48 72 a2 e6 da

9c b6 cf 00 f3 e1 9b cd

00601

ImageCast Precinct Sample Preventative Maintenance Checklist

ElectionSource

Image Cast Precinct Optical Scanner
Maintenance Checklist
Version 2.1

Serial # Printer Serial #

Date: 8/13/2015 Tech: John Keefer

Step #	Description	Expected Results	Pass	Fail	Comments
		Inspection Stage			
1	Inspect ICP-BMD	No scratches, dents or cracks			
2		ICP has all labels/ No Extra			
3		CF Card, AVS, Ports, and Printer Doors			
4		Headphones, ATI and cables Present			
5		Approved AC/DC Power Adapter Present			
		Power Up, and Verification			
6	System Power Up	Insert 2 CF cards with FN Election			
7		Connect ATI, Headphones and Printer			
8		Verify Paper Roll and Print Cart. Loaded			
9		Connect Approved AC/DC Power Adapter			
10		LCD Software Version	NA	NA	Version:
11		Loader Software Version	NA	NA	Version:
12		O/S Software Version	NA	NA	Version:
13		Verify Correct Time and Date			
		Diagnostics			
14	Complete Diagnostics	Clean Scan Heads with Cleaner Ballot			
15		Enter Diagnostics Mode			
16		Run Complete Diagnostics			
17		Memory Diagnostics			
18		Compact Flash Diagnostics			
19		EEPROM Diagnostics			
20		Thermal Printer Diagnostics			
21		LCD Diagnostics			
22		ATI Diagnostics			
23		Audio Diagnostics			
24		USB Printer Diagnostics			
25		Internal Clock Diagnostics			
26		Power Diagnostics			
27		Unplug AC Adapter	NA	NA	
28		Insert Blank Ballot/Scanner Diagnostics			
29		Observe Battery Status			
30		Print Diagnostic Report			
31		Exit Diagnostics and Restore AC Power			
		Functionality			
32	Election Project Testing	Open Polls and Print Status Report			
33		Verify Ballots cast are Zero			
34		Insert 1 OV Ballot, Override Warning			
35		Insert 1 Blank Ballot, Override Warning			
36		Insert 1 Wrong Pct. Ballot, Try to Override			
37		Insert 1 Marked Ballot from ADA Session			
38		Process Remainder of Test Deck			
39		Close Polls, Verify Results, Re-Zero			
40		Power Down and Store Unit			

Please list any repairs or required follow-up:

Tech: John Keefer Signature of Clerk/Auditor

FM-201ICP Version 2.1 Property of ElectionSource All Rights Reserved ElectionSource www.ElectionSource.com 1-888-742-8037

ImageCast Ballot Box

Dominion has designed an innovative, complementary ballot box, pictured below, for our precinct tabulators. It is built of sturdy plastic, and features four large lockable swivel wheels and handles on all sides for ease of movement, allowing the units to be securely transported to and from the polling place. Since it has no internal moving parts, the ballot box can also accommodate Election Day supplies when it is not storing ballots. For security purposes, the ballot box features five locks and multiple security seal points to limit access and prevent tampering.

When the poll worker arrives to set up, they will unlock the cover, plug the ballot box into the wall plug, and the system will turn on and be ready to print the zero tape. All other components are already attached, keeping polling location issues to a minimum.

Standard Features

- The ImageCast Ballot Box is made from solid extruded plastic and built to the requirements of the EAC.
- The ballot box capacity meets US polling place requirements, with three bins (main bin, write-in bin, and auxiliary/emergency bin).
- The ImageCast Precinct tabulator locks and seals onto the ballot box, which features a cover that provides additional security and ease of transportation.
- Features a sealed plastic base and is water resistant.
- Offers multiple deployment and warehousing options.

Plastic Ballot Box – with the lockable cover (left), and showing the three interior compartments (right)

ImageCast X – It's everything you want it to be

Highlights

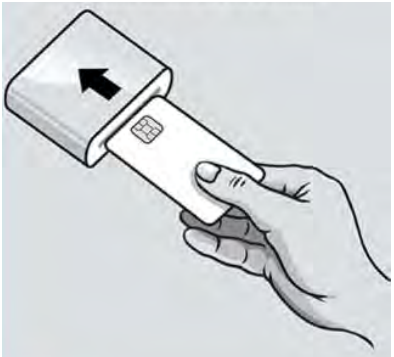
- Today, voters and election officials are increasingly looking to leverage everyday technologies to improve the voting process and experience. Dominion is listening to our customers, and has designed a **touchscreen precinct-voting terminal** that combines the flexibility, efficiency, and simplicity of modern technology, with an underlying platform of security and performance - Democracy Suite.
- Fully integrated into the Democracy Suite platform, the ImageCast X takes full advantage of commercially available hardware, **making it a cost-effective and flexible solution.**
- **The ImageCast X also offers options for voters with accessibility needs** – ranging from contrast and text size, to being able to toggle between languages during the voting session or listen to an audio ballot, as well as allowing for the use of personal assistive devices, such as a sip and puff.
- The **touchscreen interface** is user-friendly and intuitive for poll workers and voters, **improving the voting process and experience**.
- The ImageCast X prints a **verifiable choice summary ballot** that is scanned on the ImageCast Precinct or ImageCast Central.
- As with all other ImageCast products, the ImageCast X has been designed with a **high level of security that meets the latest EAC VVSG requirements** while maintaining ease of use.
- Similarly, as with all other ImageCast tabulators, **the ImageCast X benefits from Dominion's patented exclusive ballot-level audit trail, the AuditMark**, which not only creates a digital image of every ballot cast, but also appends to that image a record of how the voter's selections were interpreted by the voting system.

Fully integrated into the Democracy Suite platform, the ImageCast X takes advantage of commercially available technologies and is driven by a robust, secure and flexible application developed by Dominion. The use of compact, commercially available hardware makes the ImageCast X a cost-effective and versatile in-person voting solution. It requires less space to warehouse and is more affordable than larger proprietary solutions, while at the same time offering full ADA compliance.

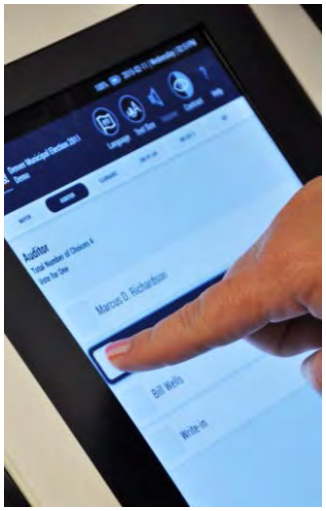
The ImageCast X has an intuitive touchscreen interface with various features for accessibility, and connects to a printer that prints the voter's ballot directly in the voting booth. Once the ballot is printed, the voter scans their ballot on the ImageCast Precinct, the same as all other voters.

Training for election poll workers is minimal and straightforward. When a voter checks in to vote, the poll worker will verify the voter's credentials and program a Smart Card using the Smart Card writer/reader. The Smart Card is used to activate a voting session on the ImageCast X and to present the voter with their correct ballot style. No information that can identify the voter is programmed on the Smart Card. Once the voter has printed their ballot, the Smart Card is inactivated and can be returned to be re-programmed for the next voter.

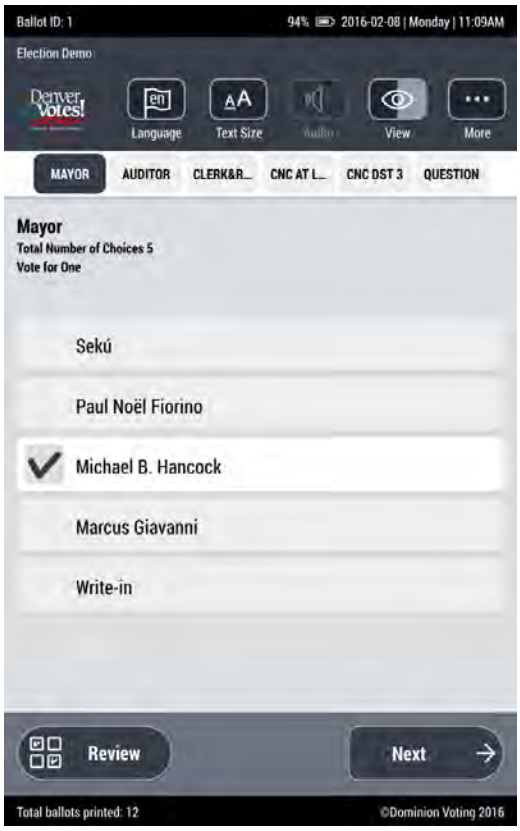
The ImageCast X is a universal voting device that is software-driven and leverages the flexibility of COTs technology



The voter will insert their Smart Card to activate the voting session on the ImageCast X. If available, the voter will be prompted to choose their preferred language for their voting session. The voter will automatically be presented with the first contest on the ballot. The voter will navigate the ballot contest-by-contest by touching the screen to select options, candidates, and text for write-in candidates. The voter can change or cancel their selection by deselecting their previous choice.



The ImageCast X features an intuitive touchscreen

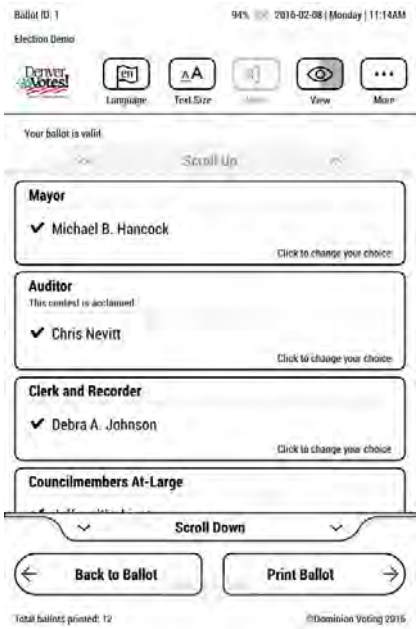


The ImageCast X features an intuitive touchscreen interface that the voter navigates contest by contest

The voter can also change the text size or contrast of the display. The View button allows the voter to change the display to high contrast white on black, or black on white. The text size button allows the voter to change the text size.

At any time, the voter can select the Review button to view their selections on their ballot. The ballot review will show all of the contests on the ballot, and give warning messages if there are any issues with the ballot, such as an undervote or blank contest. If the voter wishes to modify a contest, they simply touch that contest from the review screen and they will be taken directly to that contest page so that they can update their selection(s).

Once the voter has reviewed their ballot and has confirmed they are ready to print, the ImageCast X can print a verifiable choice summary ballot which contains a written summary of the voter's choices, as well as a 2D barcode which is read by the ImageCast Precinct. No voter selections are stored on the ImageCast X.



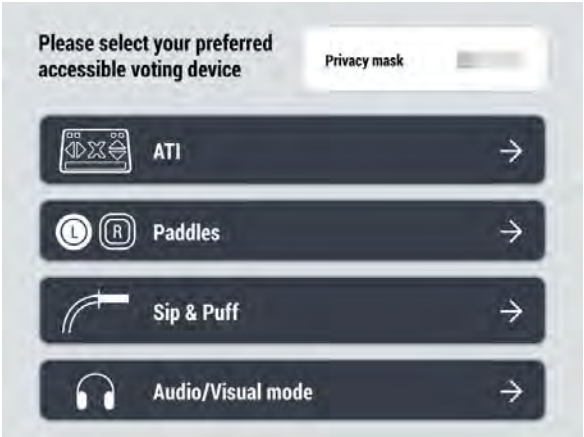
At any time the voter can change the text size or contrast of the display, as well as see a review of their ballot.

Accessibility

Designed as a voting solution for all, the ImageCast X also offers several options for voters with accessibility needs to vote in a private and independent manner. The ImageCast X offers the following user interfaces:

- Visual mode: Voter navigates their ballot using one of the available accessibility tools and the visual display
- Audio mode: Visual display can be disabled and the voter uses headphones to navigate an audio ballot using one of the available accessibility tools
- Visual & audio mode: Voter navigates their ballot using one of the available accessibility tools, the visual display, and the audio ballot

The ImageCast X pictured here with joystick and paddle button accessible voting devices.



The ImageCast X is compatible with a range of accessibility tools and can present the ballot in audio only, visual only or both audio/visual mode.

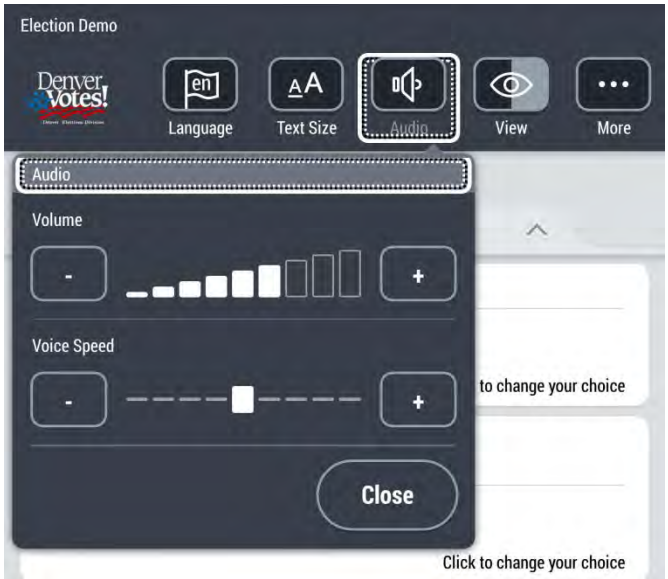
In addition to the touchscreen functionality, the ImageCast X is compatible with a range of accessibility tools that voters can use to navigate through the ballot and make their selections. The system is compatible with commercially available accessibility devices, such as a four-way joystick, as well as a hand-held controller called the Audio Tactile Interface (ATI), sip and puff device, or paddle device.

The Audio Tactile Interface (ATI) is the handheld device that is used by a voter during an Accessible Voting Session to navigate through and make selections to their ballot. The ATI:

- Has raised keys that are identifiable tactilely without activation (i.e. raised buttons of

different shapes and colors, large or Braille numbers and letters)

- Can be operated with one hand
- Includes a 3.5 mm headphone jack
- Includes a T-Coil coupling
- Has a T4 rating for interference
- Uses light pressure switches
- Can be equipped with a pneumatic switch, also known as a sip and puff device, or a set of paddles.

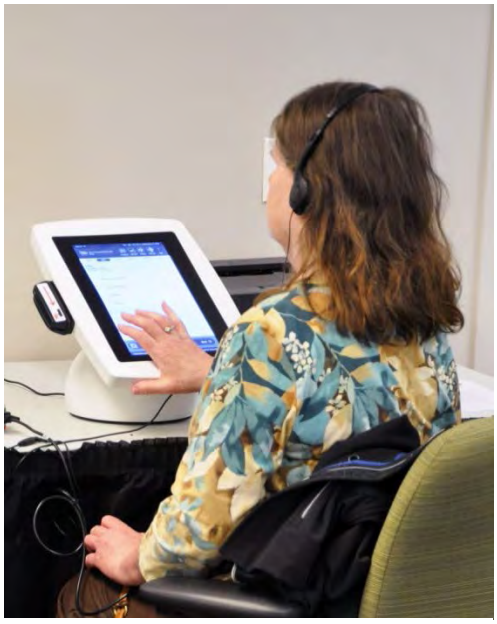


Voters can adjust the rate and volume of their audio ballot.

The ImageCast X can present the ballot in audio only, visual only, or both audio and visual modes, depending on personal preference. Voters can adjust the rate and volume of their audio ballot, as well as the text size and contrast of the display, or disable the display entirely for added privacy. Every voter configurable option is automatically reset to its default value with the initiation of each new voting session.

Voters are able to review, verify and correct their selections prior to printing their ballot, by audio and/or visual means. Voters are warned if they have missed, or undervoted a contest, and have the opportunity to go back and correct their selections. Once the ballot is printed, the voter scans their ballot on the ImageCast Precinct, the same as all other voters.

The ImageCast X was recently deployed in the State of Colorado as part of their Uniform Voting System initiative, where it received the highest usability ranking by in-person voters with disabilities. The ImageCast X features the latest technological advances in accessible voting technology, providing more options for voters with accessibility needs to vote privately and independently.



The ImageCast X features many options for voters with disabilities.

ImageCast Central – Scalable & Efficient High Speed Scanning

- Dominion's ImageCast Central tabulation system was **designed with efficiency in mind**. Most central count solutions that exist in the market today are large, expensive, proprietary solutions that are not scalable, efficient or easy to use or maintain.
- The ImageCast Central makes use of industry-leading **commercial-off-the-shelf (COTS) hardware** to decrease capital costs and minimize risk of hardware failure. So no matter the size of the county, adding multiple COTS scanners increases efficiency without breaking the bank.
- The ImageCast Central is **engineered for operational simplicity**. Step 1- The user loads a batch of ballots and presses 'scan' – Simple! Step 2 – When the batch scan is complete, the user presses 'accept' – Easy! The ImageCast Central continues scanning ballots until there are none left.

Dominion's ImageCast Central, like all of our ImageCast products, stores the ballot image with the secure AuditMark**. The system's flexibility allows the jurisdiction to customize out-stacking conditions, such as overvotes, undervotes, marginal marks, and certified write-in contests. The ImageCast Central has all the tools election officials are looking for to make their central count process easy and more efficient.**

With the ImageCast Central count solution, Dominion focused its efforts on how to create efficiency using lower cost, off-the-shelf scanners which meet the VVSG 2005 standards, and software that streamlines the process. Dominion has included two scanner options in this proposal, the Canon DR-G1130 and the smaller scale Canon DR-M160II.

The software is intuitive and requires minimal training for users. It is **simple** - the operator loads the batch into the scanner; presses scan. When complete, the operator presses the accept button and moves on to the next batch. The operator does nothing but process the ballots. The system's intelligence does the rest. Along with the requisite COTS hardware, the ImageCast Central provides ample flexibility to meet the needs of small, medium and large jurisdictions. ImageCast Central allows jurisdictions to consolidate results in an efficient environment, in real time.

Jurisdictions can add ImageCast Central units to maintain efficiency while remaining cost-effective.

This use of less expensive and compact third-party devices enables the ImageCast Central count solution to offer higher sustained throughputs in the face of hardware failures, flexible site layouts when space is at a premium, and access to a vast pool of readily available replacement parts and certified technicians. All of these factors translate to improved maintainability, and lower cost of ownership.

Central scanning is typically used to process absentee or mail-in ballots. The election definition is taken from EMS, using the same database that is utilized to program any precinct scanners for a given election. Multiple ImageCast Central scanners can be programmed for use in an election. The ImageCast Central application is installed and later initialized on a computer attached to the central count scanner. Ballots are processed through the central scanner(s) in batches based on jurisdictional preferences and requirements.

The ImageCast Central stores ballot images by scanned batches. The scanned ballot images are migrated to the Election Management System through computer networking or removable media. As with results data from

any precinct scanners in use for an election, Results Tally and Reporting is the portion of EMS that processes the images to provide tabulation and operational reports to the jurisdiction.

Batches can be appended, deleted, and processed in a number of ways to suit typical election workflows, intake of ballots before, during, and after Election Day, jurisdictional requirements surrounding absentee ballot tabulation, and canvassing needs. The ImageCast Central also features all of the technological advances present in the precinct-level tabulators – the AuditMark and the Dual Threshold technology.

ImageCast Central Reports

Sample ImageCast Central reports can be found in Appendix 2d – Sample ImageCast Central Reports.

ImageCast Central Sample Preventative Maintenance Checklist

ElectionSource

ImageCast Central Count
Maintenance Checklist
Version 2.1

Serial:
Date: 8/13/2015 Tech:

Step #	Description	Expected Results	Pass	Fail	Comments
		Inspection Stage			
1	Inspect ICC	No scratches, dents or cracks			
2		ICC has all labels/ no extra			
3		USB Cable Type A to Type B present			
4		Approved AC/DC Power adapter present			
5		Laptop with current ImageCast Central			
6		ibutton Reader/Writer			
		Power Up			
7	System Power Up	Connect USB cable to scanner/laptop			
8		Connect ibutton reader to laptop			
9		Connect AC adapter to scanner			
10		Connect AC adapter to laptop			
11		Power Up Scanner before laptop			
12		Power on laptop			
13		Insert FN ibutton			
14		Connect AC adapter to scanner			
15		Connect AC adapter to laptop			
16		Power Up scanner before laptop			
17		Power on laptop			
18		Insert FN ibutton			
19		Open Image Cast Central Software			
		Cleaning			
20	ICC Cleaning	Clean scanner exterior			
21		Clean Document Feed Inlet			
22		Clean Transport Path			
23		Clean Sensors Top and Bottom			
24		Open Upper Unit, clean scanning glass			
25		Remove pickup, feed, and retard rollers			
26		Clean pad on retard roller cover			
27		Clean rollers and re-install			
28		Close scanner			
		Election Project Testing			
29	Scanning	Load Famous Names Election			
30		Load FN ICC Test Deck			
31		Navigate to **CONFIGURATION**			
32		Hit **Scan options**			
33		Deselect all Stop Scan on options			
34		Select **Continuous Scan**			
35		Select **Only one scan per batch**, hit **OK**			
36		Return to **SCANNING** hit **SCAN**			
37		After scanning hit **ACCEPT BATCH**			
38		Navigate to FN Election Folder			
39		Verify images are clear and accurate			
40		Navigate to CONFIGURATION			
41		Hit CLOSE TABULATOR, click OK			
42		Navigate to STATUS			
43		Click SHOW RESULTS			
44		Verify totals			
45		Shutdown software, scanner, then Laptop			

Please list any required follow-up:

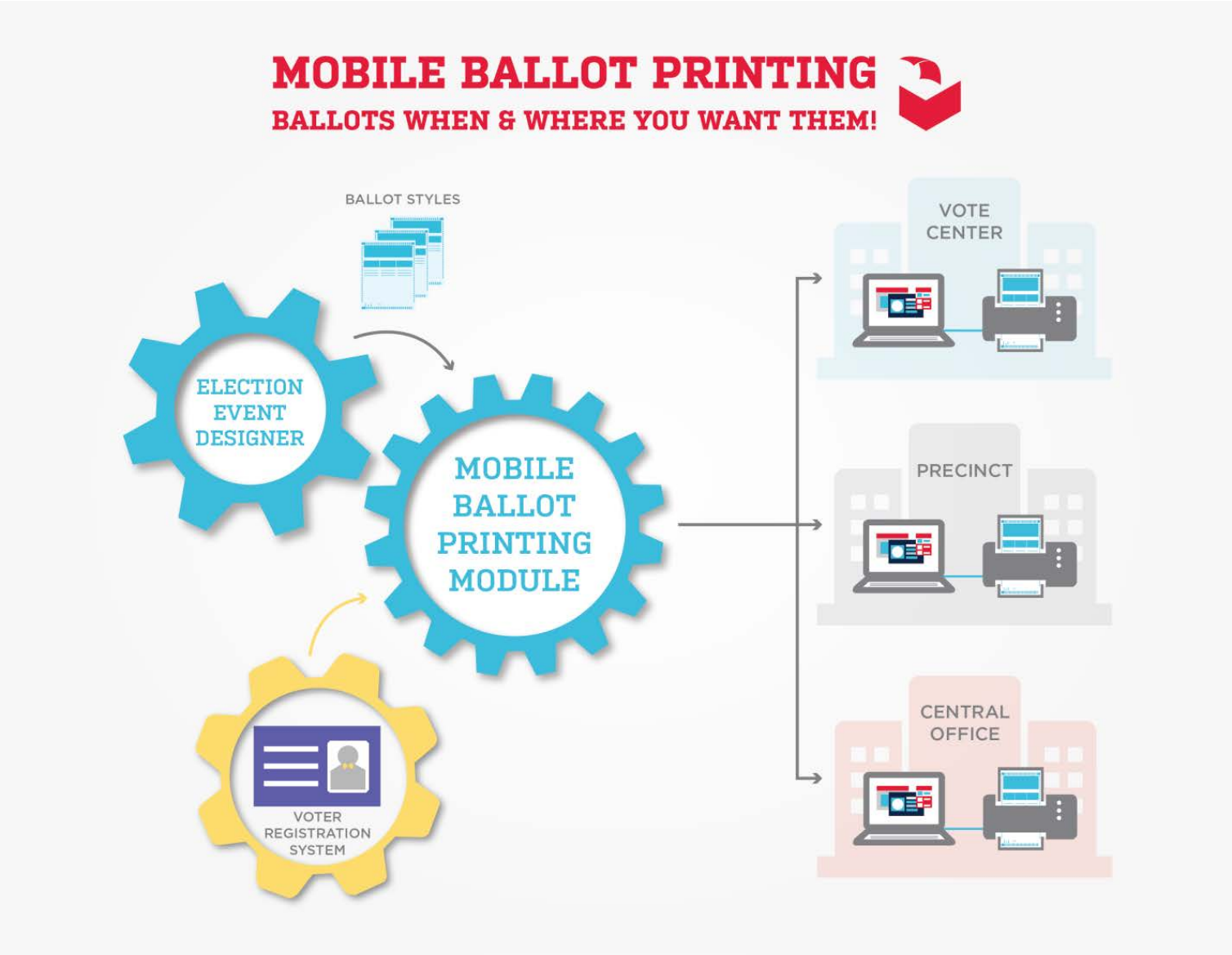
Tech: 0 Signature of Clerk/Auditor

FM-201ICC Version 2.1 Property of ElectionSource All Rights Reserved ElectionSource www.ElectionSource.com 1-888-742-6037

Mobile Ballot Printing Module

Highlights

- **Simple**: No unnecessary complexity – simple interface and voter registration integration makes it easy for election staff to quickly print the correct ballot style for each voter.
- **Secure**: Strong auditability features ensure security and transparency.
- **Flexible**: The Mobile Ballot Printing module is hardware "agnostic," giving you the flexibility to use your existing print hardware or leverage other commercially available off-the-shelf (COTS) printers.
- **Efficient**: Save on additional printing and storage costs associated with having to provide multiple ballot styles to every "Vote Anywhere" location.
- The Mobile Ballot Printing Module allows you to easily print ballots for any election whenever and wherever needed – at the central office, at the precinct, or other remote locations. The system is fully integrated with Democracy Suite.
- The system is portable and simple to set up in any location. Since the system is hardware "agnostic," the jurisdiction has the flexibility to use their existing print hardware, or leverage other commercially available off-the-shelf printers that print high-quality paper ballots. Not all systems can offer this flexibility in printer choice.
- The user-friendly interface, along with integration with a variety of voter registration systems, makes it easy for election staff to quickly print the correct ballot style for each voter. The Mobile Ballot Printing module simplifies ballot management and logistics – you no longer need to worry about stacks of different ballot styles in the precinct and about estimating the correct number of ballots to print.


MOBILE BALLOT PRINTING
BALLOTS WHEN & WHERE YOU WANT THEM!
BALLOT STYLES
ELECTION EVENT DESIGNER
MOBILE BALLOT PRINTING MODULE
VOTER REGISTRATION SYSTEM
VOTE CENTER
PRECINCT
CENTRAL OFFICE

Results Accumulation

There are several methods to upload or transmit encrypted vote totals from the precinct tabulators and/or AVCBs to the Elections Office.

Method 1 – Returning memory cards from each tabulator to the Elections Office

Using this method, after the poll worker closes the polls, the memory cards with the encrypted vote totals are removed from their slots in the ImageCast Precinct units, and are returned to the Elections Office for manual upload to the Results Tally and Reporting module.

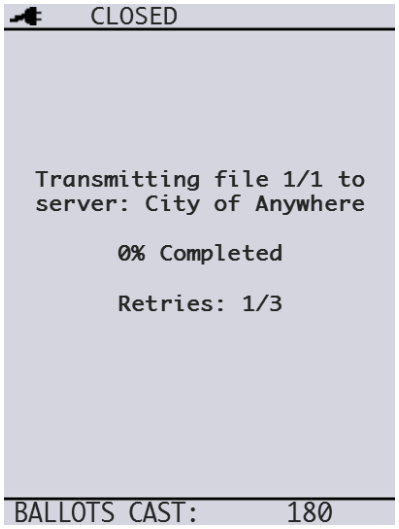
Method 2 – Dial-up and Cellular Modem transmission

The ImageCast Precinct tabulators can be deployed with remote transmission options to transfer encrypted results files from the precinct (if used as Election Day tabulators) or hub (if used as AVCBs) to the Elections Office. This can be done by landline modem, or by wireless cellular modem.

ImageCast Precinct: The ImageCast Precinct tabulators are equipped with internal dial-up modems, and can also transmit results via an external cellular modem.

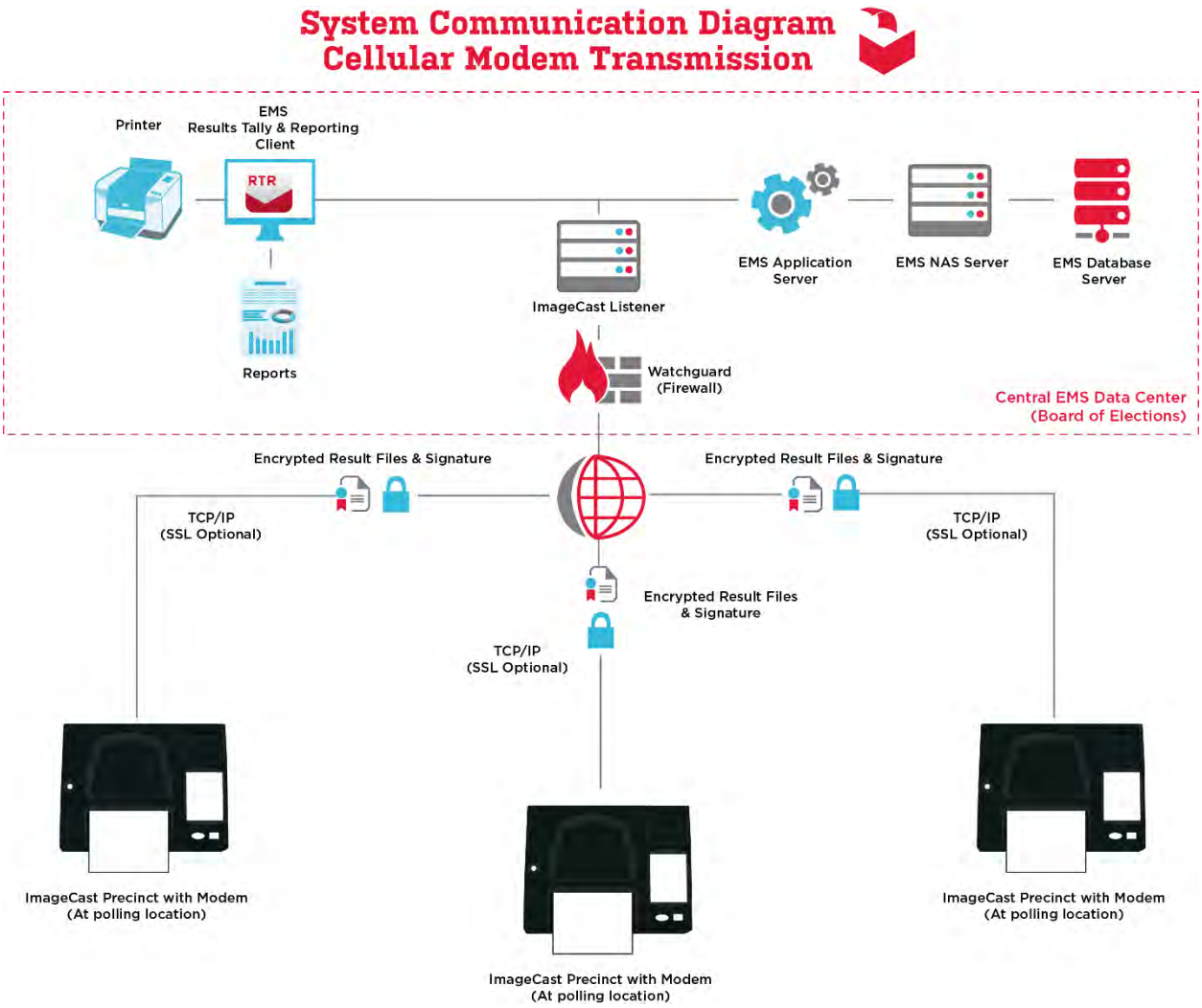
Transmission of results via modem is a very intuitive process, involving minimal input from a poll worker. After the polls have been closed, the poll worker has the option to select “Results Transfer” from the Main menu. The results transfer settings, which contain precinct-specific network data pre-configured from the EMS System, will appear. To upload the results to the ImageCast Listener server, the poll worker presses “Start” within the Results Transfer option.

The modem must be plugged into the unit in order to begin results transmission. The intuitive user interface on the tabulator informs the poll worker of the status of the upload and when it is completed, as seen on the screenshots below.



ImageCast Precinct – Modem transfer interface examples

ImageCast Listener



The ImageCast Listener module is responsible for receiving and tracking encrypted results file transmissions from any ImageCast Election Day tabulator.

Unlike traditional results transmission using FTP/SFTP, the ImageCast Listener uses a secure and proprietary protocol for establishing an authenticated connection with the ImageCast tabulators. The ImageCast Listener verifies the signature of the results file upon receipt and immediately informs election officials whether the file is valid or if any suspicious activity is detected. Results files are encrypted using AES-128 or AES-256. They are signed with SHA-256.

If the ImageCast Listener recognizes the transmitted files as valid, they are automatically made available for loading into the Results Tally & Reporting module in the main Election Management System server.

As mentioned above, ImageCast tabulators at the voting location will receive confirmation from the server that the results transmission was successful, or in rare cases, prompt the poll worker to retry the transmission. At the Elections office, election officials can view the upload status of all ImageCast tabulators deployed in the field from a single intuitive dashboard.

The ImageCast Listener service resides on an independent server from the main EMS server, and is protected by a dedicated firewall appliance. The firewall's client software includes a suite of monitoring tools for traceability of all external network traffic, including source and destination IP addresses. The ImageCast Listener's audit log also records all transmission activity, allowing for full auditability for a given election.

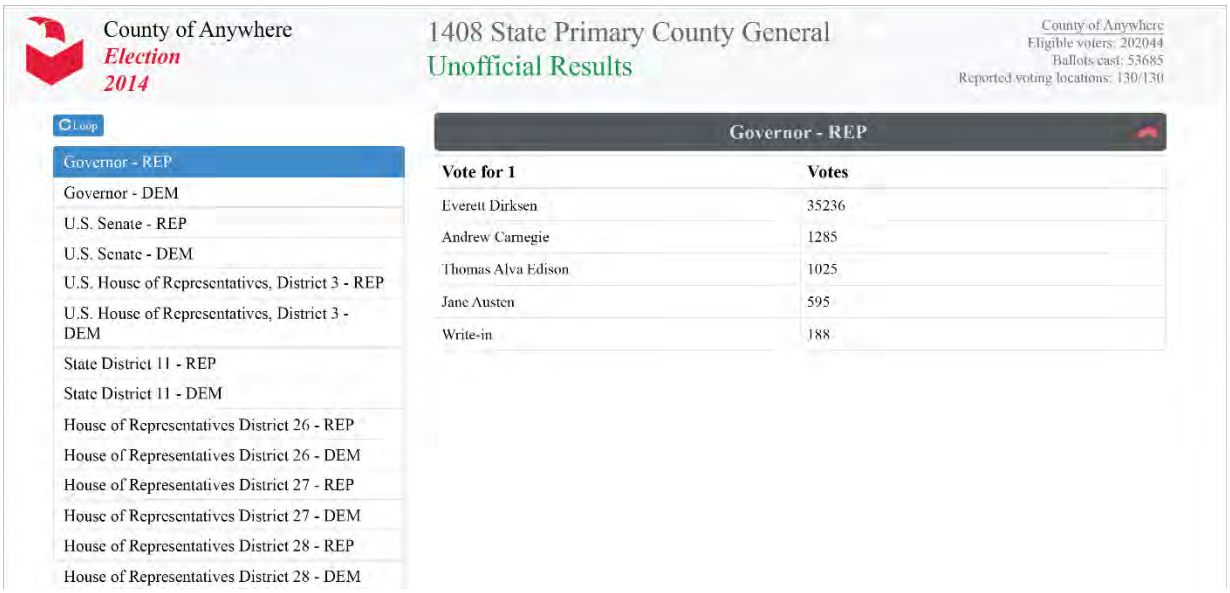
Method 3 – Results Transfer Manager

Similarly to Method 1, memory cards with the encrypted vote totals are removed from their slots in the units and brought to a local hub. At the hub, the memory cards are inserted into a card reader connected to an Results Transfer Manager client laptop with a secure Internet connection. The Results Transfer Manager will automatically upload the encrypted results files, and transmit them to the ImageCast Listener server, in a manner similar to results sent via modem. Once the files are received, they are available for loading into the Results Tally & Reporting module of the EMS system.

Election Night Reporting

As an optional additional feature, Dominion offers enhanced Election Night Reporting tools to create an Internet-based graphical display of results, which provides an attractive and dynamic focus on election night. Our cross-platform (mobile-friendly) results display based in HTML5 is our standard and most popular configuration. The report display runs in real-time on the Internet, updating as results are released from the results tally module by officials. It can be projected on public display screens, such as County Offices, fed to local television stations, and displayed on the county or state's website. Dominion has different report layouts available, and can configure the display with the jurisdiction's logos and colors.

The Internet-based graphical display is completely automated and runs behind the scenes. Once election officials have released a set of results, XML files are created and transferred to a local FTP directory (or via an external memory device), and the graphical display is automatically updated. This XML file is in an internationally defined election format called EML (Election Markup Language). As such, the election results are transferred in a format that can be easily read by news media, if they wish to import the XML files into their own display program (or they can simply use your Dominion graphical report for broadcast).



Example of the Election Night Reporting module web display

Electronic Ballot Delivery – Dominion's ImageCast Remote (UOCAVA)

Dominion's ImageCast Remote UOCAVA system offers a secure and efficient means for overseas and military voters to receive, mark, print and return their ballot to their local elections office. The ImageCast Remote UOCAVA system ensures the security and transparency of the balloting process while preserving the privacy of UOCAVA voters.

Fully integrated and supported by Democracy Suite, the ImageCast Remote UOCAVA system allows election officials to conduct a seamless election, without the need for a separate database or election project. Ballots returned by UOCAVA voters can be processed on ImageCast Central, **eliminating the need to duplicate ballots or process UOCAVA ballots on a separate system**.

System Security Overview

Dominion implements security protocols that meet or exceed EAC VVSG 2005 requirements. All of Dominion's security protocols are designed and implemented to stay current with the rapidly evolving EAC security requirements set forth by various iterations of the VVSG.

Dominion's security technology is unprecedented insofar as it takes into account every aspect and every component of the Democracy Suite platform. This includes – but is not limited to – the full encryption of election projects, iButton security keys, Compact flash cards, election data, software applications, elections results files, and data transmission. In addition, Dominion developed a custom ballot authentication system built around an (optional) secure ballot paper stock and in-tabulator authenticators.

Maintaining Data Integrity

Data generated by the Democracy Suite platform is protected by the deployment of FIPS-approved symmetric AES and asymmetric RSA encryption. The Democracy Suite Election Management System uses these techniques to encrypt election files prior to their use on ImageCast tabulators. Once the polls have been closed, the ImageCast tabulators encrypt all of the results files prior to transmitting them back to EMS.

SHA-256 hashes are used for all data integrity and verification. Should an intrusive process or altering of any file occur, hash values will be, in turn, altered as well. With that said, any presence of an intrusive process will be detected, as the hashes of any altered data will not match the value initially determined.

EMS Security

To protect any modification of software by malicious users, the Democracy Suite Election Management System integrates the Microsoft .NET Framework code signing process, within which, Dominion Voting digitally signs every executable and library (DLL) during the software build procedure. After the installation of Election Management software, only successfully verified EMS software components will be available for use. Digital signature verification is performed by the .NET Framework runtime binaries. If a malicious user tries to replace or modify any EMS executables or library files, the digital signature verification will fail and the user will not be able to start the EMS application.

Role-based Access Controls

Democracy Suite integrates a role-based access control system for all software and hardware components. Each user accessing the system is the member of one of the predefined or custom-made roles. Each role has its own set of permissions, or actions that users of that role are allowed to perform. This access control approach provides authentication and authorization services and can be granular according to the jurisdiction's needs and organization. Complete user and role membership management is integrated within the Democracy Suite EMS Election Event Designer client module.

The Democracy Suite EMS platform implements role-based user management for provisioning access control mechanisms on each election project. Managing access control policies is integrated within the User Management activity of the EMS EED module. This activity is permitted only for users with administrative privileges.

Hardware Access Controls

Democracy Suite utilizes hardware-based security tokens (iButton security keys) in the process of access control for ImageCast Precinct tabulators. These password paired hardware tokens contain data encryption information used in the voting process (encryption and signing keys). Without a valid security token, and paired access password, the administrative functions of election tabulators are effectively locked.

The poll worker applies his/her iButton security key to the tabulator

Communications

For communication channels (as well as data storage) a combination of security techniques for data integrity, authenticity and confidentiality is implemented. Democracy Suite integrates AES or RSA encryption algorithms for data confidentiality, along with SHA-256 and HMAC digital signatures for data signing (data authenticity and integrity). The system does not require external Internet connections.

Effective Password Management

Proper password management requires multiple activities and controls, namely:

- Input data validation
- Data quality
- Utilization of one-way (hash) cryptography
- Computer generated passwords for greater entropy and protection from dictionary attacks
- Different password strength profiles for different user levels
- Utilization of hardware tokens for storing user credentials (two-level authentication security: something you know and something you have)
- User state machine (initial, active, inactive)

All of these activities and controls are integrated within the Democracy Suite platform.

Dominion utilizes authentication and authorization protocols that meet EAC VVSG 2005 standards. In addition, Dominion's solution relies on industry-standard security features to ensure that the correct users based on a user role or group are granted the correct privileges. Finally, each jurisdiction is responsible for ensuring that only authorized personnel have access to both the system and tools used for installation and configuration purposes. All back end system, and tabulator operations are continuously and completely logged at all times to maintain a complete record of all election-related processes.

		Mode 1- Symmetric Crypto	
File Type	**Storage Place**	**Confidentiality**	**Integrity**
Election files (ICP) and election database (ICE), DCF (ICP) and MBS (ICE), result files (ICP/ICE)	NAS and Compact Flash	AES-128/256	HMAC (SHA-256)
Reports and Logs	NAS and Compact Flash	AES-128/256	HMAC (SHA-256)
Ballot Images	NAS and Compact Flash	-	HMAC (SHA-256)
Ballot Layout Definition (XML)	NAS and Compact Flash	-	HMAC (SHA-256)
Official Ballots	NAS	X.509 Digital Certificate	
User Credentials	iButton	HMAC (SHA-256)	HMAC (SHA-256)

File Type to Security Algorithmic Mappings

EMS Audit Log

From the initial state of the election project, until the deactivation state, the EMS system maintains an activity log within the EMS Database. This activity log contains every action that any of the users have performed within the system and represents a detailed audit log that can be analyzed and printed in the form of an audit report. The audit record information cannot be modified or permanently deleted using the EMS client applications. It can, however, be exported for archiving purposes as part of the record retention policy. Keeping in mind that audit log information can contain a significant amount of information, it is the responsibility of the administrative user to perform regular archiving of the log.

During the voting phase of the election event, ImageCast devices also keep an activity audit log which tracks events happening on the device itself.

Tabulator Security

Electronic Safeguards and Security

To access any of the administration functions of the ImageCast tabulators, an electronic iButton security key has to make contact with the iButton security key receptacle on the cover of the unit.

Access to the unit can be granted to two different levels of people:

- The poll worker iButton security key is used by the poll worker to access all poll worker functions.
- The Technician iButton security key is used by a Technician with authorized access to update and verify firmware.

In the power on sequence, the unit will not function until the poll official accesses the administrator access screen. The ImageCast tabulators are unlocked by an iButton security key, which is used to:

- Authenticate the software version (ensuring it is a certified version that has not been tampered with)
- Decrypt election files while processing ballots during the election
- Encrypt results files during the election
- Provide access control to the unit

It is anticipated that the iButton security keys may get lost; therefore, any substitute key created for the same tabulator will allow the unit to work fully.

A valid poll worker iButton security key will grant access to the admin screen from which the following operational functions can be accessed:

- Diagnostics Test
- Provisional Voting/Ballot Test
- Opening Poll
- Accessible Voting
- Closing Poll
- Reports
- Election Statistics
- Re-Open Poll
- Re-Zero Poll
- Power Down
- Ballot Review

Internal Battery

In the event of a power failure, ImageCast tabulator units have an internal Lithium Ion rechargeable battery with a two-hour life.

In the case of a power failure, including full power drain, restarting places the unit in “Interrupt” mode, in which the previously stored election data is reloaded when the unit resumes operation. If there is catastrophic electrical or mechanical damage, the memory cards are inserted into a spare unit. When powered on, the unit resumes operation using the previously stored election data.

Results Storage Media

The ImageCast tabulators have sockets for two removable, non-volatile Compact Flash cards (Primary and Administration), both of which are accessible from the unit and stored behind sealable doors. The content of each card is encrypted and signed.

The system saves election and voting data simultaneously to both locations, keeping the content of both memory cards in sync. The administrative memory card holds a copy of the election results and audit log from the primary card. The memory cards will retain data for over twenty-two months, as per EAC VVSG 2005 Volume I requirements.

		Memory Card Size		
Ballot Size (Single-sided)	Approx. Ballot Image Size (KB)	4GB	8GB	16GB
8.5” x 11”	250	14000	30000	62000
8.5” x 14”	277	12600	27000	55800
8.5” x 17”	312	11200	24000	49600
8.5” x 20”	334	10500	22400	46400
8.5” x 22”	357	9800	21000	43400
Ballot Size (Double-sided)				
8.5” x 11”	357	9800	21000	43400
8.5” x 14”	454	7700	16500	34100
8.5” x 17”	499	7000	15000	31100
8.5” x 20”	555	6300	13500	27900
8.5” x 22”	624	5600	12000	24800

ImageCast tabulators memory media capacity

Media Storage Security

The entire set of data files supporting the election are contained on the Primary Compact Flash device. The files stored on these cards allow for recovery from external conditions that cause equipment to become inoperable. The election results, device logs and scanned ballot images are recoverable from the secondary memory card. Further, the AuditMark functionality can be used to independently verify the total votes for any particular candidate or ballot issue.

Tabulator Audit Trail

The tabulator Audit trail file is stored on the Compact Flash memory card, and contains a chronological list of all messages generated by tabulator software. All audit record entries include a time-and-date stamp. This file is encrypted and digitally signed to protect its integrity.

During the final results tally audit activity, the automated audit log of each optical scanner is input into the EMS Results Tally and Reporting system for a consolidated record.

This tabulator Audit trail file will include:

- System startup messages (recorded by Application Loader).
- System self-diagnostic messages (module initializations, security verifications).
- All administrator operations (messages include “security key” id names).
- All ballots cast, rejected and diverted.
- All voter notifications (undervotes, overvotes).
- All system errors (paper jams, power failures, hardware failures, data errors, etc.).
- Source and disposition of system interrupts resulting in entry into exception handling routines.
- All messages generated by exception handlers.
- Notification of system login or access errors, file access errors, and physical violations of security as they occur, and a summary record of these events after processing.
- Non-critical status messages that are generated by the machine's data quality monitor or by software and hardware condition monitors.

All audit logs are digitally signed. If there is tampering of the audit data or logs, this is detected by the operating unit. The unit reports ‘Election file mismatch’ and will not operate since modifying the audit files can only indicate malicious usage.

Every action, event, and operation that occurs on ImageCast tabulators is permanently logged to an audit log file that exists on both memory cards. Every event and operation that occurs on the election management system is kept on the election project audit within the EMS Database. This file is signed and encrypted.

Audit logs are available to operators at all times. On the optical scanners, these can be accessed from the Administration menu, and printed. In EMS, a directory of audit files is accessed in the graphical user interface, and can be printed. Operators with Administration privileges can access these files at any time.

Audit log records cannot be deleted nor modified. Users with proper authorization levels can generate and view the audit report. Audit reports cannot be deleted.

Exhibit 5 to Schedule A

Sample Ballots and Reports

See separate document (26 pgs.)

Exhibit 6 to Schedule A
Michigan QVF Export File Format

See separate document (83 pgs.)

Exhibit 7 to Schedule A
Results Transmission Overview

Refer to ***Exhibit 2 to Schedule A, 1.1-1.4, Technical Requirements:*** *1.2A.25, 1.2D.1 and 1.3.B.1. The following provides a detailed description of the recommended infrastructure necessary for a county to design and implement a LAN, modem based, or cellular transmission network for uploading unofficial results on election night.*

Precinct and RTM Transmission with ImageCast Listener

The ImageCast Listener is an add-on component to the base EMS system—it is designed as a turnkey solution for jurisdictions to implement results transmission from their precinct tabulators and/or RTM client laptops. The system supports wireless cellular/internet-based transmission, analog dial-up modem transmission, or both, providing flexible options to meet a jurisdiction's particular requirements and preferences. The jurisdiction is responsible for providing external access to the back-end receiving infrastructure.

The base ImageCast Listener system consists of two pieces of hardware: the ImageCast Listener (ICL) server and a firewall appliance (WatchGuard Technologies Firebox M200 or XTM 25). When dial-up transmission is used, an additional Remote Access Server (RAS) is required. The RAS server uses analog USB modems, connected to the server via a powered USB 3.0 hub.

In addition to the base EMS system, the required components for the **ImageCast Listener** system, using wireless/internet transmission are:

- ImageCast Listener Server (Dell PowerEdge R330 recommended)
- WatchGuard Technologies *Firebox M200* or *XTM 25* firewall appliance
- 2 x CAT5e or CAT6 Ethernet cables
- 1 x external wireless modem (eDevices CellGo) per precinct (multiple tabulators in a precinct can share the same modem if transmission is performed serially, rather than simultaneously).

When dial-up transmission is used, the **RAS server** component is required in addition to the components listed above:

- Remote Access Server (Dell PowerEdge R330 recommended)
- Powered 10-port USB 3.0 hub
- USB analog dial-up modems (up to 10)
- 1 x CAT5e or CAT6 Ethernet cable

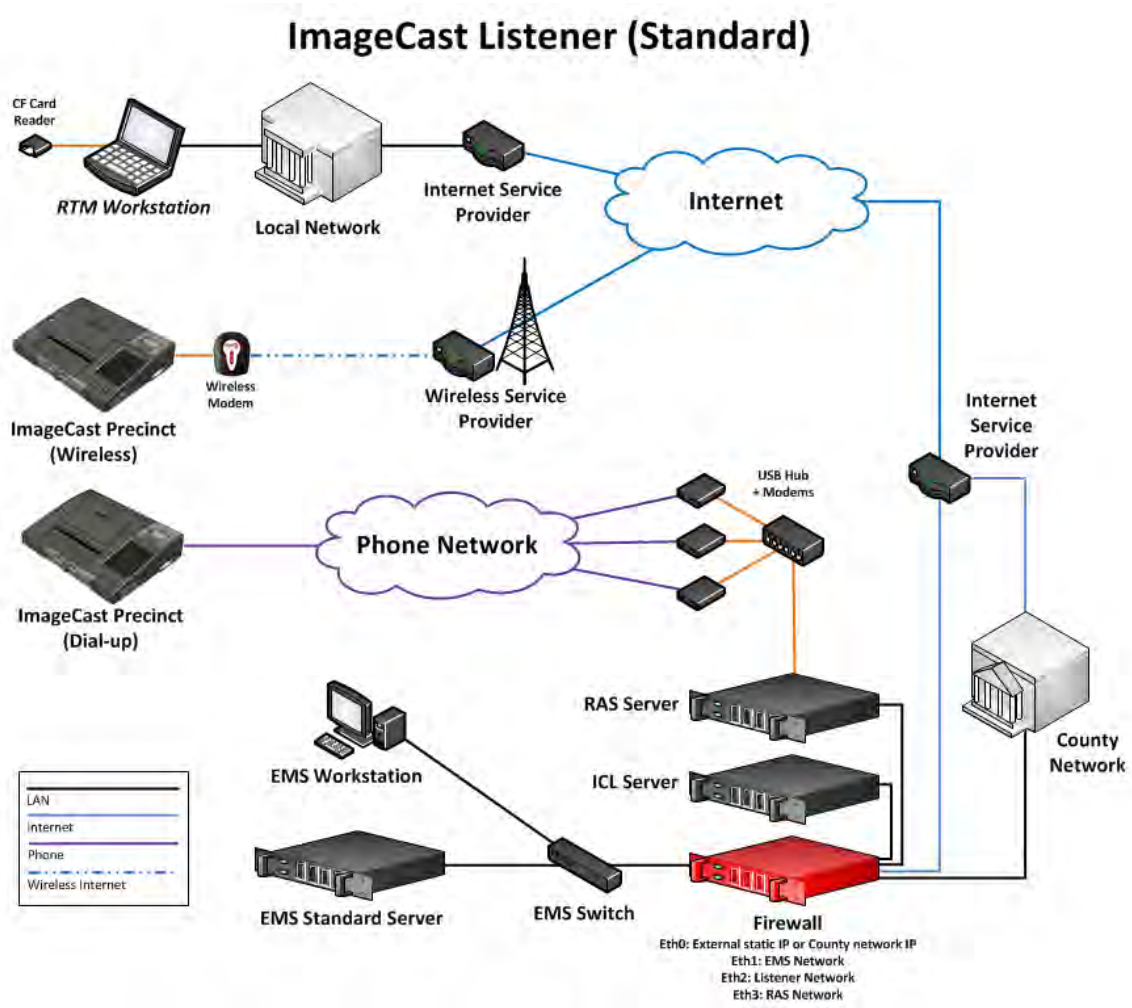
Note: analog modems on the transmitting end are built into the ImageCast Precinct tabulator.

The **EMS Results Transfer Manager (RTM)** application requires the following components:

- Laptop (with internet access)
- Compact Flash (CF) card reader/writer

Complete instructions for installing and configuring the ImageCast Listener and RAS servers can be found in the system installation documents (*2.08 ImageCast Listener System Operation Procedures*, *RAS Installation and Configuration Procedure* and *EMS RTM User's Guide*).

Note: these documents currently describe the configuration steps using screenshots from Microsoft Windows Server 2008 R2 Standard, however the 5.0-S system uses Microsoft Windows Server 2012 R2 Standard. The configuration steps are the same on both platforms.



For wireless/internet-based results transmission, a static external IP address at the jurisdiction's central office is required. Dominion recommends that jurisdictions use a dedicated external internet connection for this purpose, however jurisdictions may choose to route the TCP/IP traffic from their existing firewall, through their internal network to the ImageCast Listener firewall. Note that the diagram above illustrates both modes of external internet access, although only one is required.

Note also that the diagram depicts the EMS Standard configuration. The EMS Express configuration substitutes the EMS Standard Server and EMS Workstation with a single EMS Express Server machine (running both server and client applications), and the WatchGuard Firebox M200 with the WatchGuard XTM 25. All other aspects of the system are identical to the EMS Standard configuration.
On the transmitting/sending end, precinct tabulators require an external wireless modem and an active GSM SIM card with cellular data services enabled (CDMA-based cellular networks are not supported at this time). RTM clients run on a laptop that requires an internet connection.

For dial-up results transmission, the jurisdiction is required to provide a bank of analog telephone lines that connect to the Remote Access Server's (RAS) analog modems. The analog dial-up transmission system does not support digital telephone lines. These lines should be configured in a "hunt group" allowing a single telephone number to be dialed from the precinct, with the call rolling over to the next available modem if the primary line is busy. This configuration minimizes the chance of the tabulator receiving a busy signal and needing to re-dial.

On the transmitting/sending end, precinct tabulators require an analog telephone line at the voting location, which is connected to the tabulator's internal dial-up modem.

Dominion recommends that jurisdictions perform a wireless test at each potential voting location to ensure that adequate wireless signal is available. Analog phone lines at both the transmitting and receiving end should also be tested prior to each election to ensure they are functioning correctly.

EMS Results Transfer Manager (RTM)

The EMS Results Transfer Manager application resides on a standalone, internet- or LAN-connected laptop. The following steps are performed to transmit results securely to the central location:

1. Jurisdictions remove the primary or backup Compact Flash memory card from the ImageCast Precinct tabulators and transport them to a regional office.
2. The RTM application allows jurisdictions to rapidly load the ICP results files from the Compact Flash cards to the laptop using a CF card reader.
3. All loaded results files are securely transmitted to the ImageCast Listener or to a local or shared network folder (see the following section for more details).

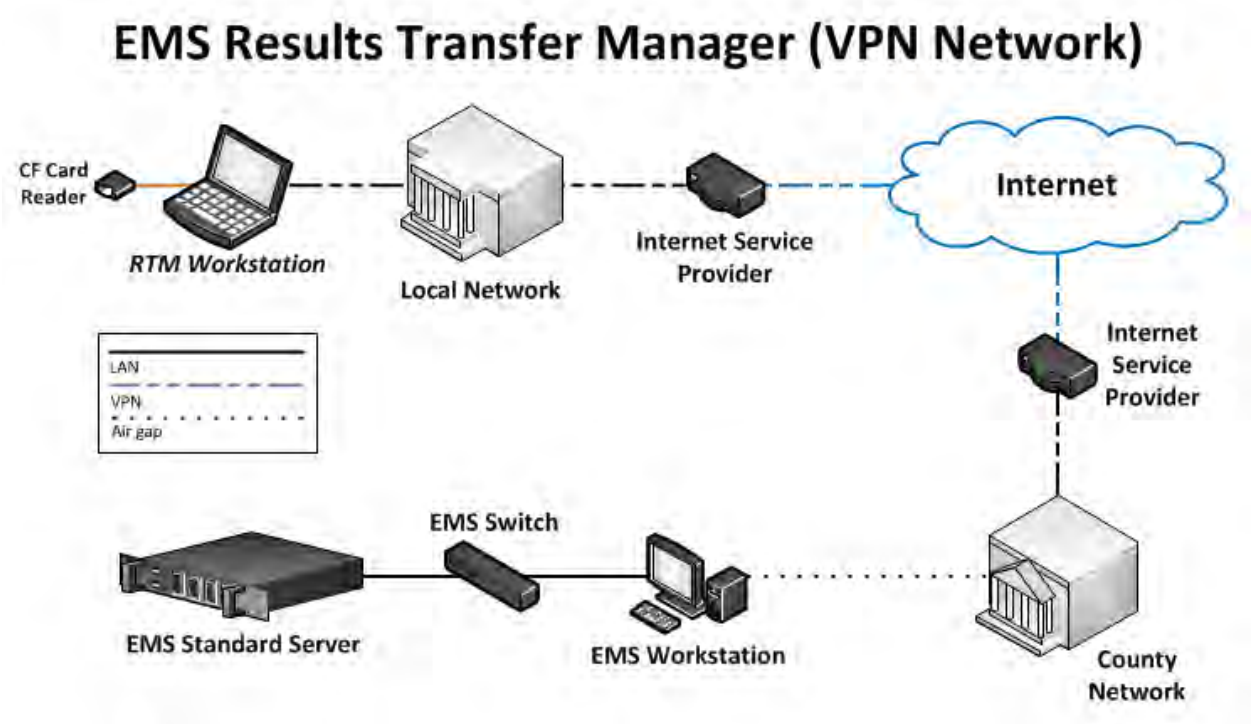
Note that the application also supports non-secure FTP transmission. Because the transmission channel is not encrypted, this functionality is not suitable for use in jurisdictions in the United States. Only secure TCP/IP transmission to the ImageCast Listener service, or shared folder transmission over secure VPN is permitted.

When RTM is used to transmit results to the ImageCast Listener, the ImageCast Listener Dashboard tracks the progress of received results files, in the same way as when results are transmitted directly from the ImageCast Precinct at the polling place.

Please see the *EMS Results Transfer Manager User's Guide* for detailed installation and use procedures.

EMS Results Transfer Manager With VPN Network

A purely LAN-based solution can be implemented using the RTM application, which allows jurisdictions to load results from ImageCast Precinct memory cards at a regional office and send those results to a local folder or a shared network folder within a secure Virtual Private Network (VPN). This solution does not require the ImageCast Listener on the receiving end. Received results files are manually copied from the shared folder on the jurisdiction's secure network to the EMS Workstation machine using a removable medium, and loaded into the EMS Results Tally and Reporting application.



It is entirely the jurisdiction's responsibility to set up the required infrastructure for linking remote locations in a wide-area network (for example, creating secure VPN tunnels between offices). Dominion can work with IT departments to plan these solutions, but due to the variability of the networking and firewall equipment used by different jurisdictions, cannot take responsibility for directly configuring or maintaining the jurisdiction's VPN infrastructure.

When RTM is used to transmit results to a shared network folder, without the ImageCast Listener, the Dashboard is not available. Progress of results files can be tracked in EMS Results Tally and Reporting as they are loaded into the system.

Exhibit 8 to Schedule A
Dominion Voting System ImageCast Printing Brief
Version: 4.19::27
April 23, 2015

Contents

1 Introduction **i**

1

1.1 Purpose and Scope 1
1.2 Patent Status 1

2 ImageCast Ballot Printing and Finishing Specification **2**
2.1 The Need for Printer Training and Certification 2
2.2 Dominion's Printer Certification Program 2
2.3 ImageCast Ballot Artwork Source Files 3
2.4 Approved Ballot Paper Stocks 3
2.5 ImageCast Ballot Printing Methods 4
2.6 ImageCast Ballot Printing Specifications 4
2.6.1 Common Specifications for all ImageCast ballot Production 4
2.6.2 Image Reproduction 6
2.6.3 Ballot Card 6
2.6.4 Other Defects 6
2.7 Scoring and Folding Ballots 7
2.8 Ballot Stubs - Perforations, Numbering and Padding 7
2.9 Ballot Handling and Print Shop Cleanliness 7

Chapter 1

Introduction

1.1 Purpose and Scope

This document provides an overview of ballot printing and finishing for ImageCast ballots used with the ImageCast family - the ImageCast® Precinct (ICP), the ImageCast® Evolution (ICE), and ImageCast® Central (ICC) ballot tabulators. The intended audience is election administrators and their technical support staff, and the content highlights the basic ballot production process and the key factors for quality control and inspection without going into the level of detailed needed for ballot production.

This document is not the full technical specification for the Dominion ballot printer qualification program, nor does it serve to outline every print operation or cover all quality control aspects. The appropriate document for that purpose is the ***Dominion Voting Systems ImageCast Printing Specification***. Printers undergoing the qualification will be provided with that document during the qualification process itself.

1.2 Patent Status

Certain system concepts, as well as many implementation and construction details, are protected by a series of U.S. and foreign patents.

Chapter 2

ImageCast Ballot Printing and Finishing Specification

2.1 The Need for Printer Training and Certification

Printing ballots is different than most commercial printing. The deadlines are fixed (Election Day) and the production timeline is short. Optically scanned ballots must be printed and manufactured with high precision and the tolerance for mistakes or other errors is very small. "Bad printing" has been the source of several disrupted or contested elections and seemingly small mistakes can have profound consequences. Printing errors can:

- Embarrass the jurisdiction.
- Erode voter confidence in the election process.
- Require a new election to be held.
- Cost millions of dollars in lawsuits and legal action.

Dominion trains, tests, and qualifies printers to print and manufacture ImageCast ballots. These training procedures educate printers in order to prevent a jurisdiction from becoming part of the "learning curve". There is "zero-tolerance" for ballot printing or manufacturing errors.

The ballot printer IS RESPONSIBLE for the correct printing, finishing, and timely delivery of every ballot produced.

2.2 Dominion's Printer Certification Program

When searching for a print vendor to supply ImageCast ballots, the printer should be a Dominion-qualified ballot printer in good standing. Qualified ballot printers are high quality commercial printers who have demonstrated the experience, equipment, and facilities required to successfully produce ImageCast ballots. A Dominion account representative can provide a list of accessible qualified printers for your type of ballot printing.

The qualification process includes:

- Creation of a test plan based on the print technology, experience, and ballot features of specific customers
- On-site instruction in ballot printing and finishing.
- Ballot inspection.
- Ballot QC programs.
- Ballot handling.

The printer is required to print and finish a production run of ImageCast ballots. These are graded and reviewed as part of the process.

If the printer successfully completes testing and inspection, Dominion will qualify the press and facility.

2.3 ImageCast Ballot Artwork Source Files

Dominion's Democracy Suite Election Management System (EMS) creates tabulator-ready PDF ballot artwork files. Ballot artwork files are created as complete ballot images, without trim lines or crop marks, and are designed to directly print on digital 4-colour sheet-fed xerographic or other electrophotographic printers (most B-sized laser printers). Ballot artwork is generated in industry-standard PDF format, `PDF\/X-1a:2001` (PDF Version 1.3) and CMYK colour space.

Ballot artwork files are full-sized press-ready ballots containing all required ballot elements and the unique ballot ID barcode that distinguishes each ballot style. Each file contains one or two ballot images: a front image (if the ballot is single-sided) or paired front and back ballot images. All fonts used in the ballot artwork are embedded in the PDF file. Ballot artwork files are digitally-signed (`X.509`) and tied to the election project files produced by Democracy Suite EMS to allow for authentication and revision control.

Pre-press imposition of ImageCast ballot artwork to add crop or alignment marks, jurisdictionally-mandated background screens, stub artwork, or other printing, may be required. No modifications, post-processing, or image conversion of the original ballot artwork files is allowed.

2.4 Approved Ballot Paper Stocks

The optimal paper stock for all scanning using except the DRS PhotoScribe Scanner is listed as the first line: Rolland Opaque 100# Text.

Alternative text and cover paper stocks that have been tested. The full list of those approved for manufacturing ImageCast ballots are listed in Table 2.1.

No other papers have completed the qualification testing, and may not be used. In cases where alternatives are requested, Dominion may perform an additional qualification test.

All approved ballot stock is white, bright white, or natural colored paper and has a smooth finish. Color-coding ballots is normally achieved in the ballot artwork by printing screened area(s) of color as a background — *not* by ordering colored ballot stock.

Recycled pulp				
Manufacturer	Type	Weight	Color/Finish	Comments
Cascades Fine Paper	Rolland Opaque 50	100# Text	Bright White, Smooth Finish	50% Post consumer fiber, EcoLogo, FCS Mixed Sources
Cascades Fine Paper	Rolland Opaque 50	80# Text	Bright White, Smooth Finish	50% Post consumer fiber, EcoLogo, FCS Mixed Sources
Cascades Fine Paper	Rolland Opaque 50	65#	Cover Bright White, Smooth Finish	50% Post consumer fiber, EcoLogo, FCS Mixed Sources
International Paper	Accent Opaque	80# and 100# Text	Smooth	FCS Forest Management
International Paper	Accent Opaque	65# Cover	Smooth	FCS Forest Management

Table 2.1: Text and Paper Stocks Approved for ImageCast Ballots.

2.5 ImageCast Ballot Printing Methods

ImageCast ballots can be printed using a range of modern printing technologies.

- Small quantities of tabulator-ready ballots can be printed with a conventional B-size laser printer (600 dpi min., pre-calibrated), directly onto pre-cut blank ballot stock. ImageCast ballot artwork files are pre-configured for this use.
- Conventional web or sheet-fed offset lithographic presses.
- High-speed digital xerographic or other electrophotographic presses (both web and sheet-fed).
- Ink jet printers, from desktop units to high-speed web print engines.

Print technologies do not produce ballots of equivalent quality. Each print technique has aspects of high quality and vulnerability. For this reason, the print qualification granted to a printer is limited to the product unit and operators. The qualification test is adapted to each technology, as well as the scope of ballot variances that are to be printed.

Common to all successful ballot printing methods is the strict adherence to Dominion's ImageCast ballot specifications.

2.6 ImageCast Ballot Printing Specifications

2.6.1 Common Specifications for all ImageCast ballot Production

Common to all ImageCast ballot production methods is the requirement for the precise reproduction of the ballot image onto the finished ballot.

- Ballot images must be accurately reproduced, properly scaled, correctly registered to the finished card, and printed with the correct inks or toner.
- Ballots must be manufactured on properly-conditioned and approved paper stocks that are accurately trimmed to size.
- Any additional ballot finishing to meet customer and jurisdictional requirements should be of the highest quality.
- Ballots must always be handled correctly and packaged properly to ensure that they are clean and undamaged when the customer receives them.
- In-house ballot inspection, testing and a well-executed quality assurance program, are an essential part of any ballot manufacturing facility.

Finished ballot dimensions broken per ImageCast tabulator type are presented in Figure 2.1.

ImageCast
Finished Ballot Dimensions

Tabulator		Width (nominal)	Width Tolerance	Length	Length Tolerance
CF-200	All Tabulators	8.500"	+0.020" -0.042"	11" and 14"	+/- 0.032"
ICP	ImageCast Tabulators	8.500"	+0.020" -0.042"	11" - 22"	+/- 0.032"
	BMD Tabulators	8.500"	+0.020" -0.042"	14", 17", 19", and 22"	+/- 0.032"
ICE	All Tabulators	8.500"	+0.020" -0.042"	11" - 22"	+/- 0.032"
ICC	Canon Scanners	8.500"	+/- 0.032"	11" - 22"	+/- 0.032"
	DRS PhotoScribe Scanner	8.500"	+/- 0.032"	11" - 18"	+/- 0.032"

Figure 2.1: ImageCast Ballot - Finished Dimensions.

THE BALLOT PRINTER IS RESPONSIBLE for all aspects of ballot printing and manufacturing and MUST ENSURE that the ballots that they produce meet all Dominion and customer specifications at the time of tabulation.

2.6.2 Image Reproduction

- **Print quality:** Clean and well-printed images, with sharply defined edges, accurately reproducing the ballot artwork. Ink density must be uniform across the ballot and should be free from smudges, mist, spray, spots, hickeys, voids or other stray marks. No visible setoff, ghosting or bleed-through.
- **Black ink:** Black ink (or toner) must be dense, opaque, light-fast and permanent, with a measured minimum 1.2 reflection density (log) above the paper base.
- **"Drop out" color:** Must be tested to confirm that the reproduced color is not imaged by the tabulator if used for a voting position target.
- **Image to card registration:** +/- 0.016" maximum, worst case in any direction. Registration is most important across ballot width.
- **Maximum image skew:** +/- 0.032" maximum
- **Maximum image scaling error:** 1% maximum
- **Front to back image registration:** 0.032" maximum, worst case in any direction
- **Minimum print imaging resolution:** 600 dpi commercial (200 dpi in-house production of test ballots)
- **Restricted areas:** No printing in the designated restricted areas.

2.6.3 Ballot Card

- **Square and accurately trimmed to size:** Ballot edges must be cleanly cut and free from burrs, rolled edges, irregular or bias-cuts, and with the corners undamaged.
- **Ballot width and tolerance:** 8.500" (nominal), 8.458" min. to 8.520" max., measured at both the top and bottom of the card. (The trim tolerances for the ICC scanners are slightly looser, see the table below).
- **Ballot length and tolerance:** 11" to 22", +/- 0.032" of required length.
- **Ballot Squareness:** 0.0075" maximum deviation
- **Squareness of scores, folds, or ballot perforations:** 90 degrees +/- 30 seconds maximum.
- **Ballot curl:** 0.150" max. height from ballot edge to the flat measuring surface (trimmed ballot). This is usually an indication of a damaged ballot or poor stock conditioning.

2.6.4 Other Defects

No anti-setoff powder, wax or spray should be used. No self-adhesive labels or stickers should be used on ballots. Ballots should be free from dust, dirt and other particulate matter.

Additional defects are included in the complete specification provided during qualification testing.

By adding additional printing to the active ballot area, the ballot printer is COMPLETELY RESPONSIBLE for any tabulation problems that may result! Dominion recommends that the jurisdiction is asked to include the required elements in the ballot artwork with Democracy Suite EMS, or to block out a reserved area in the ballot artwork for this printing to be added. If in doubt about the placement of any additional printing not found in the ballot artwork, PLEASE ASK before printing the ballots.

2.7 Scoring and Folding Ballots

Absentee and mail ballots are typically folded and inserted into envelopes for distribution to voters. Ballots should always be folded across the ballot width (perpendicular to the transport direction) and parallel to the grain of the ballot stock (short-grain). Ballots should be folded into panels of approximately equal length, with a minimum panel length of at least 3.5 inches. Fold lines are centred between ballot markers and cannot "touch" a voting position on either side of the ballot. Try and maintain a "guard band" of at least 0.050" from the position of the fold line to the edge of the nearest voting position target. The fold line should be a clean, sharp line of minimum width. All recommended ballot stocks can be folded either by hand or machine, but pre-scoring the ballot on the fold lines is recommended for heavier ballot stocks.

Table 2.2 indicates the guidelines for folding of the ballots.

Ballot Length	Maximum Allowable Folds	Max Number of Panels
11"	2	3
14"	3	4
17"	3	4
18"	3	4
19"	4	5
20"	4	5
22"	5	6

Table 2.2: Ballot Folding Guidlines

For ballots with more than two panels, folding a "Z" shape will allow for easier unfolding and ballot scanning. Panel lengths of a multi-panel ballot can be varied to "unstack" the folds (so that each fold is not exactly above another fold), which aids in envelope stuffing and removal. Ballot envelopes should be generously oversized to allow room for ballot segregation and to ease ballot stuffing and opening. Typically add a 0.5" allowance to the folded panel width to get the minimum envelope size required. Consider adding a small punched hole into the design of the return envelope - this hole will allow verification of a ballot inside - without compromising voter secrecy.

2.8 Ballot Stubs - Perforations, Numbering and Padding

Binding ballots into stacks of 50 or 100 — a process known as "padding" — improves the way in which ballots are handled and counted. Padded ballots are serialized on the ballot stub (or stubs), which allows for a quick reckoning of the total issued ballots. The stub used to bind the ballots together onto a pad, is referred to as the "binding stub".

Stubs can be placed at the top or bottom of the ballot artwork. If stub placement is not mandated by jurisdictional or election code requirements, it is recommended that the stub is placed at the bottom of the ballot artwork. This placement makes allowances for imperfections on ballot perforation.

THE BALLOT PRINTER IS RESPONSIBLE for all aspects of ballot printing and manufacturing and MUST ENSURE that the ballots produced meet all Dominion and customer specifications at the time of tabulation.

2.9 Ballot Handling and Print Shop Cleanliness

- All ballot printing facilities should be regularly cleaned, including the floors and all surfaces.

- Special attention should be paid to processes that generate dust, particulate matter, or aerosols.
- Effort should be made to isolate or vent "dirty" air in order to prevent the contamination of paper and working surfaces from occurring.
- Waste should be regularly removed and all inks, solvents, or lubricants should be properly cleaned-up and stored.
- Implementing a regular cleaning program throughout the print shop will help to ensure that the ballots stay clean.
- Just as important is the cleanliness of the press operators, bindery workers, and other staff who will be handling ballot stock or ballots. Hands should be washed regularly.
- Work surfaces should be regularly cleaned and food should not be allowed in the shop area.
- Remember that all paper and printing defects - dirt, dust, smudges, and spots - will be scanned by the tabulators!
- Always work to protect the edges and corners of finished ballots from damage or wear.
- Finishing or secondary operations that require the jogging of ballots can damage their edges and cause problems in tabulation.
- Ballots with bent or damaged corners, or worn, flattened or rolled edges should be destroyed.

SCHEDULE B LICENSE AGREEMENT

Dominion Voting Systems, Inc.

EMS AND SYSTEM SOFTWARE LICENSE AGREEMENT

1. Definitions.

1.1. "Hardware" means the ImageCast® system defined in the State Contract.

1.2. "Licensee" shall mean the State and Authorized Users.

1.3. "Licensor" shall mean Dominion Voting Systems, Inc.

1.4. "Party" or "Parties" Licensor and Licensee may hereinafter be referred to individually as a Party and collectively as the Parties.

1.5. "Software" means the Democracy Suite® and/or ImageCast® software licensed by Licensor hereunder, in object code form, including all documentation therefore.

1.6. "Specifications" means descriptions and data regarding the features, functions and performance of the Software and Hardware, as set forth in user manuals or other applicable documentation provided by Licensor.

1.7. "State Contract" means the contract entered into by the State of Michigan and Dominion Voting Systems, Inc. All capitalized term defined in the State Contract shall have the same meaning and effect in this EMS and Software License Agreement.

2. License.

2.1. License to Software. Subject to the terms herein, Licensor grants Licensee a non-exclusive, non-transferrable license to use the Software solely for the Licensee's own business purposes for the Term of 10 years from the date of purchase, and any extension thereof by the State or Authorized User.

2.2. Print Copyright License. Subject to the Licensor's Print Copyright License terms and conditions attached hereto as Exhibit B-1. Licensor grants to Licensee a non-exclusive, non-transferable print copyright license.

2.3. No Other Licenses. Other than as expressly set forth herein, (a) Licensor grants no licenses, expressly or by implication, and (b) Licensor is not licensing or assigning any intellectual property rights of Licensor to Licensee or any third party. Licensee agrees not to use the Software for elections outside the State of Michigan and agrees not to reverse engineer or otherwise attempt to derive the source code of the Software. The Licensee shall have no power to transfer or grant sub-licenses for the Software. Any use of all or any portion of the Software not expressly permitted is strictly prohibited.

3. Upgrades and Certification. During the Term, Licensor may provide upgrades to Licensee under the following terms and conditions.

3.1. Upgrades. In the event that Licensor, at its sole discretion, certifies a Software upgrade under the applicable laws and regulations of the State of Michigan, Licensor shall make the certified Software upgrade available to the Licensee at no additional cost.

3.2. Certification Requirement. Notwithstanding any other terms herein, Licensor shall not provide, and shall not be obligated to provide under any upgrade or other software update that has not been certified under the applicable provisions of the election laws and regulations of the State of Michigan.

4. Prohibited Acts. The Licensee shall not, without the prior written permission of Licensor:

4.1. Transfer or copy onto any other storage device or hardware or otherwise copy the Software in whole or in part except for purposes of system backup;

4.2. Reverse engineer, disassemble, decompile, decipher or analyze the Software in whole or in part;

4.3. Alter or modify the Software in any way or prepare any derivative works of the Software or any part of parts of the Software;

4.4. Alter, remove or obstruct any copyright or proprietary notices from the Software, or fail to reproduce the same on any lawful copies of the Software.

5. Return of Software. Upon termination or expiration of this license, Licensee shall (i) forthwith return to Licensor all Software in its possession or control, or destroy all such Software from any electronic media, and certify in writing to Licensor that it has been destroyed.

6. Warranties. All Software warranty terms specified in Section 31 of the State Contract and Section 1.6 of the State Contract SOW shall apply to this EMS and System Software License Agreement.

EXHIBIT B-1

PRINT COPYRIGHT LICENSE TERMS AND CONDITIONS

1. Definitions.

1.1. "Derivative Works" shall mean any work that is based upon or derived from the Licensor's voting systems' ballots, including without limitation, sample ballots and voting booklets.

1.2. "Voting Systems' Ballots" shall mean any ballot created for use with any voting system owned or licensed by the Licensor.

2. Print Copyright License and Use.

2.1. Copyright License Grant. Licensor grants to the Licensee a non-exclusive, non-transferable copyright license to print, reproduce, distribute or otherwise copy the Licensor's Voting Systems' Ballots or any Derivative Works (collectively the "Materials") pursuant to the terms and conditions of this Schedule A.

2.2. Copyright License Use. Other than as expressly set forth herein, (a) Licensor grants no other licenses, expressly or by implication, (b) Licensor's entering into and performing the Agreement will not be deemed to license or assign any intellectual property rights of Licensor to Licensee or any third party, and (c) the copyright license granted herein cannot be transferred or sublicensed and the Voting Systems' Ballots or Derivative Works cannot be reproduced by any third party without the prior written consent of the Licensor, including without limitation:

(i) any commercial or non-commercial printer
(ii) any third party vendor using ballot on demand system.

2.3. Rights and Interests. All right, title and interest in the Material, including without limitation, any copyright, shall remain with the Licensor.

3. No Copyright Warranties. LICENSOR DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES, WHETHER WRITTEN, ORAL, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY BASED ON A COURSE OF DEALING, COURSE OF PERFORMANCE OR USAGE OF TRADE.

STATE OF MICHIGAN

Contract No. 071B7700117
Voting System Hardware, Firmware, Software and Service

SCHEDULE C
PRICING

1. The pricing schedule for the Contract Activities is in the cost tables on the following pages.

2. Pricing encompasses 5 separate tables (attached):
   - Cost Table 1. Precinct Tabulators and Accessible Voting Systems
   - Cost Table 2. Election Management System (EMS) Software –License Fee and Extended Service / Maintenance (NOTE: this cost table has 2 parts: Tables 2a and 2b)
   - Cost Table 3. OPTIONAL ITEM – High Speed AVCB Tabulator
   - Cost Table 4. Component Replacement / Additional Parts
   - Cost Table 5: Additional Options/Costs – EMS Network Configuration options - The Contractor has standard third party network configurations and related pricing for use by counties and select local jurisdictions in implementing Election Management Systems (EMS) for the following environments: Accumulation Only; Full EMS; Accumulation Only with modeming; and Full EMS with modeming. Orders for these configuration components will be handled and negotiated separately between the Contractor and their individual customers.

3. **Prices include all costs,** including but not limited to any one-time or set-up charges, fees, and potential costs that Contractor may charge the State/Authorized User (e.g., shipping and handling, per-piece pricing, and palletizing). **Any element of the Contractor's system with an associated cost (including optional system features) must be listed and included in one of the Cost Tables available.**

4. Prices listed are fixed for the contract term, and represent the maximum prices per item. Notwithstanding the foregoing, the Contractor is authorized to negotiate pricing with individual counties that are lower than the prices listed here. Any and all lower negotiated prices must be communicated to the Program Manager immediately as they are finalized. Additionally, price changes may be proposed at the end of the initial service and maintenance period, (acquisition year + 4 years) **for component replacement/additional parts only (Cost Table 4).**

Cost Table 1. Precinct Tabulators and Accessible Voting Systems

	PURCHASE AND INITIAL SERVICE / MAINTENANCE PERIOD (ACQUISITION YEAR + 4 YEARS)			EXTENDED SERVICE / MAINTENANCE PERIOD (ANNUAL PAYMENT – UP TO 5 ADDITIONAL YEARS)
	Per-Unit Purchase Price	**Incentive Program (existing equipment per-unit trade-in discount) See Schedule A Section 1.9**	**Per-Unit Purchase Price with Discount**	**Per-Unit Annual Extended Service/Maintenance Price**
Precinct Tabulators – • 1 at State level (no charge) • 1 per county • 1 per precinct • AVCB Tabulators	$5,390.00	($95.00)	$5,295.00	$375.00
Accessible Voting System (1 per polling place)**	$3,555.00	($40.00)	$3,515.00	$240.00

**Polling places with more than 2 precincts may receive an additional accessible voting system.

Cost Table 2. Election Management System (EMS) Software –SOFTWARE LICENSE FEE; INITIAL AND EXTENDED SERVICE / MAINTENANCE

Two cost tables are included in this section (2a and 2b).Several clarifying notes are provided with respect to EMS Pricing.

EMS costs will be applicable to counties, as well as select local jurisdictions. Each county will select either:

1) **Full EMS ("Program Your Own")**, for counties that fully program their elections internally (without reliance on the voting system Contractor/subcontractor); or
2) **Accumulation-Only EMS**, for counties that rely on the voting system Contractor/subcontractor for programming; the accumulation-only functionality for these counties shall include the capability to burn media, read media, transmit results and produce accumulation reports.

- The Accumulation-Only version of EMS will also be available to local jurisdictions statewide. While each county will acquire either Full EMS or Accumulation-Only EMS), local cities and townships (local jurisdictions) will have the option to acquire a copy of Accumulation Only EMS. A statewide EMS purchase for local jurisdictions is **not** planned.

- The EMS License fee is included in the initial payment in year 1, and covers the entire contract term. The initial payment also covers the initial service and maintenance period (acquisition year, plus 4 additional years). The extended service/maintenance period covers an additional 5 years, after the expiration of the initial service and maintenance period. During the extended service/maintenance period (years 6-10), counties have the option of selecting either an annual fee or an hourly technical support rate. See **Table 2b** for additional information on extended service/maintenance costs and options**.**

- NOTE: Additional EMS component costs are listed in **Cost Table 4**. Also, **Cost Table 5** includes costs for required/recommended EMS Network components, for several possible network configurations. These additional EMS component and network costs are the sole responsibility of the county/local jurisdiction.

Cost Table 2a – Base EMS Price (Software License Fee + Initial Service/Maintenance)

	EMS SOFTWARE LICENSE FEE (INCLUDES INITIALSERVICE / MAINTENANCE FOR ACQUISITION YEAR + 4 ADDITIONAL YEARS)	
Category	**EMS Software License Fee (price per copy)**	
County Option 1: Full EMS*	Based on total registered voters (county):	
	0 to 15,000	$50,310.00
	15,001 to 30,000	$64,800.00
	30,001 to 60,000	$115,000.00
	60,001 to 125,000	$157,250.00
	125,001 to 250,000	$220,363.00
	more than 250,000	$295,000.00
County Option 2: Accumulation Only*	Based on total registered voters (county):	
	0 to 15,000	$12,623.00
	15,001 to 30,000	$18,563.00
	30,001 to 60,000	$27,000.00
	60,001 to 125,000	$41,650.00
	125,001 to 250,000	$58,905.00
	more than 250,000	$84,150.00
Local Jurisdiction EMS: Accumulation-Only		$2,500.00

*Please see the list below for the specific EMS software components that are included in both the full and Accumulation Only versions of Democracy Suite® EMS:

Both full and Accumulation only versions of Democracy Suite® EMS include:

Dominion Software Modules:
Democracy Suite® EED
Democracy Suite® RTR
Democracy Suite® AS
Data Center Manager – DCM
Application Server – APPS
Democracy Suite® EMS Service
ImageCast® Voter Activation – ICVA
Results Transfer Manager – RTM
Election Data Translator – EDT
File System Service – FSS
Smart Card Service

Third Party Software Components:
Adobe Reader
Microsoft SQL
Microsoft Visual Studio C++ 2013 Redistributable Libraries
Microsoft Visual J# Redistributable Libraries
Java Runtime Environment
Microsoft Access Database Engine
Open XML SDK 2.0 for MS Office
Dallas Semiconductor 1-Wire Driver(s) for iButton
System Fonts (Arial)
Cepstral
Google Text-to-Speech

The Accumulation only version allows for restoring project databases, programming machine memory cards, editing audio for accessible voting, uploading results, and generating results reports.

Cost Table 2b – EMS Extended Service / Maintenance Fees

NOTE: For EMS extended service / maintenance, counties have the option to choose either a flat annual rate or an hourly technical support rate. These rates shall be the same for all counties for each option (one set price for Full EMS, one set price for Accumulation-Only EMS).

	EMS EXTENDED SERVICE / MAINTENANCE PERIOD (UP TO 5 ADDITIONAL YEARS)		
	OPTION 1: ANNUAL COUNTY EMS SUPPORT PAYMENT		OPTION 2: HOURLY TECHNICAL SUPPORT RATE
	EMS Extended Service / Maintenance Annual Payment Option (annual price per county)		EMS Extended Service / Maintenance Hourly Technical Support Rate Option for Counties
County Option 1: Full EMS*	Based on total registered voters (county): 0 to 15,000 15,001 to 30,000 30,001 to 60,000 60,001 to 125,000 125,001 to 250,000 more than 250,000	$8,000.00 $10,000.00 $20,000.00 $25,000.00 $34,000.00 $50,000.00	$300.00
County Option 2: Accumulation-Only*	Based on total registered voters (county): 0 to 15,000 15,001 to 30,000 30,001 to 60,000 60,001 to 125,000 125,001 to 250,000 more than 250,000	$1,700.00 $2,500.00 $3,000.00 $5,400.00 $8,400.00 $12,000.00	$300.00
Local Jurisdiction EMS: Accumulation Only		$750.00	$300.00

Cost Table 3. OPTIONAL ITEM – High Speed AVCB Tabulator

	Hardware COTS? (Y/N)	Additional Hardware / Software Required? (Y/N)**	Processing Speed (Ballots per Minute)	Per-Unit Purchase Price (includes Service / Maintenance for acquisition year + 4 years)	Annual Per-Unit Extended Service / Maintenance Price (5 additional years)
High Speed AVCB Tabulator*					
ICC G1130 System			11" - 80/min, 4,800/hr		
Canon DR-G1130	Yes	Yes – ICC Software	14" - 64/min, 3,840/hr	$14,050.00	$2,500.00
Workstation	Yes	Yes – ICC Software	17" - 53/min, 3,180/hr	$2,200.00	$115.00
ICC Software	NA	Yes – Workstation and Scanner	20" - 45/min, 2,700/hr	$19,100.00	$2,900.00
				$35,350.00	**$5,515.00**
ICC M160II System			11" - 60/min, 3,600/hr		
Canon DR-M160II	Yes	Yes – ICC Software	14" - 47/min, 2,820/hr	$3,480.00	$725.00
Workstation	Yes	Yes – ICC Software	17" - 38/min, 2,280/hr	$2,200.00	$115.00
ICC Software	NA	Yes – Workstation and Scanner	20" - 33/min, 1,980/hr	$7,300.00	$900.00
				$12,980.00	**$1,740.00**

***NOTE:**

- The AVCB tabulators are utilized at the local jurisdiction (city/township) level, not at the county level.

Cost Table 4. Component Replacement / Additional Parts
All applicable and available component parts for the Contractor's system are listed below. For each component part, the Contractor has identified the source for obtaining the part and whether the part is available commercially off the shelf (COTS).

NOTE: If alternative purchase sources are available, the State, counties and local jurisdictions reserve the right to purchase from those sources.

Contractor must also list all other system features available in their proposed system, if the cost for such features have not been included elsewhere in this Cost Proposal.

Product	Estimated Life (Years)	Purchase Source (Indicate if COTS)	Per-Unit Price
Ballot and Report Printer - C931	5 years	COTS	$6,200.00
Compact Flash Memory Card 8GB	5 years	COTS	$75.00
Compact Flash Reader/Writer	5 years	COTS	$60.00
EMS Express Managed Switch	5 years	COTS	$200.00
EMS Express Server - Desktop	5 years	COTS	$1,750.00
EMS Standard Server - Rackmount	5 years	COTS	$7,800.00
EMS Standard Server KVM Switch - Rackmount	5 years	COTS	$80.00
EMS Standard Server Network Switch - Rackmount	5 years	COTS	$400.00
EMS Standard Server Power Strip - Rackmount	5 years	COTS	$200.00
EMS Standard Server Rack	5 years	COTS	$900.00
EMS Standard Smart UPS	5 years	COTS	$800.00
EMS Workstation PC	5 years	COTS	$1,200.00
ImageCast Listener Express Firewall	5 years	COTS	$480.00
ImageCast Listener Express RAS Server	5 years	COTS	$2,000.00
ImageCast Listener Express Server - Desktop	5 years	COTS	$2,200.00
ImageCast Listener Standard Firewall - Rackmount	5 years	COTS	$2,300.00
ImageCast Listener Standard RAS Server - Rackmount	5 years	COTS	$2,000.00
ImageCast Listener Standard Server - Rackmount	5 years	COTS	$2,000.00
ImageCast Listener USB Hub	5 years	COTS	$165.00
ImageCast Listener USB Modems	5 years	COTS	$225.00
Headphones	5 years	COTS	$15.00
I-Button Programmer with USB Adapter	8 years	COTS	$50.00
ICC I-Button Security Key	8 years	COTS	$25.00
ICP Backup Battery	5 Years when recharged every 6 months	Dominion	$165.00
ICP Ballot Box - Plastic	7 years	Dominion	$1,000.00
ICP Ballot Box - Collapsible Plastic	5 years	Dominion	$1,000.00
ICP Cleaning Sheet	1 year	Dominion	$20.00
ICP External Wireless Modem	10 years	COTS	$295.00
ICP I-Button Security Key	8 years	COTS	$25.00
ICP Paper Roll (60')	1 year	Dominion	$2.50
ICP Power Supply and Cord	7 years	Dominion	$30.00
ICP Tech Key - Blue	8 years	Dominion/COTS	$25.00
ICP-300A Coin Battery	7 years	COTS	$5.00
ICX Accessible Voting Kit	7 years	COTS	$400.00
ICX Transport Case	7 years	Dominion	$175.00
ICX Printer Transport Case	7 years	Dominion	$100.00
ICX Laser Printer	5 years	COTS	$220.00
ICX UPS 1500	5 Years when recharged every 6 months	COTS	$600.00
ICX Smart Card	5 years	COTS	$10.00
ICX Smart Card Programmer	5 years	COTS	$200.00
ICX Voting Booth	8 years	ElectionSource	$375.00
Mobile Ballot Printing System Hardware - LV	5 years	Dominion/COTS	$9,500.00

Cost Table 5 – EMS Network Configuration Options
Dominion Voting Systems

Democracy Suite Sample Configuration for Michigan

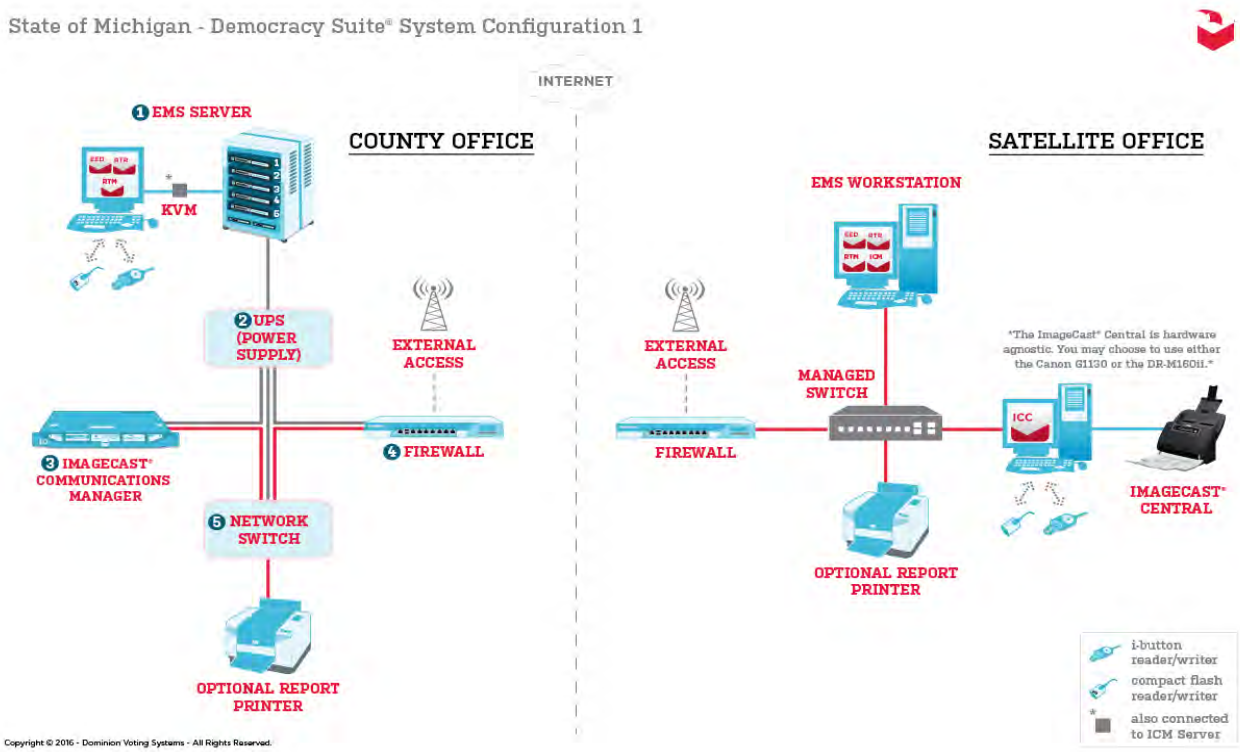
The following Democracy Suite® Configurations are samples based on estimated needs of the counties and local jurisdictions. These configurations can be further adjusted according to the specific components required for each county. They have been simplified to illustrate the major components required in each location.

Configuration 1

Democracy Suite® Components located at the County/central office and/or local satellite office (city or township) for larger jurisdictions:

- ☐ EMS Standard (with client station)
- ☐ EMS Express (no client station)
- ☐ Listener (wireless modems only)
- ☐ ICC (M160-II) for AVCB

Please see below for the Configuration diagram.



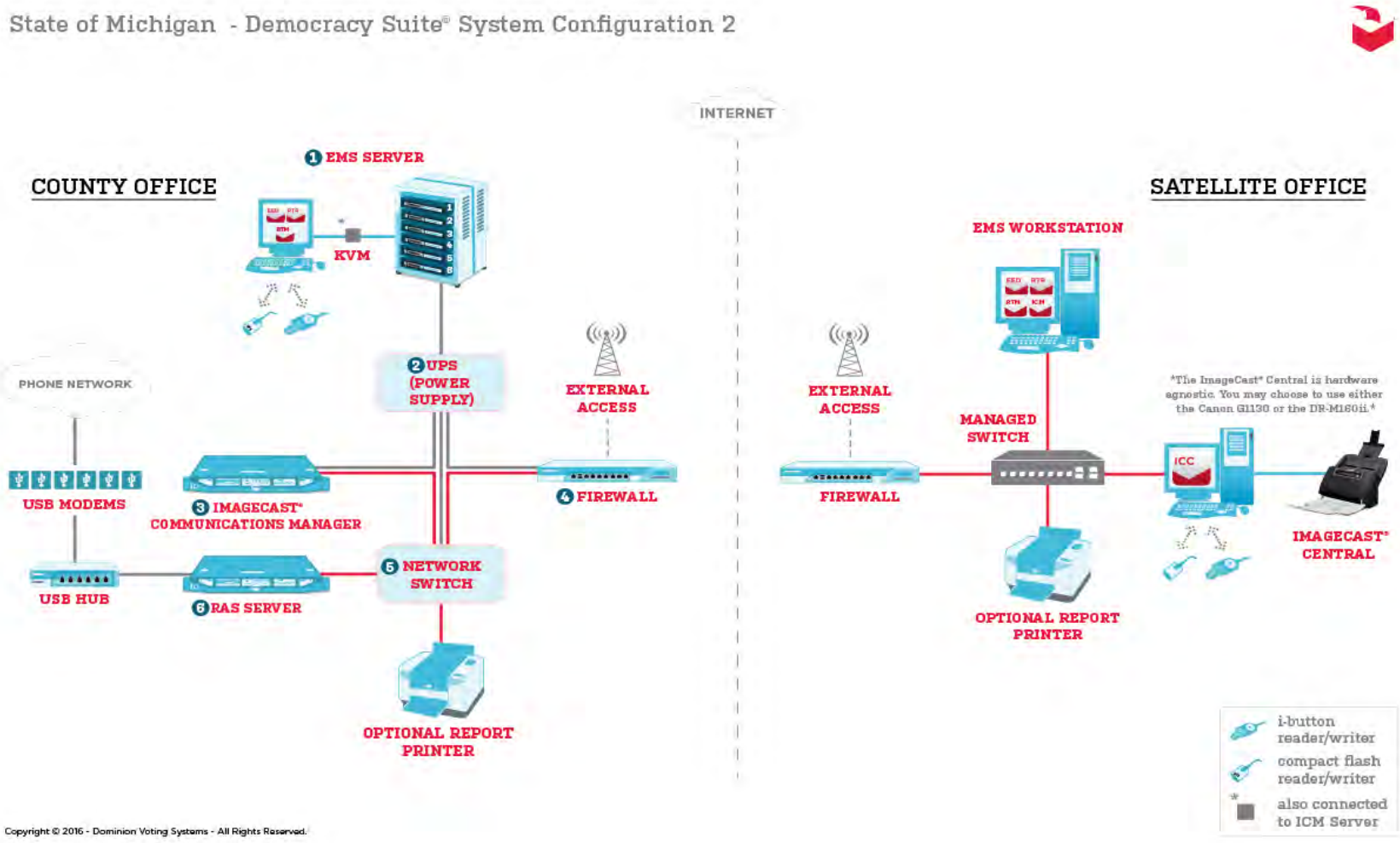
Dominion Vo

Configuration 2

Democracy Suite® Components located at the County/central office and/or local satellite office (city or township) for larger jurisdictions:

- ☐ EMS Standard (with client station)
- ☐ EMS Express (no client station)
- ☐ Listener (wireless and analog modems)
- ☐ ICC (M160-II) for AVCB

See below for the Configuration Diagram.



Configuration 3

Democracy Suite® Components located at the County/central office and local satellite office (city or township) for small to medium

- ☐ EMS Express (no client station)
- ☐ Listener (wireless modems only)
- ☐ ICC (M160-II) for AVCB

Dominion Voting Systems

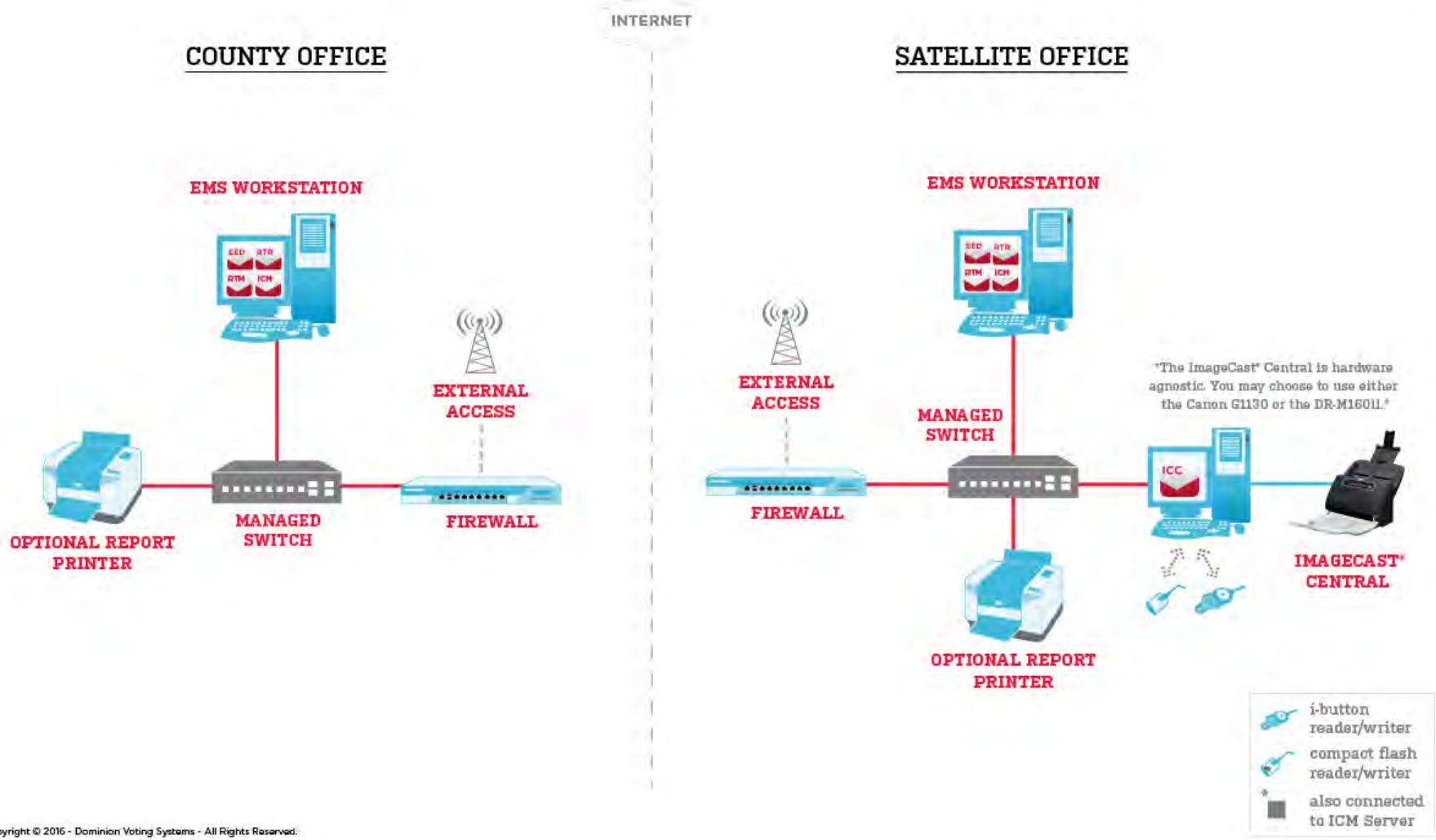
Configuration 3

Democracy Suite® Components located at the County/central office and local satellite office (city or township) for small to medium sized counties:

- EMS Express (no client station)
- Listener (wireless modems only)
- ICC (M160-II) for AVCB

Please see the next page for the Configuration diagram.

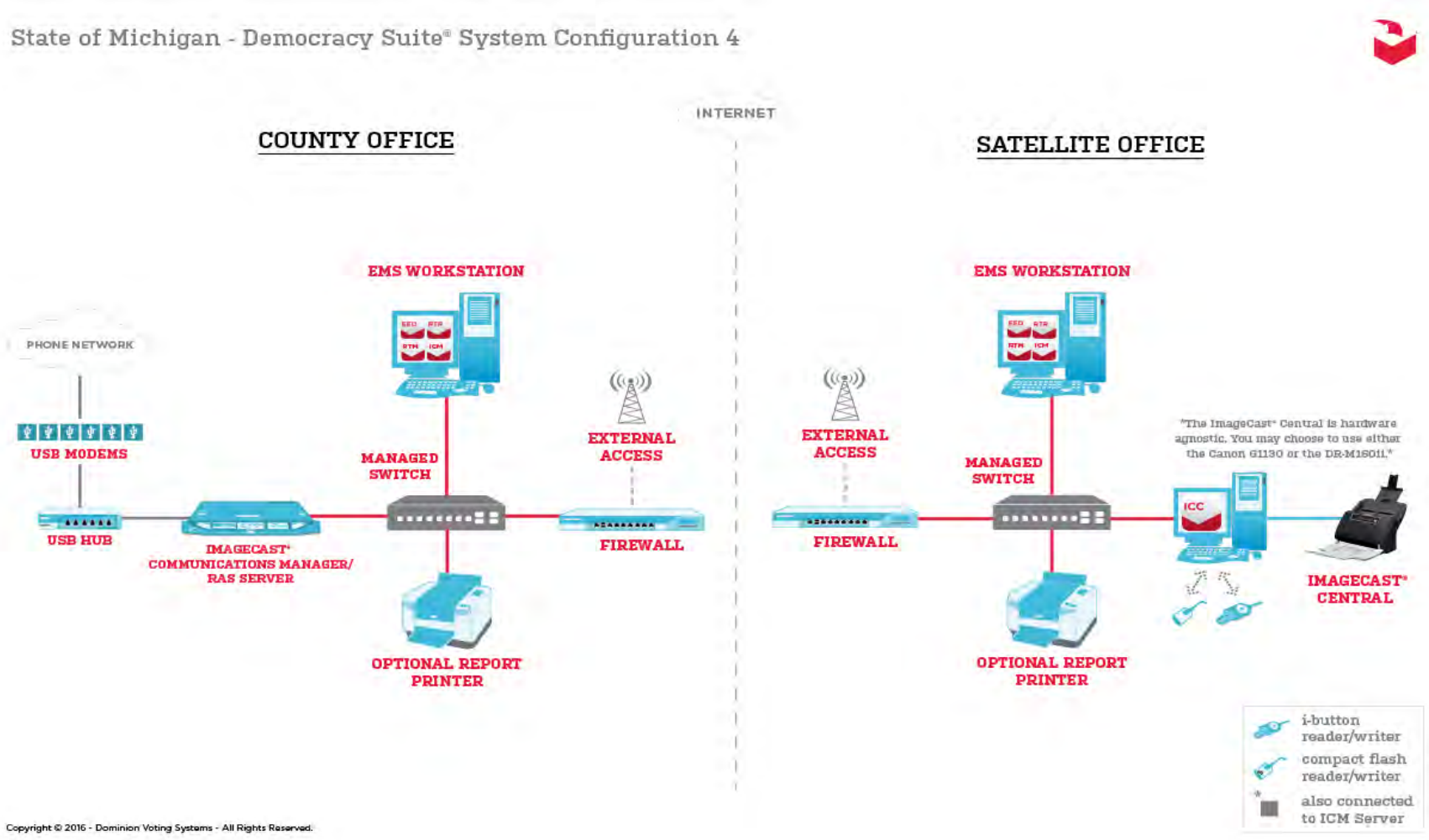
State of Michigan - Democracy Suite® System Configuration 3



Copyright © 2016 - Dominion Voting Systems - All Rights Reserved.

- ☐ EMS Express (no client station)
- ☐ Listener (wireless and analog modems)
- ☐ ICC (M160-II) for AVCB

Please see below for the Configuration diagram.



Configuration 1 - Hardware Pricing

Product	Purchase Source	Quantity	Per-Unit Price	Total Price
County or Central Location:				
EMS Standard Server - Rackmount	COTS	1	$7,800.00	$7,800.00
EMS Standard Server KVM Switch - Rackmount	COTS	1	$80.00	$80.00
EMS Standard Server Network Switch - Rackmount	COTS	1	$400.00	$400.00
EMS Standard Server Power Strip - Rackmount	COTS	1	$200.00	$200.00
EMS Standard Server Rack	COTS	1	$900.00	$900.00
EMS Standard Smart UPS	COTS	1	$800.00	$800.00
EMS Workstation PC	COTS	1	$1,200.00	$1,200.00
ImageCast Listener Standard Firewall - Rackmount	COTS	1	$2,300.00	$2,300.00
ImageCast Listener Standard Server - Rackmount	COTS	1	$2,000.00	$2,000.00
EMS Report Printer	COTS	1	$250.00	$250.00
Total per County:				**$15,930.00**

City or Town Location:				
EMS Express Managed Switch	COTS	1	$200.00	$200.00
EMS Express Server and Adjudication Workstation - Desktop	COTS	1	$2,200.00	$2,200.00
ICC Workstation - Desktop	COTS	1	$2,200.00	$2,200.00
ImageCast Express Firewall	COTS	1	$480.00	$480.00
EMS Report Printer	COTS	1	$250.00	$250.00
Total per City or Town:				**$5,330.00**

Configuration 2 - Hardware Pricing

Product	Purchase Source	Quantity	Per-Unit Price	Total Price
County or Central Location:				
EMS Standard Server - Rackmount	COTS	1	$7,800.00	$7,800.00
EMS Standard Server KVM Switch - Rackmount	COTS	1	$80.00	$80.00
EMS Standard Server Network Switch - Rackmount	COTS	1	$400.00	$400.00
EMS Standard Server Power Strip - Rackmount	COTS	1	$200.00	$200.00
EMS Standard Server Rack	COTS	1	$900.00	$900.00
EMS Standard Smart UPS	COTS	1	$800.00	$800.00
EMS Workstation PC	COTS	1	$1,200.00	$1,200.00
ImageCast Listener Standard Firewall - Rackmount	COTS	1	$2,300.00	$2,300.00
ImageCast Listener Standard Server - Rackmount	COTS	1	$2,000.00	$2,000.00
ImageCast Listener Standard RAS Server - Rackmount	COTS	1	$2,000.00	$2,000.00
ImageCast Listener USB Hub	COTS	1	$165.00	$165.00
ImageCast Listener USB Modems - quantity based on 6 tabulators using analog modems	COTS	12	$225.00	$2,700.00
EMS Report Printer	COTS	1	$250.00	$250.00
Total per County:				**$20,795.00**

City or Town Location:				
EMS Express Managed Switch	COTS	1	$200.00	$200.00
EMS Express Server and Adjudication Workstation - Desktop	COTS	1	$2,200.00	$2,200.00
ICC Workstation - Desktop	COTS	1	$2,200.00	$2,200.00
ImageCast Express Firewall	COTS	1	$480.00	$480.00

EMS Report Printer	COTS	1	$250.00	$250.00
Total per City or Town:				**$5,330.00**

Configuration 3 - Hardware Pricing

Product	Purchase Source	Quantity	Per-Unit Price	Per-Unit Price
County or Central Location:				
EMS Express Managed Switch	COTS	1	$200.00	$200.00
EMS Express and Listener Server - Desktop	COTS	1	$2,200.00	$2,200.00
ImageCast Listener Express Firewall	COTS	1	$480.00	$480.00
EMS Report Printer	COTS	1	$250.00	$250.00
Total per County:				**$3,130.00**
City or Town Location:				
EMS Express Managed Switch	COTS	1	$200.00	$200.00
EMS Express Server and Adjudication Workstation - Desktop	COTS	1	$2,200.00	$2,200.00
ICC Workstation - Desktop	COTS	1	$2,200.00	$2,200.00
ImageCast Express Firewall	COTS	1	$480.00	$480.00
EMS Report Printer	COTS	1	$250.00	$250.00
Total per City or Town:				**$5,330.00**

Configuration 4 - Hardware Pricing

Product	Purchase Source	Quantity	Per-Unit Price	Per-Unit Price
County or Central Location:				
EMS Express Managed Switch	COTS	1	$200.00	$200.00
EMS Express Server - Desktop	COTS	1	$2,200.00	$2,200.00
ImageCast Listener Express Firewall	COTS	1	$480.00	$480.00
ImageCast Listener Express Server (Wirelss and Analog)	COTS	1	$2,000.00	$2,000.00
ImageCast Listener USB Hub	COTS	1	$165.00	$165.00
ImageCast Listener USB Modems - quantity based on 6 tabulators using analog modems	COTS	12	$225.00	$2,700.00
EMS Report Printer	COTS	1	$250.00	$250.00
Total per County:				**$7,995.00**

City or Town Location:				
EMS Express Managed Switch	COTS	1	$200.00	$200.00
EMS Express Server and Adjudication Workstation - Desktop	COTS	1	$2,200.00	$2,200.00
ICC Workstation - Desktop	COTS	1	$2,200.00	$2,200.00
ImageCast Express Firewall	COTS	1	$480.00	$480.00
EMS Report Printer	COTS	1	$250.00	$250.00
Total per City or Town:				**$5,330.00**

Modular Software Pricing

Adjudication Software Pricing

Based on total registered voters (county):	Purchase Source	5 year Initial Contract Period	Extended Service / Maintenance Annual Payment
0 to 15,000	Dominion	$7,043	$900
15,001 to 30,000	Dominion	$14,085	$1,800
30,001 to 60,000	Dominion	$21,128	$2,700
60,001 to 125,000	Dominion	$31,500	$4,050
125,001 to 250,000	Dominion	$49,298	$6,300
more than 250,000	Dominion	$70,425	$9,000

Listener Software Pricing

Based on total registered voters (county):	Purchase Source	5 year Initial Contract Period	Extended Service / Maintenance Annual Payment
0 to 15,000	Dominion	$9,000	$1,000
15,001 to 30,000	Dominion	$10,800	$1,200
30,001 to 60,000	Dominion	$12,600	$1,400
60,001 to 125,000	Dominion	$21,600	$4,320
125,001 to 250,000	Dominion	$36,000	$7,200
more than 250,000	Dominion	$54,000	$10,800

Mobile Ballot Printing Software Pricing

Based on total registered voters (county):	Purchase Source	5 year Initial Contract Period	Extended Service / Maintenance Annual Payment
0 to 15,000	Dominion	$3,240	$360
15,001 to 30,000	Dominion	$4,050	$450
30,001 to 60,000	Dominion	$4,860	$540
60,001 to 125,000	Dominion	$6,750	$810
125,001 to 250,000	Dominion	$10,530	$1,170
more than 250,000	Dominion	$16,200	$1,800

The State of Texas

Elections Division
P.O. Box 12060
Austin, Texas 78711-2060
www.sos.texas.gov

Phone: 512-463-5650
Fax: 512-475-2811
Dial 7-1-1 For Relay Services
(800) 252-VOTE (8683)

Ruth R. Hughs
Secretary of State

REPORT OF REVIEW OF DOMINION VOTING SYSTEMS DEMOCRACY SUITE 5.5-A

PRELIMINARY STATEMENT

On October 2-3, 2019, Dominion Voting Systems ("Dominion" or the "Vendor") presented the Democracy Suite 5.5-A system for examination and certification. The examination was conducted in Austin, Texas. Pursuant to Sections 122.035(a) and (b) of the Texas Election Code, the Secretary of State appointed the following examiners:

1. Mr. Tom Watson, an expert in electronic data communication systems;
2. Mr. Brian Mechler, an expert in electronic data communication systems;
3. Mr. Brandon Hurley, an expert in election law and procedure; and
4. Mr. Charles Pinney, an expert in election law and procedure.

Pursuant to Section 122.035(a), the Texas Attorney General appointed the following examiners:

1. Dr. Jim Sneeringer, an expert in electronic data communication systems; and
2. Mr. Ryan Vassar, an employee of the Texas Attorney General.

On October 2, 2019, Mr. Pinney, Mr. Mechler, and Dr. Sneeringer witnessed the installation of the Democracy Suite 5.5-A software and firmware that the Office of the Texas Secretary of State (the "Office") received directly from the Independent Testing Authority. The next day, Mr. Pinney examined the accessibility components of the ImageCast X Ballot Marking Device.

On October 3, 2019, the Vendor demonstrated the Democracy Suite 5.5-A system and answered questions presented by the examiners. Test ballots were then processed on each voting device. The results were accumulated and later verified for accuracy by staff of the Secretary of State.

Examiner reports regarding the Democracy Suite 5.5-A system are attached hereto and incorporated herein by this reference.

On December 27, 2019, pursuant to Section 122.0371 of the Texas Election Code, the Office held a public hearing for interested persons to express views for or against the certification of the Democracy Suite 5.5-A system.

BRIEF DESCRIPTION OF DEMOCRACY SUITE 5.5-A

The Democracy Suite 5.5-A system is an updated version of the Democracy Suite 5.5 system, which was denied certification by the Office on June 20, 2019. The Democracy Suite 5.5-A system includes certain software and hardware updates to the Suite 5.5 version.

Democracy Suite 5.5-A has been evaluated at an accredited independent voting system laboratory for conformance to the 2005 Voluntary Voting System Guidelines (VVSG). Democracy Suite 5.5-A was certified by the Election Assistance Commission (EAC) on January 30, 2019.

The components of Democracy Suite 5.5-A are as follows:

Component	Version	Description
EMS – Election Management System	5.5.12.1	Election Management System
ADJ – Adjudication	5.5.8.1	
ICC – ImageCast Central	5.5.3.0002	Central scanner
ICX – ImageCast X BMD	5.5.10.30	Ballot marking device
ICP – ImageCast Precinct	5.5.3-0002	Precinct scanner

FINDINGS

The following are the findings, based on written evidence submitted by the Vendor in support of its application for certification, oral evidence presented at the examination, and the findings of the voting system examiners as set out in their written reports.

The examiner reports identified multiple hardware and software issues that preclude the Office of the Texas Secretary of State from determining that the Democracy Suite 5.5-A system satisfies each of the voting-system requirements set forth in the Texas Election Code. Specifically, the examiner reports raise concerns about whether the Democracy Suite 5.5-A system is suitable for its intended purpose; operates efficiently and accurately; and is safe from fraudulent or unauthorized manipulation. Therefore, the Democracy Suite 5.5-A system and corresponding hardware devices do not meet the standards for certification prescribed by Section 122.001 of the Texas Election Code.

CONCLUSION

Accordingly, based upon the foregoing, I hereby deny certification of Dominion Voting Systems' Democracy Suite 5.5-A system for use in Texas elections.

Signed under my hand and seal of office, this 24th day of January 2020.

JOSE A. ESPARZA
DEPUTY SECRETARY OF STATE

State of Michigan)

County of Oakland) Sworn Statement

1. My name is Kayla Toma, I am a law school graduate, a US citizen, an Oakland County resident, and registered voter who resides in Novi, MI.

2. On Election Day, November 3, 2020, I was a volunteer for the Michigan Republican Party and Trump Campaign in Lansing at the Radisson hotel. I signed up for the 12 to 3 PM shift, but ended up working until 12 AM.

3. At the headquarters, I filled out incident reports. I would get calls and emails relating to poll challengers, poll watchers, or concerned voters that called the EDO hotline to report an incident or something that they saw as suspicious.

4. I made notes about incidents as quickly as possible. I was able to receive and note scores of unlawful incidents and report them to the on-site attorneys.

5. If there was a clear violation of election law, I would walk over to the two supervisors, give them a quick description of the incident, and they reported it to the lawyers.

6. Our written reports contained blanks for description of the incident, name, phone, township or city, county, polling location, category of incident (illegal voting, intimidation, electioneering, ballots, machines, election workers, etc.), as well as what was the remedy/response (if any).

7. While making these reports, I began seeing a pattern and frequently encountering illegal situations, and other strange situations, that were very concerning and stuck with me.

8. The following is not an exhaustive list of the reports that were made to me as an EDO Hotline operator, but these stuck out as highly questionable or concerning:

9. During a challenger's shift at the polling location, the election worker preemptively shut down the machine, prior to any malfunction or jam. The election worker, after being approached by the challenger, told the challenger that they could just tell when a machine is about to jam so they were allowed to do this.

10. There were several reports of polling places with their malfunctioning machines

11. While the machines were down in various areas in the morning, afternoon and evening, concerned voters began calling to verify if it was OK that they are being told by election workers to place their ballots in the back of the machine even though the ballots were within reach and could be easily pulled out after they left.

12. Other callers, at separate polling locations, had similar concerns. Instead of putting their ballots in the back of the machine, they were required to place their ballots in a blue square clear bag located just behind the machine.

13. In Detroit, after attempting to enforce the rules re. a provisional ballot, a challenger was met with a hostility by election workers—the challenger pointed out the hostility and they then refused to allow the challenger to see the poll book.

14. Similarly, several challengers were not allowed to stand behind the election workers and were blocked from seeing poll books.

15. In one situation, a challenger was extremely upset that she was told she had to be 10-15 feet away and could not see the poll book. She requested a lawyer to come out right away. Poll workers then became aggressive and bullied her by saying that she was blind for not being able to see a poll book 10-15 feet away from a diagonal angle, and even threatened to have her arrested.

16. In different polling locations, there were several calls made about clear violations of the 100-foot rule. There were posters, pamphlets, and banners, explicitly advocating for Democratic candidates within 100 feet of the front door. The challengers/voters that I spoke with took photographs and videos of these violations, including incidents of literature distributed at the door, pamphlets of lists of Democrats that the voter should vote for within 50 feet of the door, and large Democratic boards and banners within 100 feet of the door.

17. Poll challengers or Republican voters reported a water pipe broken in a precinct. (I heard that in other states water pipes were breaking in Republican districts.)

18. There were several calls from challengers and voters claiming that voters were required to use permanent markers on the ballot; one voter observed that the marker bled through to the back of his ballot, allowing duplication of on the ground that this was a "mistake" by the voter.

19. One caller reported containers/coolers in the polling location which could have contained ballots.

20. One voter reported that Googling "Republican Party near me" and "Republican Party number near me," showed only Democratic hotlines. It wasn't until she searched MI GOP on Facebook that she got the number.

Kayla Toma

Sworn to before me this. 13 Nov, 2020

day of November 2020

INDERPREET NANCY
Notary Public, State of Michigan
County of Wayne
My Commission Expires 01-06-2021
Acting in the County of Wayne

State of Michigan)

County of Oakland) Sworn Statement

1. My name is Kayla Toma, I am a law school graduate, a US citizen, an Oakland County resident, and registered voter who resides in Novi, MI.

2. On Wednesday, November 4, 2020, I received an email from Nicholas Schneider, Michigan Republican Deputy Coalitions Director in Michigan to volunteer.

3. I signed up to be a canvasser in Oakland County, Michigan.

4. On Nov. 4 at about 12:00 I arrived at the 1200 Building in Pontiac, Michigan. At 12:05, I found the Oakland County Elections Office. I told the front desk person that I that I was a canvasser.

5. Inside the office, I noticed a long line and stock pile of boxes, and bins that were stacked on top of one another. The bins were overfilled with folders.

6. The front desk lady showed me two sign-in sheets that were side-by-side. The left side, I was told, was for the general public, whereas the right was for the employees who would be reviewing and deciding on the reports. I signed in at 12:09, but I never signed the time that I left. (I have evidence of the sign-in sheet).

7. The canvassing room was huge, at least 100 feet long. There were five people having lunch close to one another.

8. There were two African females; one younger Caucasian female with dark hair; one older Caucasian female, with a blue shirt, red vest, and light-colored hair that was short; and one husky Caucasian older male.

9. Initially, (I have a video) the rooms were divided by sections of rows; at the end of the room and along the back walls, there were 5 office desks.

10. By the time I left, the room changed drastically. There were no more sections or tables--only chairs pushed to the walls and employees working at their desks at least 100ft away. One desk was 50ft away, so far that I could not observe anything or hear what was said or whispered.

11. The following is the layout (I have photos and videos of the layout) of how the room looked initially:

12. There was at least one chair for every table. There was plexiglass that divided each table. There was at least six tables for each row (3, side-by-side).

13. Each row was long, and there were seven rows. Two rows were laid out on the right side of the room, directly when you walk into the room. Two rows were going vertically: one of those rows were where the employees were eating their lunch.

14. One row was in the near middle to the left side of the room; and two rows were on the left side of the room.

15. Five out of the seven rows had election materials on them, either they were folders, papers, and pencils and highlighters, and they also had very large bins stuffed to the top with large folders right next to the table or on top.

16. When I sat down, I pulled out my phone to take a picture. The older Caucasian female in the vest struck up a conversation with me. She told me everyone was at lunch and that they will not begin working for another 40 minutes. She suggested that I should to leave and return later. She told me it was going to be boring to observe. I said no thanks, I'd wait. She then asked me who am I here with, I told her that I am here as a volunteer to observer as a member of the public. She then asked again, who am I here with, and I replied that I was a Republican volunteer to observe as a canvasser. I could tell that the answer did not sit well with her because she began to get defensive and her mood switched. She then repeated that they were not going to start for another 40 minutes. And I said I'll wait, that I did not mind.

17. Shortly after the exchange, two other Caucasian females, middle-aged, came into the room. I noticed that the person in the red vest, looked at me and then went to those two females who then began whispering and huddling in a pack. One of the females had a manila envelope in her hand. I thought they were acting suspicious; their body language told me that they didn't like me there. So, I took pictures of them. One other woman said that she took a picture of us.

18. As they formed their group, I noticed another group come in. This time it was a group of men. The vested woman ordered him to break down the tables and put it on the outside of the side of the room. She told him to take away the plexiglass.

19. I asked one of the guys what they were doing, and then asked him how was I supposed to observe? He didn't like what was happening. (I have a video) he then walked over to the husky man. The husky man then walked over to me.

20. The husky man (recording number 348,1:35) told me that I needed to contact Rocky (Rajkowski), whom I knew to be a member of the Oakland County GOP.

21. The husky man stated that since we didn't get tables, we had to sit in the chairs, and then I asked how was I supposed to review (observe) the documents and then he said "you don't get to! This isn't what this about. Rocky has been here this morning, to straighten that out. He left with a clear understanding of the process." He told me that I needed to check in with Rocky. I told him that I do not have his contact information, and if he's willing to give it to me, and he said no.

22. I explained that I was unfamiliar with the process and that I did not have Rocky's number, and asked if there were a particular rule that I should be aware of.

23. The husky man then told me that "the people who sent me should have prepared me." I said that I understood, and asked for a particular rule, and he told me MCL 160.

24. After looking this rule up on my phone, I realized that the husky man was intentionally trying to undermine my right to observe since there is no election law under MCL160. I turned on my camera and began recording them breaking down the tables and stacking up the chairs instead.

25. I made sure my chair was not going to be touched, by sitting in it, while it was already dragged off to the side and against the wall.

26. I contacted Mayra Rodriguez, who was involved with the 14th Congressional District. I told her at 12:44 that they were taking tables away, while everyone was out to lunch. She told me that she would let others know. I text her at 12:52 when I spoke with the supervisor, Ellie (or a name that is similar to it), who claimed that the tables were rentals, but they were never taken from the office. They were still on the side of the room off to the side, even at the time I left at 2pm. The tables were there for 2 hours, so they did not appear to rentals.

27. Before they began but after they broke down the tables, an older lady in navy-colored outfit, also a public observer, came back from her lunch break and sat near me. She told me that she was with the League of Women Voters of Michigan. (I have a recording of this conversation, recording number 349, 5:06). She said that the tables were a waste of space and it was good to have it removed because of Covid.

28. She attempted to say that they removed the tables because of social distancing. I said that social distancing meant 6 feet, not 20 feet, apart. I said that plexiglass dividers protected people. Observers were simply unable to observe.

29. Before lunch, the tables were set up, and used by everyone, but when I came at noon, after stating my political affiliation, the guys were called to break down the tables, and cleared out the room. I was fed up. I went out of the room and into the office area.

30. I recorded a conversation with the receptionist, Andie (or Angie or Addie) (I have this recording, recording number 350, at 1:20) Andie was at the front desk.

31. I approached Andie to ask if they are having the chairs placed on top of each other, or against the wall, where the observers were supposed to review the reports, as the distance they wanted was at least 100 feet between my seat and where the workers and reports were. I asked how I was supposed to observe from 100 feet away.

32. Andie stated that "you can't be on top of them." I told her that it is not my intention to be "on top of them" because I have a very low immune system, and even showed her medical proof

33. Andie became sympathetic. I explained that I understand there's high stress levels, hostility, in the workers who may resent that I was judging or checking their jobs, but that was not my intention. My intent was to volunteer to make sure that there was a lawful election.

34. I explained that this was the law. I also apologized to her in advance for asking more questions.

35. She then explained the process: at the end of the night, there was paperwork that each polling location required, including canvass reports. Everything had to be complete, signed properly, and votes balanced—all this was to be recorded.

36. I told her that they wanted me against the wall, with no tables in their room, with workers at their desk at the very end of the far side of the room. I couldn't see what is going on.

37. I said that they wanted me 100 feet away, so I could not observe, just try to listen.

38. Andie then introduced me to Ellie, who was "the second in command to the director". Ellie was a supervisor of the whole office.

39. I asked Ellie what happened if I could not observe or even hear discussions? The workers were whispering and barely talking.

40. Ellie told me that workers do not have to discuss the reports; they could unilaterally decide discrepancies, and correct them on the report that is within the report, without discussing it amongst their peers. I asked if they were going to at least call out the information on the reports and she told me that I wouldn't get to know the numbers, and they didn't have to tell me or discuss anything.

41. I asked why I should be there, i.e. what was the point of having a law for observers to observe if they could not hear or see anything. She couldn't answer this question. I realized that they were all following a pattern. Indeed, she went right back to talking about Covid. In addition, I thought that it was odd that the courthouse could not afford tables and had to rent them. It didn't make sense. Nevertheless, I went back into the room.

42. I heard the lady in the red vest tell the African-American female worker to add two points.

43. Immediately, I walked outside to find Ellie to ask her one last question. Andie told me Ellie is not in her office. Andie told me to tell her my question so she can rely it to Ellie since she is going to go look for her now. I stated to Andie, my question is whether I could ask questions to a person reviewing the reports, i.e. elaborate, after they made a remark? (Recording 352)

44. Ellie answered the question, according to Andie, who then relied that answer. Andie told me that I was not allowed to talk to them. I was not allowed to ask any questions nor obtain any information.

45. At this time, I was so fed up that I texted Mayra and a family friend, saying that I needed a lawyer because I knew these were blatant violations.

46. I also then called Rocky and told him what the workers were claiming. I told him I was leaving because they would not let me hear or know or see anything. I walked out of the room. I told Rocky how they told me that I was unable to view any reports, they didn't need to talk to each other and could unilaterally decide and correct incorrect canvassing reports on their own.

47. I left the room about four times. Whenever I walked out of the room, the older lady in the red vest always followed me. I was being watched. She was listening to my conversations and watching what I was doing.

48. Before going on one restroom break, I placed my purse on the chair and left the room and the office. When I came back into the office, the doors were locked. I looked and pointed at the door after seeing Andie, who opened the door. The lady in the red vest was nearby. She seemed annoyed, and I noticed that two blue coolers that once were placed on top of each other were moved side by side.

49. By the coolers there was a black box that look like a drive or a modem. When the coolers were set side by side, the black box was in front.

50. I believe it was odd that coolers were used because everyone brought their own lunch, and in their own lunch bags. (please see videos of break-down of tables). They never went to the coolers while I was present. I believe that other items, not the regular drinks or food, were kept in the coolers.

Kayla Toma

Sworn to before this 13 NOV. 2020

day of November 2020

INDERPREET NANCY
Notary Public, State of Michigan
County of Wayne
My Commission Expires 01-06-2027
Acting in the County of

MI Unreturned Live Agent - Mass Markets

			11/15/2020	11/16/2020	11/17/2020
3,815	**Completes**		**-**	**990**	**2,825**
248	**Q4=01**	1-Completed Survey	-	36	212
1,257	**VM Message Left**	2-Message Delivered VM	-	388	869
2,310	**up/RC**	3-Refused	-	566	1,744
62,569	**No Answer**	4-No Answer	-	15,482	47,087
3,644	**Numbers/Language**	5-Bad Number	-	570	3,074
100.00%	**List Penetration**				
70,030	**Data Loads**				

Q1 - May I please speak to <lead on screen>?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
958	23.65%	A-Reached Target	-	158	800
142	3.51%	Uncertain	-	57	85
2,950	72.84%	X = Refused	-	883	2,067
0	0.00%				
4,050	**100.00%**	**Sum of All Responses**	**-**	**1,098**	**2,952**

Q2 - Did you request Absentee Ballot in state of MI?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
752	49.64%	A-Yes [Go to Q3]	-	167	585

239	15.78%	B-No [Go to Q4]	-	39	200
50	3.30%	Member) [Go to Q3]	-	5	45
17	1.12%	Member) [Go to Q4]	-	2	15
37	2.44%	E-Unsure [Go to Close A]	-	4	33
11	0.73%	Moment [Go to Close A]	-	2	9
409	27.00%	X = Refused	-	63	346
1,515	**100.00%**	**Sum of All Responses**	**-**	**282**	**1,233**

Q3 - Did you mail your ballot back?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
232	21.28%	A-Yes [Go to Q4]	-	41	191
472	43.30%	B-No [Go to Close A]	-	109	363
10	0.92%	Member) [Go to Q4]	-	2	8
28	2.57%	Member) [Go to Close A]	-	2	26
22	2.02%	Close A]	-	5	17
326	29.91%	X = Refused	-	60	266
			-		
1,090	**100.00%**	**Sum of All Responses**	**-**	**219**	**871**

Q4 - Can you please give us the best phone number to reach you at?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
246	69.89%	A-Yes (Capture Number) [Go to Q5]	-	36	210
106	30.11%	B-Refused [Go to Q5]	-	27	79

0	0.00%				
0	0.00%				
352	**100.00%**	**Sum of All Responses**	**-**	**63**	**289**

Q5 - Can you provide us your email address?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
18	7.26%	01-Yes [Go to Close B]	-	5	13
230	92.74%	02-No [Go to Close B]	-	31	199
0	0.00%				
248	**100.00%**	**Sum of All Responses**	**-**	**36**	**212**

Declaration of Eric Quinnell

1. My name is Dr. Eric Quinnell. I am over 18 years of age, and Iam competent to testify in this action. All of the facts stated herein are true and based on my personal knowledge. All scientific conclusions herein are made to a reasonable degree of scientific certainty in my fields of expertise.

2. I received a Bachelor of Science Degree in Engineering in May of 2004, aMaster of Science in Circuit Design in May of 2006, and a Doctorate in Computer Arithmetic in May of 2007, all from The University of Texas at Austin.

3. I have extensive professional experience as an engineer designing and leading teams engaged in various aspects of circuit architecture and processing. In this capacity, I frequently engage in complex and sophisticated predictive mathematical modeling and statistical analysis. I am required to prepare reports and analysis on the same for presentations to executives and other decision makers. I make this declaration in my personal capacity.

Executive Summary

4. I was asked to analyze the results of the 2020 General Election in Wayne and Oakland Counties,Michigan to determine if there were any statistical anomalies in voting, and if so, to perform a predictive modeling analysis to analyze those anomalies.

5. When compared to the 2016 General Election Democrat to Republican voting ratio, the voting distribution gains for 2020 are well outside the 2016 ratio of a multiple of 1.24 for Wayne County (outside Detroit) and 1.19 for Oakland County.Specifically, for every one additional voter for President Donald J. Trump ("Trump") over the full total from the 2016 General Election in e.g. Oakland County, former Vice-President Joseph R. Biden ("Biden") gained 2.32 additional voters over the full total from 2016 in Wayne County (outside Detroit) and 2.54 additional voters over the full total from 2016 in Oakland County.

6. At a county or district level of analysis, statistical anomalies appear in even greater ratios. For example, in the township of Livonia, Wayne County, which was a majority Republican county in the 2106 General Election, showed Biden gain 3.2new voters to every 1 new Trump voter. Biden also achieved 97% of all additional new votes above 2016General Election total vote sumLivonia, as well as achieved 151% more new votes than all total new registrations in the township, which is a significant mathematical curiosity.

7. Such local mathematical anomalies are not seen in all townships of both Wayne and Oakland Counties, but rather only a select few.

8. I constructed a mathematical model that subtracted out local statistical anomalies and renormalized them according to their 2016 ratios, all while keeping pace with the additional turnout for Trump as a control. This allowed me to quantize a predicted number of anomalous votes per county, which are listed at the end of the Declaration. In all, I identified some 40,771 votes as statistically anomalous in Wayne County (outside Detroit), and some 46,125 votes in Oakland County.

Data Set Selection

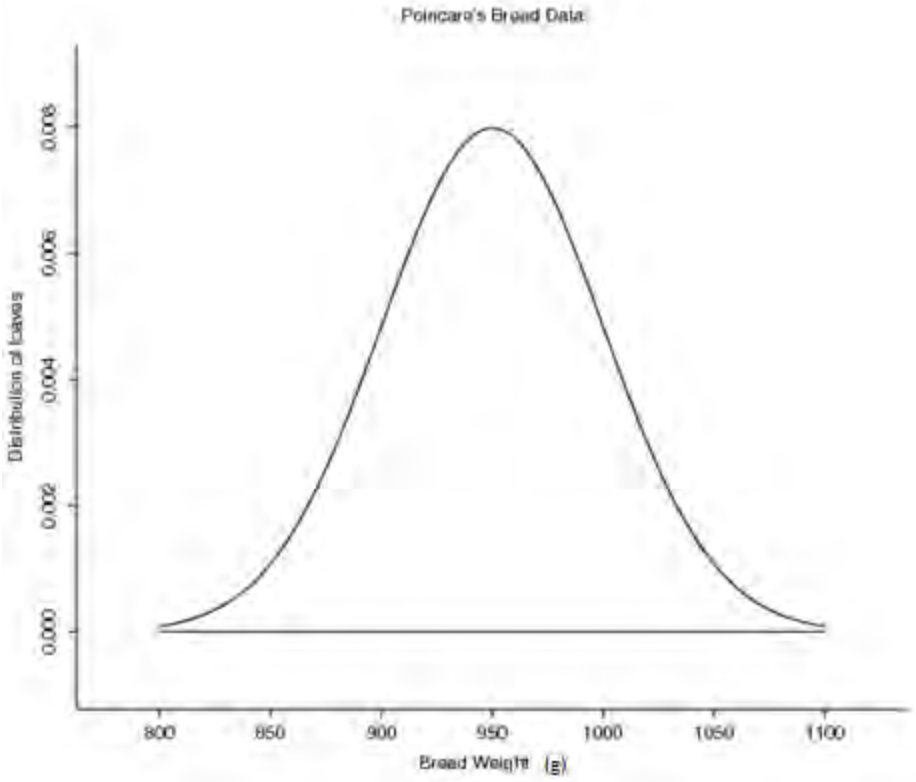
9. I retrieved publicly available data from thehttps://www.waynecounty.com/elected/clerk/election-results.aspxwebsite containing the official Wayne County 2016 and 2020General Election Results. I also retrieved the publicly available Oakland County 2020General Election Results fromhttps://results.enr.clarityelections.com/MI/Oakland/105840/web.264614/#/summaryand the 2016 results fromhttps://www.oakgov.com/clerkrod/elections/Pages/past-election-results.aspxwebsites as of November 24, 2020.

Basic Methodology

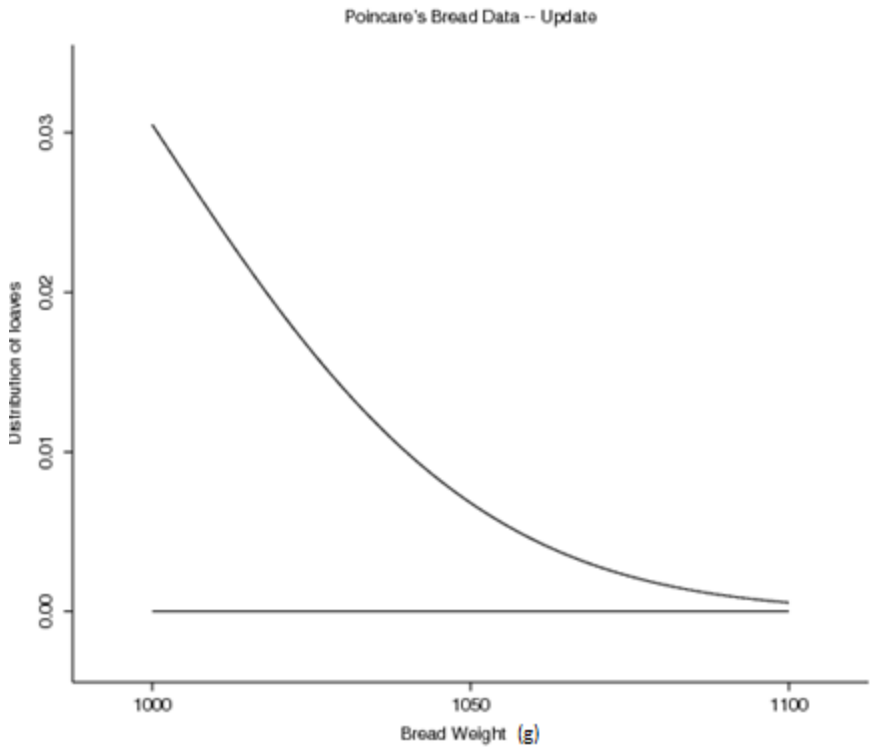
10. The anecdote of the 19th century French mathematician Henri Poincaré and a bread baker under his employ illustrate how one can use statistical inference to detect when agents are adjusting the data of the events under consideration. In particular, even if we only see part of behavior, we canoften infer the rest.

11. Henri wished for a bakery he owned in Paris to produce bread that averaged 1kg in weight and provided capital accordingly to his baker. Every morning, the baker would bring bread to Henri, who, being a mathematician, would weigh the bread and record the weight in a log. After a year, Henri sued the baker for making bread consistently lighter than 1kg.

12. Henri's accusation was backed by the normal distribution of data (more commonly known as the "bell curve" or sometimes "Gaussian") of natural variation across a year of different bread. Henri said that the average (or "mean") of the weight of the bread was centered around 950g, and only weighing 1kg at a lower frequency.This means primitively that the weight of the bread he received was under the specified 1kg more than half the time.



13. The baker admitted his scheme, paid a fine, and was given a second chance to start being honest while working for Henri's bakery. The following year, the pattern repeated—the baker would bring bread to Henri, who would chart the weight. At the end of the year, Henri fired the baker for his continued scheme by showing him the plot of his newly logged bread-weight data.



14. The baker, caught again, asked how Henri managed to root out the scheme with this new graph, as it clearly says the bread wasalwaysat least 1kg. What Henri noticed is that when he plotted the frequencies of weights of the loaves,he did not see a distribution,but instead just a tail. This plot is indicative of the baker throwing away all data pointsless than 1kg.Henri told the baker that he inferred he didn't change his behavior, but merely always brought him the heaviest piece of bread in the day's batch.

15. Henri's correct observation of the statistical anomaly in this particular anecdote is an abuse of the "tail of the curve". In natural phenomena, nearly all repeated behaviors in nature have a universal variance—or a bell curve, albeit of different variants of shapes. History continues to show examples of such observable mathematical anomalies to the tail of a variance curve.

16. In addition to the mean[1]and the standard deviation[2], one can look at other statistics to get a sense of the shape of the

[1]"Mean" is the average value of a dataset.
[2]"Standard Deviation" is the scale of fluctuations about the mean.

distribution. The next two are the skewness[3] and the kurtosis[4]. These statistics are normalized by dividing by the standard deviation, so they are all of a comparable scale; the standard normal has a skewness of 0 and a kurtosis of 3. As we often expect our data to be close to a normal distribution, significant deviations from these values can indicate an event that is statistically anomalous.

Mathematical Signature of Differential Vote Gain Anomaly

17. To set a baseline of the variability of vote pattern changes from the 2016 General Election, I plot the natural distribution of gain/lost votes per specific pricinct in a histogram plot for both Trump in Figure 1 and Biden in Figure 2 vote gains vs the 2016 General Election in the same areas. Oakland County is selected as a simpler example in the data shown:

[3]"Skew" or the "3rd moment" is the expected value of the cube of the fluctuations about the mean divided by the standard deviation. This tells us which side of the distribution has more mass.

[4]"Kurtosis" or the "4th moment" is the expected value of the fourth power of the fluctuations about the mean divided by the standard deviation, which informs us on how much of the tail is outside the main distribution.

	Trump Vote Gain over 2016 Distribution per precinct
MEAN	70.79
STDEV	81.84
Skew	0.61
Kurtosis	11.67

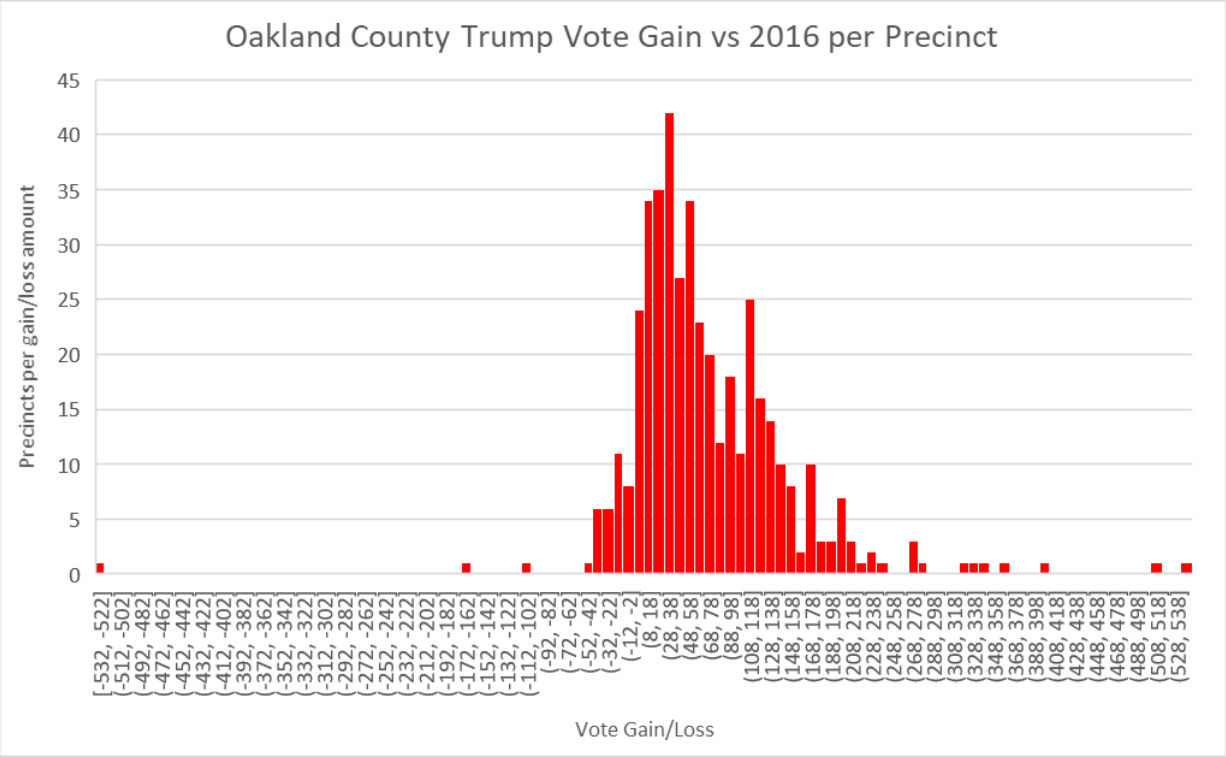


Figure 1. Trump Vote Gain Distribution vs 2016, Oakland County

	Biden Vote Gain over 2016 Distribution per precinct
MEAN	179.83
STDEV	98.88
Skew	1.43
Kurtosis	10.43

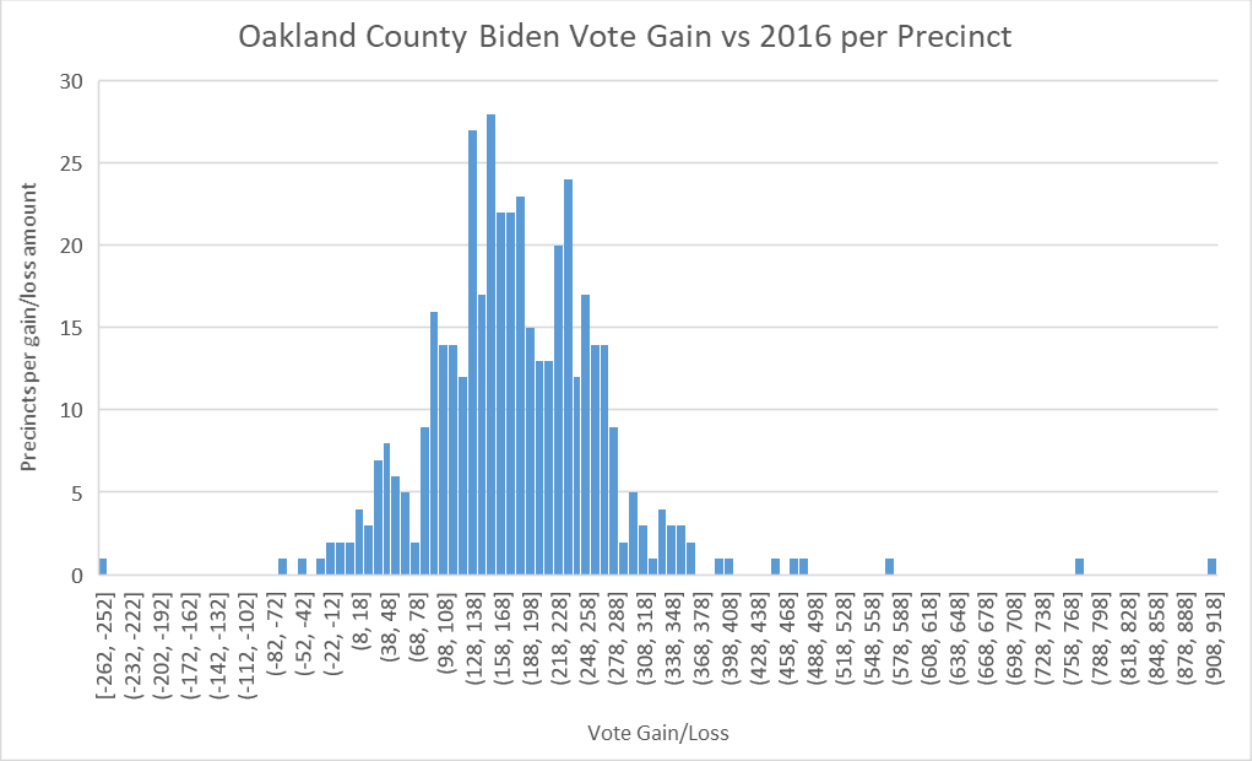


Figure 2. Biden Vote Gain Distribution vs 2016, Oakland County

18. Further, by calculating the gain in votes for both Trump and Biden over the respective 2016 total from the same districts, the Democratic/Republican ratio (D/R ratio or DEM/GOP ratio) of added votes gained for Biden over Trump was a2.54x.

	Gained Votes over 2016 Average per Precinct, Oakland County
Trump	70.79
Biden	179.83
Diff	109.04
2020 DEM/GOPNew Vote Gain Ratio	2.54
%	72D / 28R
2016 DEM/GOP Ratio	1.19
%	54D / 46R

19. As an example of the anomalous vote gains above the norm, consider the township of Troy, broken into precincts. Nearly every single precinct first achieves the entire 2016 vote total for each party, but then a new population of votes skews excessively in favor of the Biden vote – resulting in a "new vote population" that is voting 82 D / 20 Rratio in a township that as recent as 2016 was almost evenly split at 51 D/ 49 R. Additionally, the votes gained by Biden well outpace even the new registrations in the township – gaining 109% of the new registered voters and 98% of the new votes above 2016.

2016						2020 Gain						
Precinct	Trump	Clinton	Total	Dem/Rep	% Dem	New Trump	New Biden	New Total	New Registered	Gain Dem/Rep	Dem % of New Registered	Dem % of New Votes
Troy, Precinct 1	462	434	944	0.94	46%	40	226	230	199	5.65	114%	98%
Troy, Precinct 2	805	792	1680	0.98	47%	53	231	217	189	4.36	122%	106%
Troy, Precinct 3	791	572	1446	0.72	40%	137	270	343	337	1.97	80%	79%
Troy, Precinct 4	974	998	2064	1.02	48%	48	350	341	273	7.29	128%	103%
Troy, Precinct 5	683	453	1193	0.66	38%	18	120	104	72	6.67	167%	115%
Troy, Precinct 6	204	177	402	0.87	44%	19	55	61	40	2.89	138%	90%
Troy, Precinct 7	571	625	1251	1.09	50%	49	197	201	184	4.02	107%	98%
Troy, Precinct 8	536	731	1337	1.36	55%	29	153	125	68	5.28	225%	122%
Troy, Precinct 9	843	746	1683	0.88	44%	134	188	254	216	1.40	87%	74%
Troy, Precinct 10	760	673	1518	0.89	44%	21	306	263	273	14.57	112%	116%
Troy, Precinct 11	754	680	1496	0.90	45%	-12	183	123	87	-15.25	210%	149%
Troy, Precinct 12	523	534	1103	1.02	48%	56	128	155	137	2.29	93%	83%
Troy, Precinct 13	939	1037	2112	1.10	49%	37	312	251	217	8.43	144%	124%
Troy, Precinct 14	763	679	1508	0.89	45%	50	244	249	270	4.88	90%	98%
Troy, Precinct 15	695	687	1443	0.99	48%	2	288	254	200	144.00	144%	113%
Troy, Precinct 16	549	599	1223	1.09	49%	60	197	205	224	3.28	88%	96%
Troy, Precinct 17	746	830	1644	1.11	50%	-35	219	133	139	-6.26	158%	165%
Troy, Precinct 18	618	529	1208	0.86	44%	-14	177	127	111	-12.64	159%	139%
Troy, Precinct 19	595	531	1189	0.89	45%	-32	224	157	73	-7.00	307%	143%
Troy, Precinct 20	812	766	1647	0.94	47%	24	267	246	198	11.13	135%	109%
Troy, Precinct 21	486	536	1096	1.10	49%	67	194	214	213	2.90	91%	91%
Troy, Precinct 22	838	1008	1941	1.20	52%	82	320	329	325	3.90	98%	97%
Troy, Precinct 23	866	954	1908	1.10	50%	124	344	403	380	2.77	91%	85%
Troy, Precinct 24	801	669	1554	0.84	43%	181	178	311	295	0.98	60%	57%
Troy, Precinct 25	724	802	1604	1.11	50%	153	216	329	363	1.41	60%	66%
Troy, Precinct 26	616	699	1421	1.13	49%	120	332	369	330	2.77	101%	90%
Troy, Precinct 27	404	671	1131	1.66	59%	128	150	246	280	1.17	54%	61%
Troy, Precinct 28	380	679	1109	1.79	61%	60	155	173	149	2.58	104%	90%
Troy, Precinct 29	840	885	1848	1.05	48%	35	236	179	168	6.74	140%	132%
Troy, Precinct 30	202	199	425	0.99	47%	-12	81	56	27	-6.75	300%	145%
Troy, Precinct 31	319	238	590	0.75	40%	24	136	141	95	5.67	143%	96%
Precinct	Trump	Clinton	Total	Dem/Rep	% Dem	New Trump	New Biden	New Total	New Registered	Gain Dem/Rep	Dem % of New Registered	Dem % of New Votes
TOTAL	20099	20413	42718	1.02	48%	1646	6677	6789	6132	4.06	109%	98%
			2016 Troy Dem/Rep	51D / 49R					2020 Troy Gain Dem/Rep	80D / 20R		

20. For completeness, I now list the similar observations for Wayne County, specifically in the townships outside Detroit. The D/R ratioof added votes gained for Biden over Trump in this area was a 2.32x.

Gained Votes over 2016 Average

	per Precinct, Wayne County (outside Detroit)
Trump	79.85
Biden	185.41
Diff	105.56
2020 DEM/GOP New Vote Gain Ratio	2.32
%	70D / 30R
2016 DEM/GOP Ratio	1.24
%	55D / 45R

21. As an example of the anomalous vote gains above the norm in Wayne County,consider the township of Livonia, broken into precincts. Nearly every single precinct first achieves the entire 2016 vote total for each party, but then a new population of votes skews excessively in favor of the Biden vote – resulting in a "new vote population" that is voting 76 D / 24 R ratio in a township that as recent as 2016 was Republican. Additionally, the votes gained by Biden well outpace even the new registrations in the township – gaining 151% of the new registered voters and 97% of the new votes above 2016.

2016						2020 Gain						
Precinct	Trump	Clinton	Total	Dem/Rep	% Dem	New Trump	New Biden	New Total	New Registered	Gain Dem/Rep	Dem % of New Registered	Dem % of New Votes
Livonia Pct 1A	650	783	1558	1.20	50%	119	263	310	272	2.21	97%	85%
Livonia Pct 1B	310	348	706	1.12	49%	51	106	137	94	2.08	113%	77%
Livonia Pct 2A	630	634	1337	1.01	47%	58	214	230	158	3.69	135%	93%
Livonia Pct 3A	467	492	1035	1.05	48%	64	125	132	105	1.95	119%	95%
Livonia Pct 3B	854	722	1680	0.85	43%	87	183	214	132	2.10	139%	86%
Livonia Pct 4A	1034	834	1961	0.81	43%	44	233	217	137	5.30	170%	107%
Livonia Pct 7A	823	638	1514	0.78	42%	31	164	168	102	5.29	161%	98%
Livonia Pct 8A	752	398	1212	0.53	33%	20	134	123	71	6.70	189%	109%
Livonia Pct 8B	598	426	1082	0.71	39%	18	135	114	30	7.50	450%	118%
Livonia Pct 9A	947	635	1651	0.67	38%	12	264	238	146	22.00	181%	111%
Livonia Pct 10A	615	478	1168	0.78	41%	47	153	152	105	3.26	146%	101%
Livonia Pct 11A	797	715	1625	0.90	44%	53	218	193	95	4.11	229%	113%
Livonia Pct 12A	544	671	1293	1.23	52%	78	159	183	146	2.04	109%	87%
Livonia Pct 13A	637	709	1426	1.11	50%	44	180	177	131	4.09	137%	102%
Livonia Pct 14A	755	721	1582	0.95	46%	53	163	143	60	3.08	272%	114%
Livonia Pct 15A	732	563	1361	0.77	41%	74	140	181	114	1.89	123%	77%
Livonia Pct 16A	713	506	1294	0.71	39%	84	133	176	106	1.58	125%	76%
Livonia Pct 16B	479	408	961	0.85	42%	46	85	83	44	1.85	193%	102%
Livonia Pct 178	646	493	1219	0.76	40%	114	226	287	297	1.98	76%	79%
Livonia Pct 17A	732	488	1284	0.67	38%	-61	136	42	-111	-2.23	-123%	324%
Livonia Pct 18A	884	597	1552	0.68	38%	57	161	171	88	2.82	183%	94%
Livonia Pct 19A	674	494	1244	0.73	40%	57	148	158	103	2.60	144%	94%
Livonia Pct 19B	768	598	1472	0.78	41%	69	183	181	68	2.65	269%	101%
Livonia Pct 20A	861	602	1555	0.70	39%	32	208	183	90	6.50	231%	114%
Livonia Pct 21A	715	566	1369	0.79	41%	39	219	207	100	5.62	219%	106%
Livonia Pct 22A	712	576	1396	0.81	41%	33	223	192	119	6.76	187%	116%
Livonia Pct 22B	592	486	1142	0.82	43%	32	128	125	86	4.00	149%	102%
Livonia Pct 238	508	325	876	0.64	37%	119	390	498	524	3.28	74%	78%
Livonia Pct 23A	579	550	1199	0.95	46%	-31	-89	-164	-315	2.87	28%	54%
Livonia Pct 24B	492	591	1149	1.20	51%	102	235	313	182	2.30	129%	75%
Livonia Pct 24A	535	610	1215	1.14	50%	69	126	155	161	1.83	78%	81%
Livonia Pct 25A	358	358	784	1.00	46%	24	122	105	107	5.08	114%	116%
Livonia Pct 31A	654	561	1286	0.86	44%	69	197	224	152	2.86	130%	88%
Livonia Pct 31B	600	520	1199	0.87	43%	45	193	190	172	4.29	112%	102%
Livonia Pct 32A	739	537	1345	0.73	40%	73	148	178	115	2.03	129%	83%
Livonia Pct 33A	850	680	1616	0.80	42%	86	225	257	136	2.62	165%	88%
Livonia Pct 34A	683	746	1532	1.09	49%	83	257	280	158	3.10	163%	92%
Livonia Pct 34B	651	591	1345	0.91	44%	48	215	197	126	4.48	171%	109%
Livonia Pct 34C	539	487	1107	0.90	44%	25	187	154	119	7.48	157%	121%
Livonia Pct 35A	517	468	1085	0.91	43%	67	130	121	65	1.94	200%	107%
Livonia Pct 35B	350	343	753	0.98	46%	28	144	135	62	5.14	232%	107%
Livonia Pct 35C	330	315	703	0.95	45%	45	121	121	70	2.69	173%	100%
Livonia Pct 36A	407	462	944	1.14	49%	62	145	163	151	2.34	96%	89%
Livonia Pct 36B	534	469	1079	0.88	43%	104	165	219	142	1.59	116%	75%
Precinct	Trump	Clinton	Total	Dem/Rep	% Dem	New Trump	New Biden	New Total	New Registered	Gain Dem/Rep	Dem % of New Registered	Dem % of New Votes
TOTAL	28247	24194	55896	0.86	43%	2373	7595	7863	5015	3.20	151%	97%
			2016 Dem/Rep	46D / 54R					2020 Gain Dem/Rep	76D / 24 R		

Predictive Model to Identify Mathematically Anomalous Vote Totals

22. I constructed a reverse engineeredpredictive model to identify and correct where such anomalies existed at a precinct level by using the 2016 General Election D/R total ratio per precinct and comparing them to the same ratio in the same precinct in 2020. The Trump 2020 General Election vote gain distributions are used as a

control for the increase in turnout (generally) in both counties as applied to both campaigns.The model is not presuming a standard normal distribution, but rather one with a mean that increases according to the 2016 General Election D/R ratio within a reasonable variance.

23. To achieve this, I did not create a distribution model from scratch. Rather, I began with the actual Biden 2020 General Election vote distribution and corrected anomalies from the original, district by district, until the distribution targets were achieved.

24. The difference between the raw 2020 General Election data and the reverse-engineered predictive model follows for Oakland County.

The 2020 General Election Oakland County raw data results are below:

2020 Actual	**Register**	**Voted**	**Biden**	**Trump**	**D/R**
	1035172	771991	434148	325971	**1.33**
Turnout	75%		56%	42%	

The predicted model, holding turnout and 2016 General Election ratios consistent and correlated to the Trump baseline in the 2020 General Election for Oakland County, are below:

Total Predicted 2020	**Register**	**Voted**	**Biden**	**Trump**	**D/R**	**Excess Votes**
	1035172	750646	388023	325971	**1.19**	46,125
turnout	73%		52%	43%		

The difference between the 2020 General Election raw data and the predicted correction show exceedingly large vote block gains to only specific townships.

25. The difference between the raw 2020 General Election data and the reverse-engineered predictive model follows for Wayne County (outside Detroit).

The 2020 General Election Wayne County (outside Detroit) raw data results are below:

2020 Actual	**Register**	**Voted**	**Biden**	**Trump**	**D/R**
	900050	620483	356234	251664	1.42
Turnout	68.9%		57.4%	40.6%	

The predicted model, holding turnout and 2016 General Election ratios consistent and correlated to the Trump baseline in the 2020 General Election for Wayne County (outside Detroit), are below:

Total Predicted 2020	**Register**	**Voted**	**Biden**	**Trump**	**D/R**	**Excess Votes**
	900050	580056	315807	251664	1.25	40,771
turnout	64.4%		54.4%	43.4%		

Again, the difference between the 2020 General Election raw data and the predicted correction show exceedingly large vote block gains to only specific townships.

Full Predictive List ofBiden Vote Gains Outside the Predicted Distribution in Wayne and Oakland Counties

26. While some counties hold their 2016 ratio gains well within the historical variance and match the model perfectly, other counties or super districts stand out. Specifically, first in Oakland County,~266 precinctsof ~434precincts (with someprecincts merged to average out redistricting) have a sum of ~46,125votes in excess ofthe predicted model. These votes are statistically anomalous.

27. As an example, the top 6 set of townships in Oakland County significantly exceeding the predicted model are shown:

Township	**Excess Votes**
Troy	4781
Royal Oak	4152
Novi	3911
Farmington Hills	3598
Rochester Hills	3597
Bloomfield	2696

With the aforementioned township of Troy listed like this:

Township	**Precinct**	**Excess Votes above Prediction**
Troy		4781
	Troy, Precinct 1	188
	Troy, Precinct 2	179
	Troy, Precinct 3	171
	Troy, Precinct 4	301
	Troy, Precinct 5	108
	Troy, Precinct 6	39
	Troy, Precinct 7	143
	Troy, Precinct 8	113
	Troy, Precinct 9	0
	Troy, Precinct 10	287
	Troy, Precinct 11	194
	Troy, Precinct 12	71
	Troy, Precinct 13	271
	Troy, Precinct 14	200
	Troy, Precinct 15	286
	Troy, Precinct 16	132
	Troy, Precinct 17	258
	Troy, Precinct 18	189
	Troy, Precinct 19	253

	Troy, Precinct 20	244
	Troy, Precinct 21	120
	Troy, Precinct 22	221
	Troy, Precinct 23	207
	Troy, Precinct 24	0
	Troy, Precinct 25	0
	Troy, Precinct 26	196
	Troy, Precinct 27	0
	Troy, Precinct 28	0
	Troy, Precinct 29	199
	Troy, Precinct 30	93
	Troy, Precinct 31	118

28. Repeating for Wayne County (outside Detroit),~266 precinctsof ~434precincts (with someprecincts merged to average out redistricting) have a sum of ~46,125votes in excess of the predicted model. These votes are statistically anomalous.

29. As an example, the top 6 set of townships in Wayne County (outside Detroit) significantly exceeding the predicted model are shown:

Township	**Excess Votes**
Canton	5735
Livonia	5428
Redford	4159
Gr Pointe	3052
Taylor	2891
Westland	2559

With the aforementioned township of Livonia listed like this:

Township	**Precinct**	**Excess Votes above Prediction**
Livonia		5428
	Livonia Pct 1A	120
	Livonia Pct 1B	49
	Livonia Pct 2A	156
	Livonia Pct 3A	58
	Livonia Pct 3B	109
	Livonia Pct 4A	198
	Livonia Pct 7A	140
	Livonia Pct 8A	123
	Livonia Pct 8B	122
	Livonia Pct 9A	256
	Livonia Pct 10A	116
	Livonia Pct 11A	170
	Livonia Pct 12A	63
	Livonia Pct 13A	131
	Livonia Pct 14A	112
	Livonia Pct 15A	83
	Livonia Pct 16A	73
	Livonia Pct 16B	46
	Livonia Pct 178	139
	Livonia Pct 17A	45
	Livonia Pct 18A	123
	Livonia Pct 19A	106
	Livonia Pct 19B	129
	Livonia Pct 20A	186
	Livonia Pct 21A	188
	Livonia Pct 22A	196
	Livonia Pct 22B	102
	Livonia Pct 238	314
	Livonia Pct 23A	60
	Livonia Pct 24B	112
	Livonia Pct 24A	47
	Livonia Pct 25A	98
	Livonia Pct 31A	138

	Livonia Pct 31B	154
	Livonia Pct 32A	95
	Livonia Pct 33A	156
	Livonia Pct 34A	166
	Livonia Pct 34B	171
	Livonia Pct 34C	164
	Livonia Pct 35A	69
	Livonia Pct 35B	117
	Livonia Pct 35C	78
	Livonia Pct 36A	75
	Livonia Pct 36B	74

I declare under the penalty of perjury that the foregoing is true and correct.

November 25, 2020

_____

Eric Quinnell, Ph.D.

Matt Braynard @MattBraynard · Nov 20

Update:

-Residency Analysis of ABS/EV Voters

These are the two indicators of someone no longer eligible to vote due to residency:

NCOA = Voters who filed change of address to another state.
SVR = Subsequent Voter Registration in another state
Merged = NCOA+SVR Deduped

42 1K 2.1K

Matt Braynard @MattBraynard · Nov 20

State / NCOA / SVR / Merged
AZ / 5,084 / 744 / 5,790
GA / 15,700 / 4926 / 20,311
MI / 12,120 / 1,170 / 13,248
NV / 5,145 / 3,401 / 8,502
PA / 7,426 / 7,051 / 14,477
WI / 6,207 / 765 / 6,966

9 178 493

Matt Braynard @MattBraynard · Nov 20

The SVR component was greatly hampered by the lack of reliable DOB from state voter records and/or commercial vendors, so these numbers are all artificially low. We only matched when we had a full DOB we were confident of.

3 82 397

Matt Braynard @MattBraynard · Nov 20

- Double ABS/EV Voter Analysis

Voters who cast early/absentee in two+ states, and not including anyone who voted in person on E-Day as that data is not widely available. If it were, these numbers would be much higher.

Counts are also artificially low due to DOB issues.

4 82 360

Matt Braynard on Twitter: "Update: -Residency Analysis of ABS/EV Voters These are the two indicators of someone no longer eligible to vote due to residency: NCOA = Voters who filed change of address to another state. SVR = Subsequent Voter Registration in another state Merged = NCOA+SVR Deduped" / Twitter

Affidavit of Russell James Ramsland, Jr.

1. My name is Russell James Ramsland, Jr., and I am a resident of Dallas County, Texas. I hold an MBA from Harvard University, and a political science degree from Duke University. I have worked with the National Aeronautics and Space Administration (NASA) and the Massachusetts Institute of Technology (MIT), among other organizations, and have run businesses all over the world, many of which are highly technical in nature. I have served on technical government panels.

2. I am part of the management team of Allied Security Operations Group, LLC, (ASOG). ASOG is a group of globally engaged professionals who come from various disciplines to include Department of Defense, Secret Service, Department of Homeland Security, and the Central Intelligence Agency. It provides a range of security services, but has a particular emphasis on cybersecurity, open source investigation and penetration testing of networks. We employ a wide variety of cyber and cyber forensic analysts. We have patents pending in a variety of applications from novel network security applications to SCADA (Supervisory Control and Data Acquisition) protection and safe browsing solutions for the dark and deep web. For this report, I have relied on these experts and resources.

3. In November 2018, ASOG analyzed audit logs for the central tabulation server of the ES&S Election Management System (EMS) for the Dallas, Texas, General Election of 2018. Our team was surprised at the enormous number of error messages that should not have been there. They numbered in the thousands, and the operator ignored and overrode all of them. This led to various legal challenges in that election, and we provided evidence and analysis in some of them.

4. As a result, ASOG initiated an 18-month study into the major EMS providers in the United States, among which is Dominion that provides EMS services in Michigan. We did thorough background research of the literature and discovered there is quite a history from both Democrat and Republican stakeholders in the vulnerability of Dominion. The State of Texas rejected Dominion's certification for use there due to vulnerabilities. Next, we began doing passive penetration testing into the vulnerabilities described in the literature and confirmed for ourselves that in many cases, vulnerabilities already identified were still left open to exploit. We also noticed a striking similarity between the approach to software and EMS systems of ES&S and Dominion. This was logical since they share a common ancestry in the Diebold voting system.

5. Over the past three decades, almost all of the states have shifted from a relatively low-technology format to a high-technology format that relies heavily on a handful of private services companies. These private companies supply the hardware and software, often handle voter registrations, hold the voter records, partially manage the elections, program counting the votes and report the outcomes. Michigan is one of those states.

6. These systems contain a large number of vulnerabilities to hacking and tampering, both at the front end where Americans cast their votes, and at the back end where the votes are stored, tabulated, and reported. These vulnerabilities are well known, and experts in the field have written extensively about them.

7. Dominion ("Dominion") is a privately held company that provides election technologies and services to government jurisdictions. Numerous counties across the state of Michigan use the Dominion Election Management System. The Dominion system has both options to be an electronic, paperless voting system with no permanent record of the voter's choices, paper ballot based system or hybrid of those two.

8. The Dominion Election Management System's central accumulator does not include a protected real-time audit log that maintains the date and time stamps of all significant election events. Key components of the system utilize unprotected logs. Essentially this allows the internal operator or an external attacker the opportunity to arbitrarily add, modify, or remove log entries, causing the machine to log election events. The system makes the creation and maintenance of various logs voluntary, so that the user has a choice to "not retain" or "conceal" their actions. Further, when logs are left unprotected and can be altered, they no longer serve the functional purpose of provided a transparent audit log to the public or election officials.

9. My colleagues and I at ASOG have studied the information that is publicly available concerning the November 3, 2020, election results. Based on the significant anomalies and red flags that we have observed, we believe to a reasonable degree of professional certainty that election results have been manipulated within the Dominion system in Michigan. As one example, Dr. Andrew Appel, Princeton Professor of Computer Science and Election Security Expert has observed, with reference to Dominion Voting machines, "I figured out how to make a slightly different computer program that just before the polls were closed it switches some votes around from one candidate to another. I wrote that computer program into a memory chip and now to hack a voting machine you just need 7 minutes alone with it and a screwdriver." We list below other red flags that our team has uncovered. Until a thorough forensic analysis of the voting system hardware and software is conducted, it will be impossible to know for certain.

10. One red flag has been seen in Antrim County, Michigan. In Michigan we have seen reports of 6,000 votes in Antrim County that were switched from Donald Trump to Joe Biden and were only discoverable through a hand counted manual recount. While the first reports have suggested that it was due to a "glitch" after an update, it was recanted and later attributed to "clerical error." This change is important because if it were not due to clerical error, but due to a "glitch" emanating from an update, the system would be required to be "re-certified" according to Dominion officials. This was not done. We are skeptical of these assurances as we know firsthand this has many other plausible explanations and a full investigation of this event needs to be conducted as there are a reported 47 other counties using essentially the same system in Michigan. It is our belief (based on the information

we have acquired to this point) that the problem most likely did occur due to a glitch where an update file didn't properly synchronize the ballot barcode generation and reading portions of the system. If that is indeed the case, there is no reason to assume this would be an isolated error. This "glitch" would either cause the vote to be misread and directed to another candidate on the ballot or cause the entire ballot upload batch to read as zero in the tabulation processor. This in turn hands over to the system operator at the voting site full control of vote allocation for the entire batch of ballots. We also observed provisional ballots were accepted properly but in-person ballots were being rejected (zeroed out and/or changed - flipped). Because of the highly vulnerable nature of these systems to error and exploits, it is likely that some, or all of the other counties in MI with these systems may have experience the same problem.

11. Another statistical red flag can be observed in Michigan where even the very limited remaining public data reveals 643 precincts with voter turn-out above 80%, according to county records. Further if these very limited remaining public data votes were normalized to 80% turnout (still 15%+/- above normal), the excess votes are at least 36,812 over the maximum that could be expected. We anticipate that precincts with excess voter turnout will be even higher with complete public data (Some larger precincts in Wayne Co and others are no longer publicly reporting their data).

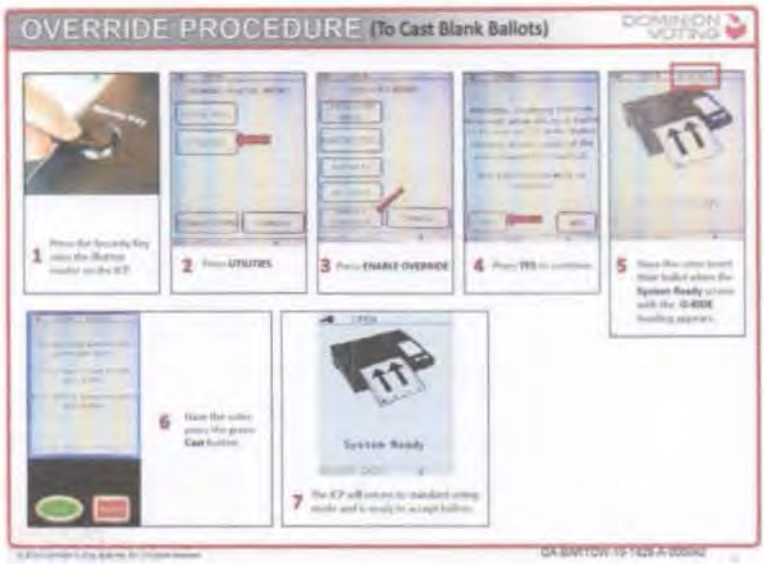
Precinct/Township	% Turnout
City of North Muskegon	781.91%
Zeeland Charter Township	460.51%
Grout Township	215.21%
City of Muskegon	205.07%
City of Detroit	139.29%
Spring Lake Township	120.00%
Greenwood Township	100.00%
Hart Township	100.00%
Leavitt Township	100.00%
Newfield Township	100.00%
Otto Township	100.00%
Pentwater Township	100.00%
Shelby Township	100.00%
Shelby Township	100.00%
Weare Township	100.00%
City of Hart	100.00%
Grand Island Township	96.77%
Tallmadge Charter Township	95.24%
Fenton	93.33%
Bohemia Twp	90.63%
Zeeland Charter Township	90.59%

12. The following data strongly suggests that the additive algorithm (a feature enhancement referred to as "ranked choice voting algorithm" or "RCV") was activated in the code as shown in the Democracy Suite EMS Results Tally and Reporting User Guide, Chapter 11, Settings 11.2.2. It reads in part, "**RCV METHOD: This will select the specific method of tabulating RCV votes to elect a winner.**" For instance, blank ballots can be entered into the system and treated as "write-ins." Then the operator can enter an allocation of the write-ins among candidates as he or she wishes. The result then awards the winner based on "points" that the algorithm computes, not actual voter votes. The fact that we observed raw vote data coming directly from the Dominion data feed that includes decimal places proves that the winner was selected by an algorithm, and not individual voter's choice. Otherwise, votes would be solely represented as whole numbers (votes cannot possibly be added up and have decimal places reported). Below is an excerpt from Dominion's direct feed to news outlets showing actual calculated votes with decimals.

state	timestamp	eevp	trump	biden	TV	BV
michigan	2020-11-04T06:54:48Z	64	0.534	0.448	1925865.66	1615707.52
michigan	2020-11-04T06:56:47Z	64	0.534	0.448	1930247.664	1619383.808
michigan	2020-11-04T06:58:47Z	64	0.534	0.448	1931413.386	1620361.792
michigan	2020-11-04T07:00:37Z	64	0.533	0.45	1941758.975	1639383.75
michigan	2020-11-04T07:01:46Z	64	0.533	0.45	1945297.562	1642371.3
michigan	2020-11-04T07:03:17Z	65	0.533	0.45	1948885.185	1645400.25

13. Yet another statistical red flag in Michigan concerns the dramatic shift in votes between the two major party candidates as the tabulation of the turnout increased. A significant irregularity surfaces. Until the tabulated voter turnout reached approximately 83%, Trump was generally winning between 55% and 60% of every turnout point. Then, after the counting was closed at 2:00 am, the situation dramatically reversed itself, starting with a series of impossible spikes shortly after counting was supposed to have stopped. The several spikes cast almost solely for Biden could easily be produced in the Dominion EMS control system by pre-loading batches of blank ballots in files such as Write-Ins, then casting them almost all for Biden using the Override Procedure (to cast Write-In, Blank, or Error ballots) that is available to the operator of the system. A few batches of blank ballots could easily produce a reversal this extreme; a reversal that is almost as statistically difficult to explain as is the impossibility of the votes cast to the number of voters described in Paragraph 11 above. See Melissa Carone Affidavit, attached.

Dominion also has a "Blank Ballot Override" function. Essentially a save for later bucket that can be manually populated later.



13. The final red flag is perhaps the greatest. Something occurred in Michigan that is physically impossible, indicating the results were manipulated on election night within the EMS. The event as reflected in the data are the 4 spikes totaling 384,733 ballots allegedly processed in a combined interval of only 2 hour and 38 minutes. This is physically impossible given the equipment available at the 4 referenced locations (precincts/townships). We looked at ballots processed and cross referenced the serial numbers and types of the scanning devices used at each location to determine the amount of ballot processing capacity per the equipment performance specifications. The Model DRM16011 processes 60 images/min. without accounting for paper jams, replacement cover sheets or loading time, so we calculate 2,000 ballots/hr/machine in field conditions, which is probably generous. This calculation yields a sum of 94,867 ballots as the maximum number of ballots that could be processed. It should be noted that in the event of a jam and the counter is not reset, the ballots can be run through again effectively duplicating them – This was noted in Ms. Carone's affidavit, a Dominion Contract Employee working in Detroit (attached). The existence of the spike is indicative of a manual adjustment either by the operator of the system (see paragraph 12 above) or an attack by outside actors. **In any event, there were 289,866 more ballots processed in the time available for processing in four precincts/townships, than there was processing capacity.** A look at the graph below demonstrates this.

14. Based on the foregoing, I believe these statistical anomalies and impossibilities compels the conclusion to a reasonable degree of professional certainty that the vote count in Michigan, and in Wayne County, in particular for candidates for President contain at least 289,866 illegal votes that must be disregarded.

Further affiant sayeth naught.

Russell James Ramsland, Jr.

11/24/2020
Date

Sworn before me on 11/24/2020

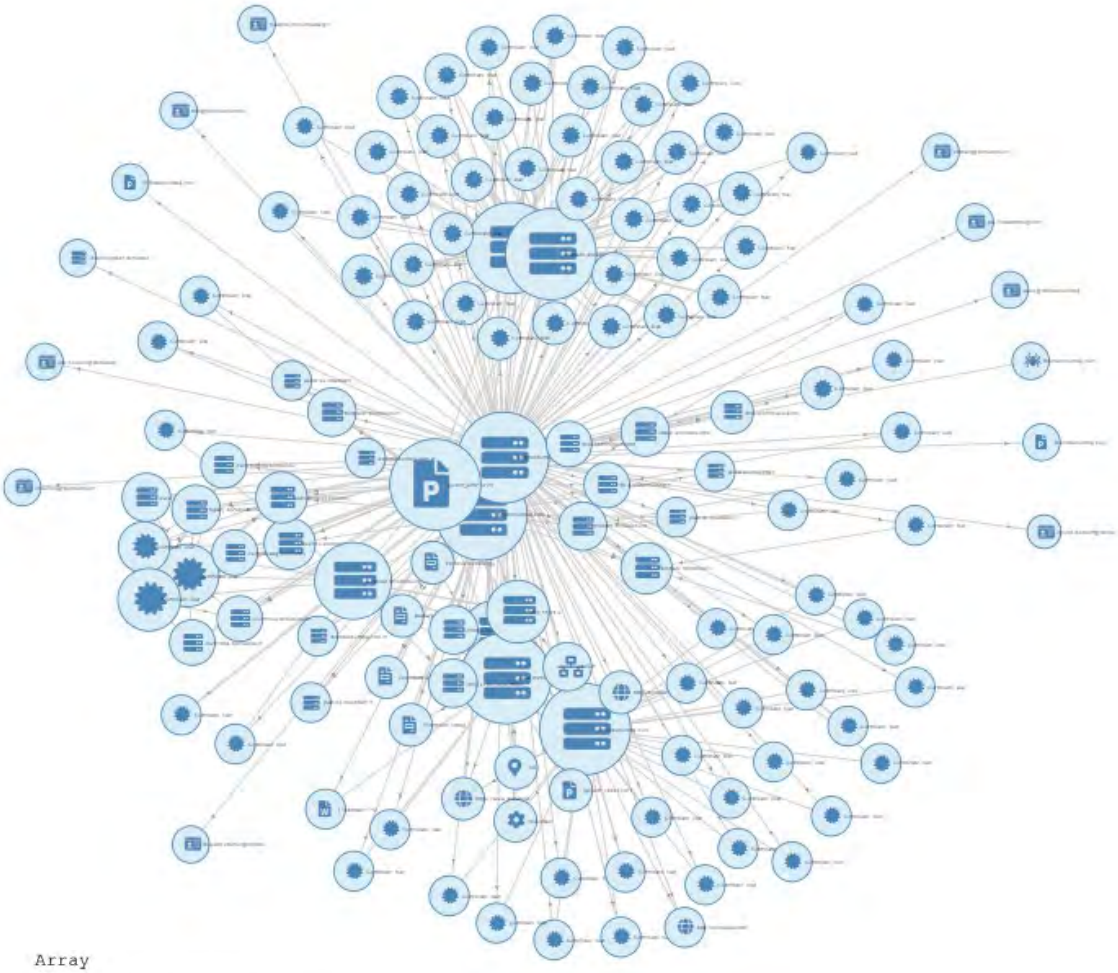
Notary public: Sarah Agee

SARAH AGEE
Notary Public, State of Texas
Comm. Expires 08-20-2022
Notary ID 131688896

Declaration of [redacted]

Pursuant to 28 U.S.C Section 1746, [redacted] make the following declaration.

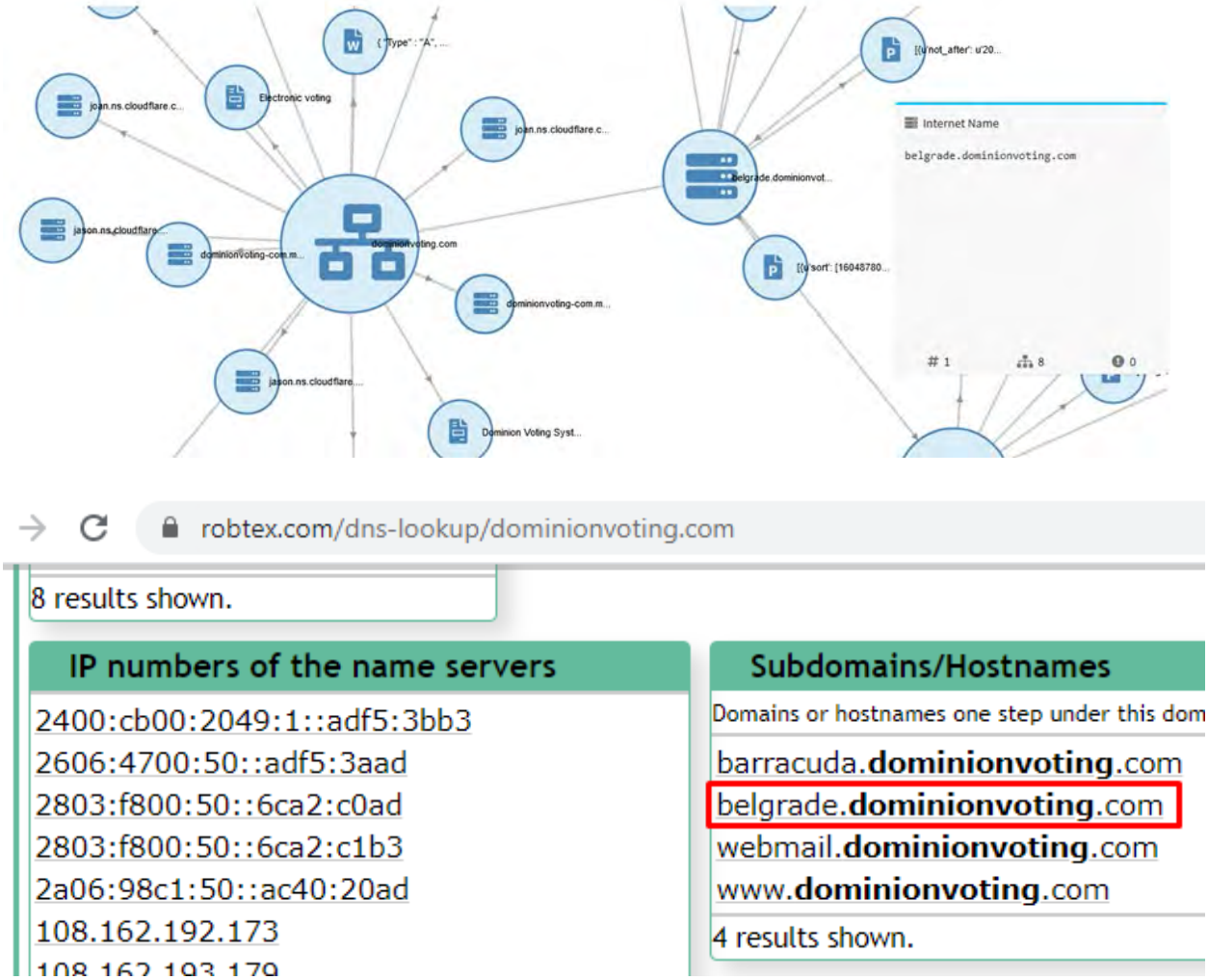
1. I am over the age of 21 years and I am under no legal disability, which would prevent me from giving this declaration.
2. I was an electronic intelligence analyst under 305th Military Intelligence with experience gathering SAM missile system electronic intelligence. I have extensive experience as a white hat hacker used by some of the top election specialists in the world. The methodologies I have employed represent industry standard cyber operation toolkits for digital forensics and OSINT, which are commonly used to certify connections between servers, network nodes and other digital properties and probe to network system vulnerabilities.
3. I am a US citizen and I reside [redacted] location in the United States of America.
4. Whereas the Dominion and Edison Research systems exist in the internet of things, and whereas this makes the network connections between the Dominion, Edison Research and related network nodes available for scanning,
5. And whereas Edison Research's primary job is to report the tabulation of the count of the ballot information as received from the tabulation software, to provide to Decision HQ for election results,
6. And whereas Spiderfoot and Robtex are industry standard digital forensic tools for evaluation network security and infrastructure, these tools were used to conduct public security scans of the aforementioned Dominion and Edison Research systems,
7. A public network scan of Dominionvoting.com on 2020-11-08 revealed the following inter-relationships and revealed 13 unencrypted passwords for dominion employees, and 75 hashed passwords available in TOR nodes:



```
Array
(
    [id] => 544167324
    [luser] => ian.macvicar
    [domain] => dominionvoting.com
    [password] => jamley
)

7
Array
(
    [id] => 599400504
    [luser] => jelena.tanaskovic
    [domain] => dominionvoting.com
```

8. The same public scan also showed a direct connection to the group in Belgrade as highlighted below:



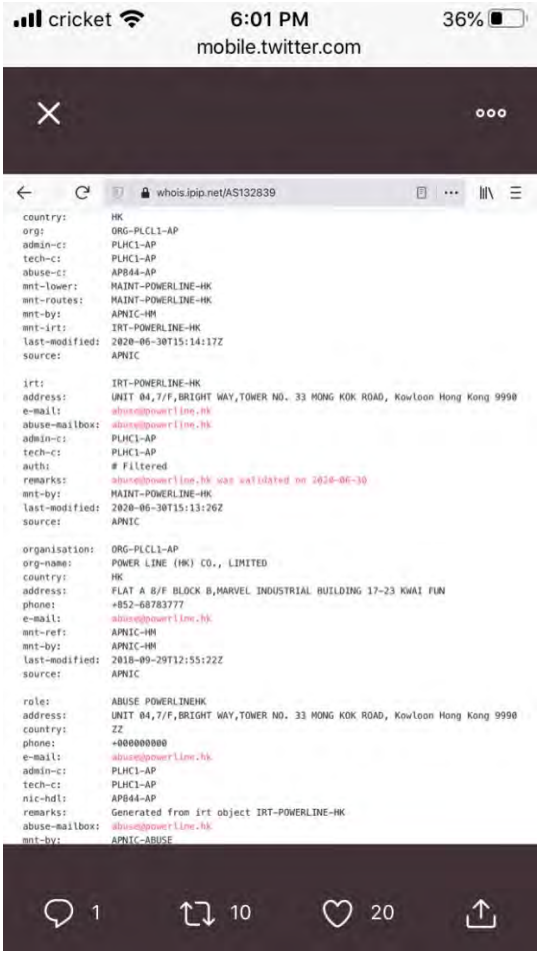
9. A cursory search on LinkedIn of "dominion voting" on 11/19/2020 confirms the numerous employees in Serbia:

10. An additional search of Edison Research on 2020-11-08 showed that Edison Research has an Iranian server seen here:

Inputting the Iranian IP into Robtex confirms the direct connection into the "edisonresearch" host from the perspective of the Iranian domain also. This means that it is not possible that the connection was a unidirectional reference.

A deeper search of the ownership of Edison Research "edisonresearch.com" shows a connection to BMA Capital Management, where shareofear.com and bmacapital.com are both connected to edisonresearch.com via a VPS or Virtual Private Server, as denoted by the "vps" at the start of the internet name:

Dominionvoting is also dominionvotingsystems.com, of which there are also many more examples, including access of the network from China. The records of China accessing the server are reliable.



CHINA UNICOM China169 Backbone - Fraud Risk

Low Risk

← Lowest Risk Highest Risk →

0 Fraud Score: 3 100

We consider **CHINA UNICOM China169 Backbone** to be a potentially low fraud risk ISP, by which we mean that web traffic from this ISP potentially poses a low risk of being fraudulent. Other types of traffic may pose a different risk or no risk. They operate 1,889,865 IP addresses, some of which are running

6 77 126

Domain Name: dominionvotingsystems.com
Registry Domain ID: 2530599738_DOMAIN_COM-VRSN
Registrar WHOIS Server: whois.godaddy.com
Registrar URL: http://www.godaddy.com
Updated Date: 2020-05-26T15:48:58Z
Creation Date: 2020-05-26T15:48:57Z
Registrar Registration Expiration Date: 2021-05-26T15:48:57Z
Registrar: GoDaddy.com, LLC
Registrar IANA ID: 146
Registrar Abuse Contact Email: abuse@godaddy.com
Registrar Abuse Contact Phone: +1.4806242505
Domain Status: clientTransferProhibited http://www.icann.org/epp#clientTransferProhibited
Domain Status: clientUpdateProhibited http://www.icann.org/epp#clientUpdateProhibited
Domain Status: clientRenewProhibited http://www.icann.org/epp#clientRenewProhibited
Domain Status: clientDeleteProhibited http://www.icann.org/epp#clientDeleteProhibited
Registrant Organization:
Registrant State/Province: Hunan
Registrant Country: CN
Registrant Email: Select Contact Domain Holder link at
https://www.godaddy.com/whois/results.aspx?domain=dominionvotingsystems.com
Admin Email: Select Contact Domain Holder link at
https://www.godaddy.com/whois/results.aspx?domain=dominionvotingsystems.com
Tech Email: Select Contact Domain Holder link at
https://www.godaddy.com/whois/results.aspx?domain=dominionvotingsystems.com
Name Server: NS1.DNS.COM
Name Server: NS2.DNS.COM
DNSSEC: unsigned

Overview - dominionvotingsystems.com

DNS Records 4

Type	Value	OSH	Security score
A	45.195.162.194 - AS132839 - POWER LINE DATACENTER	2	15
NS	ns1.dns.com		
	27.152.186.193 - AS133776 - Quanzhou	9	100
	119.167.180.131 - AS4837 - CHINA UNICOM China169 Bac...	8	100
	218.98.111.202 - AS21859 - ZNET	14	100
NS	ns2.dns.com		
	183.253.57.193 - AS9808 - Guangdong Mobile Communic...	6	100
	121.12.104.65 - AS134763 - CHINANET Guangdong provin...	4	100
SOA	ns1.dns.com		
	Hostname		
	dnsadmin.dns.com		

View all DNS Records

Domains with same A records - dominionvotingsystems.com

1 Domains with same A records

Domain	Site Title	Alexa rank	DNS A	OSH	DNS CNAME
bioaoglobal.com	—	—	45.195.162.194 - AS132839 - POWER LINE DATACENTER	2	—

CVE - dominionvotingsystems.com

22 CVE

Columns Copy Download

Id	Base Score	Severity	Vector	Source	Description
CVE-2018-20685	2.6	LOW	AV:N/AC:H/Au:N/C:N/I:P/A:N	45.195.162.194	In OpenSSH 7.9, scp.c in the scp client allows remote SSH servers to bypass intended access restrictions via the filename of . or an empty filename. The impact is modifying the permissions of the target directory on the client side.
CVE-2015-6564	6.9	MEDIUM	AV:L/AC:M/Au:N/C:C/I:C/A:C	45.195.162.194	Use-after-free vulnerability in the mm_answer_pam_free_ctx function in monitor.c in sshd in OpenSSH before 7.0 on non-OpenBSD platforms might allow local users to gain privileges by leveraging control of the sshd uid to send an unexpectedly early MONITOR_REQ_PAM_FREE_CTX request.
CVE-2016-1908	7.5	HIGH	AV:N/AC:L/Au:N/C:P/I:P/A:P	45.195.162.194	The client in OpenSSH before 7.2 mishandles failed cookie generation for untrusted X11 forwarding and relies on the local X11 server for access-control decisions, which allows remote X11 clients to trigger a fallback and obtain trusted X11 forwarding privileges by leveraging configuration issues on this X11 server, as demonstrated by lack of the SECURITY extension on this X11 server.
CVE-2016-10010	6.9	MEDIUM	AV:L/AC:M/Au:N/C:C/I:C/A:C	45.195.162.194	sshd in OpenSSH before 7.4, when privilege separation is not used, creates forwarded Unix-domain sockets as root, which might allow local users to gain privileges via unspecified vectors, related to serverloop.c.
CVE-2016-6515	7.8	HIGH	AV:N/AC:L/Au:N/C:N/I:N/A:C	45.195.162.194	The auth_password function in auth-passwd.c in sshd in OpenSSH before 7.3 does not limit password lengths for password authentication, which allows remote attackers to cause a denial of service (crypt CPU consumption) via a long string.
CVE-2015-5600	8.5	HIGH	AV:N/AC:L/Au:N/C:P/I:N/A:C	45.195.162.194	The kbdint_next_device function in auth2-chall.c in sshd in OpenSSH through 6.9 does not properly restrict the processing of keyboard-interactive devices within a single connection, which makes it easier for remote attackers to conduct brute-force attacks or cause a denial of service (CPU consumption) via a long and duplicative list in the ssh -oKbdInteractiveDevices option, as demonstrated by a modified client that provides a different password for each pam element on this list.
CVE-2015-6563	1.9	LOW	AV:L/AC:M/Au:N/C:N/I:P/A:N	45.195.162.194	The monitor component in sshd in OpenSSH before 7.0 on non-OpenBSD platforms accepts extraneous username data in MONITOR_REQ_PAM_INIT_CTX requests, which allows local users to conduct impersonation attacks by leveraging any SSH login access in conjunction with control of the sshd uid to send a crafted MONITOR_REQ_PWNAM request, related to monitor.c and monitor_wrap.c.
CVE-2018-15919	5	MEDIUM	AV:N/AC:L/Au:N/C:P/I:N/A:N	45.195.162.194	Remotely observable behaviour in auth-gss2.c in OpenSSH through 7.8 could be used by remote attackers to detect existance of users on a target system when GSS2 is in use. NOTE: the discoverer states 'We understand that the OpenSSH developers do not want to treat such a username enumeration (or "oracle") as a vulnerability.'

CVE - dominionvotingsystems.com

CVE-2020-15778	6.8	MEDIUM	AV:N/AC:M/Au:N/C:P/I:P/A:P	45.195.162.194	scp in OpenSSH through 8.3p1 allows command injection in the scp.c toremote function, as demonstrated by backtick characters in the destination argument. NOTE: the vendor reportedly has stated that they intentionally omit validation of "anomalous argument transfers" because that could "stand a great chance of breaking existing workflows."
CVE-2019-6110	4	MEDIUM	AV:N/AC:H/Au:N/C:P/I:P/A:N	45.195.162.194	In OpenSSH 7.9, due to accepting and displaying arbitrary stderr output from the server, a malicious server (or Man-in-The-Middle attacker) can manipulate the client output, for example to use ANSI control codes to hide additional files being transferred.
CVE-2016-10011	2.1	LOW	AV:L/AC:L/Au:N/C:P/I:N/A:N	45.195.162.194	authfile.c in sshd in OpenSSH before 7.4 does not properly consider the effects of realloc on buffer contents, which might allow local users to obtain sensitive private-key information by leveraging access to a privilege-separated child process.
CVE-2016-10012	7.2	HIGH	AV:L/AC:L/Au:N/C:C/I:C/A:C	45.195.162.194	The shared memory manager (associated with pre-authentication compression) in sshd in OpenSSH before 7.4 does not ensure that a bounds check is enforced by all compilers, which might allows local users to gain privileges by leveraging access to a sandboxed privilege-separation process, related to the m_zback and m_zlib data structures.
CVE-2015-5352	4.3	MEDIUM	AV:N/AC:M/Au:N/C:N/I:P/A:N	45.195.162.194	The x11_open_helper function in channels.c in ssh in OpenSSH before 6.9, when ForwardX11Trusted mode is not used, lacks a check of the refusal deadline for X connections, which makes it easier for remote attackers to bypass intended access restrictions via a connection outside of the permitted time window.
CVE-2015-8325	7.2	HIGH	AV:L/AC:L/Au:N/C:C/I:C/A:C	45.195.162.194	The do_setup_env function in session.c in sshd in OpenSSH through 7.2p2, when the UseLogin feature is enabled and PAM is configured to read .pam_environment files in user home directories, allows local users to gain privileges by triggering a crafted environment for the /bin/login program, as demonstrated by an LD_PRELOAD environment variable.
CVE-2016-10009	7.5	HIGH	AV:N/AC:L/Au:N/C:P/I:P/A:P	45.195.162.194	Untrusted search path vulnerability in ssh-agent.c in ssh-agent in OpenSSH before 7.4 allows remote attackers to execute arbitrary local PKCS#11 modules by leveraging control over a forwarded agent-socket.
CVE-2016-10708	5	MEDIUM	AV:N/AC:L/Au:N/C:N/I:N/A:P	45.195.162.194	sshd in OpenSSH before 7.4 allows remote attackers to cause a denial of service (NULL pointer dereference and daemon crash) via an out-of-sequence NEWKEYS message, as demonstrated by Honggfuzz, related to kex.c and packet.c.
CVE-2019-6109	4	MEDIUM	AV:N/AC:H/Au:N/C:P/I:P/A:N	45.195.162.194	An issue was discovered in OpenSSH 7.9. Due to missing character encoding in the progress display, a malicious server (or Man-in-The-Middle attacker) can employ crafted object names to manipulate the client output, e.g., by using ANSI control codes to hide additional files being transferred. This affects refresh_progress_meter() in progressmeter.c.
CVE-2016-6210	4.3	MEDIUM	AV:N/AC:M/Au:N/C:P/I:N/A:N	45.195.162.194	sshd in OpenSSH before 7.3, when SHA256 or SHA512 are used for user password hashing, uses BLOWFISH hashing on a static password when the username does not exist, which allows remote attackers to enumerate users by leveraging the timing difference between responses when a large password is provided.
CVE-2020-14145	4.3	MEDIUM	AV:N/AC:M/Au:N/C:P/I:N/A:N	45.195.162.194	The client side in OpenSSH 5.7 through 8.3 has an Observable Discrepancy leading to an information leak in the algorithm negotiation. This allows in-the-middle attackers to target initial connection attempts (where no host key for the server has been cached by the client).
CVE-2016-3115	5.5	MEDIUM	AV:N/AC:L/Au:S/C:P/I:P/A:N	45.195.162.194	Multiple CRLF injection vulnerabilities in session.c in sshd in OpenSSH before 7.2p2 allow remote authenticated users to bypass intended shell-command restrictions via crafted X11 forwarding data, related to the (1) do_authenticated1 and (2) session_x11_req functions.

11. BMA Capital Management is known as a company that provides Iran access to capital markets with direct links publicly discoverable on LinkedIn (found via google on 11/19/2020):

www.linkedin.com › muhammad-talha-a0759660

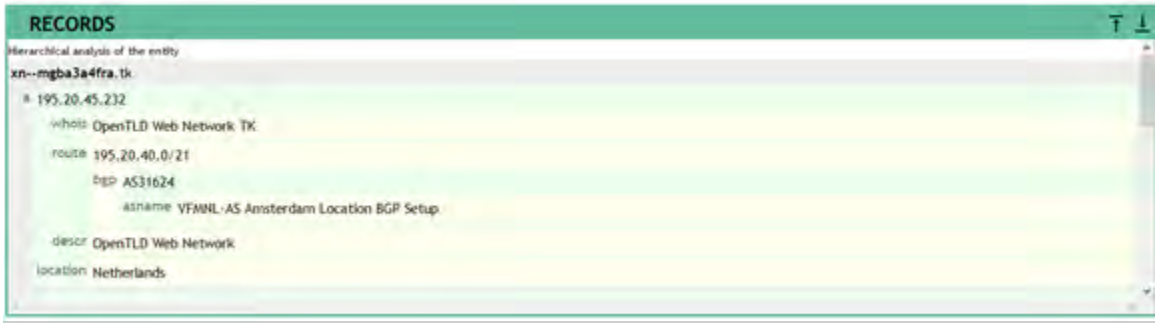
Muhammad Talha - BMA Capital Management Limited

Manager, Money Market & Fixed Income at **BMA Capital** Management Limited. **BMA Capital** ...

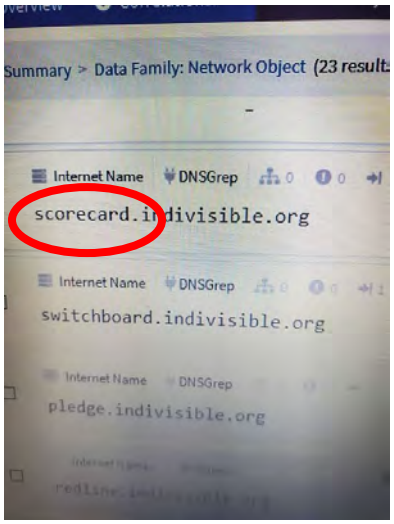
Manager-FMR at Pak **Iran** Joint Investment Company. Pakistan.

Pakistan · Manager, Money Market & Fixed Income · BMA Capital Management Limited

The same Robtex search confirms the Iranian address is tied to the server in the Netherlands, which correlates to known OSINT of Iranian use of the Netherlands as a remote server (See Advanced Persistent Threats: APT33 and APT34):



12. A search of the indivisible.org network showed a subdomain which evidences the existence of scorecard software in use as part of the Indivisible (formerly ACORN) political group for Obama:



13. Each of the tabulation software companies have their own central reporting "affiliate". Edison Research is the affiliate for Dominion.

14. Beanfield.com out of Canada shows the connections via co-hosting related sites, including dvscorp.com:

This domain redirects to **beanfield.com**

DNS

View domain name system records, including but not limited to the A, CNAME, MX, and TXT records.

View API →

A	96.45.195.194	5 Domains
MX	10 barracuda.dominionvoting.com.	2 Domains
NS	ns29.domaincontrol.com.	56,979,357 Domains
	ns30.domaincontrol.com.	56,979,357 Domains

Co-Hosted

There are **5 domains** hosted on **96.45.195.194** (AS21949 Beanfield Technologies Inc.). Show All →

View API →

guta.ca	ndbgroup.ca	dvscorp.com
aiyokuacardiolounge.com	grantdyer.com	

This Dominion partner domain "dvscorp" also includes an auto discovery feature, where new in-network devices automatically connect to the system. The following diagram shows some of the related dvscopr.com mappings, which mimic the infrastructure for Dominion and are an obvious typo derivation of the name. Typo derivations are commonly purchased to catch redirect traffic and sometimes are used as honeypots. The diagram shows that infrastructure spans multiple different servers as a methodology.

dvs

Overview | Correlations... | Browse by... | Starred | Visualize... | Settings | Logs

Data Summary » Data Type: Similar Domain (10 results)

Data Element	Source Data Element
Similar Domain · TLD Searcher · dvscopr.ایران.ir	Internet Name · SpiderFoot UI · dvscopr.com
Similar Domain · Tool - DNSTwist · dv.scopr.com	Domain Name · SpiderFoot UI · dvscopr.com
Similar Domain · Tool - DNSTwist · dvscorp.com	Domain Name · SpiderFoot UI · dvscopr.com
Similar Domain · TLD Searcher · dvscopr.台湾	Internet Name · SpiderFoot UI · dvscopr.com
Similar Domain · TLD Searcher · dvscopr.fin.ci	Internet Name · SpiderFoot UI · dvscopr.com

Domain Name: DSVCORP.COM
Registry Domain ID: 134773082_DOMAIN_COM-VRSN
Registrar WHOIS Server: whois.bookmyname.com
Registrar URL: http://www.bookmyname.com
dsvcorp.com

Similar Domain - Whois | Whois
% This is the IRNIC Whois server v1.6.2.
% Available on web at http://whois.nic.ir/
% Find the terms and conditions of use on http://www.nic.ir/
%
Similar Domain | TLD Searcher
dvscorp.ایران.ir

Similar Domain | TLD Searcher
dvscopr.caa.li
Internet Name | SpiderFoot UI
dvscopr.com

Similar Domain | TLD Searcher
dvscopr.hasura-app.io
Internet Name | SpiderFoot UI
dvscopr.com

Similar Domain | TLD Searcher
dvscopr.rackmaze.com
Internet Name | SpiderFoot UI
dvscopr.com

Similar Domain | TLD Searcher
dvscopr.devices.resinstaging.io
Internet Name | SpiderFoot UI
dvscopr.com

Similar Domain | TLD Searcher
dvscopr.cust.dev.thingdust.io
Internet Name | SpiderFoot UI
dvscopr.com

The above diagram shows how these domains also show the connection to Iran and other places, including the following Chinese domain, highlighted below:

Similar Domain | TLD Searcher
dvscopr.台湾 Chinese Domain

Similar Domain | TLD Searcher
dvscopr.fin.ci

15. The auto discovery feature allows programmers to access any system while it is connected to the internet once it's a part of the constellation of devices (see original Spiderfoot graph).
16. Dominion Voting Systems Corporation in 2019 sold a number of their patents to China (via HSBC Bank in Canada):

Assignment details for assignee "HSBC BANK CANADA, AS COLLATERAL AGENT"

Assignments (1 total)

Assignment 1

Reel/frame	Execution date	Date recorded	Pages
050500/0236	Sep 25, 2019	Sep 26, 2019	7

Conveyance

SECURITY AGREEMENT

Assignors	Correspondent	Attorney docket
DOMINION VOTING SYSTEMS CORPORATION	CHAPMAN & CUTLER LLP 1270 AVENUE OF THE AMERICAS, 30TH FLOOR ATTN: SOREN SCHWARTZ NEW YORK, NY 10020	

Assignee

HSBC BANK CANADA, AS COLLATERAL AGENT

4TH FLOOR, 70 YORK STREET

TORONTO M5J 1S9

CANADA

Properties (18)

Patent	Publication	Application	PCT	International registration
8844813	20130306724	13476836		
8913787	20130301873	13470091		
9202113	20150071501	14539684		
8195505	20050247783	11121997		
9870666	20120232963	13463536		
9710988	20120259680	13525187		
9870667	20120259681	13525208		
7111782	20040238632	10811969		
7422151	20070012767	11526028		
D599131		29324281		

View all

This searchable database contains all recorded Patent Assignment information from August 1980 to the present.

When the USPTO receives relevant information for its assignment database, the USPTO puts the information in the public record and does not verify the validity of the information. Recordation is a ministerial function–the USPTO neither makes a determination of the legality of the transaction nor the right of the submitting party to take the action.

Release 2.0.0 | Release Notes | Send Feedback | Legacy Patent Assignment Search | Legacy Trademark Assignment Search

Of particular interest is a section of the document showing aspects of the nature of the patents dealing with authentication:

Patent assignment 050500/0236

SECURITY AGREEMENT

Date recorded	Reel/frame	Pages
Sep 26, 2019	050500/0236	7

Assignors
DOMINION VOTING SYSTEMS CORPORATION

Execution date
Sep 25, 2019

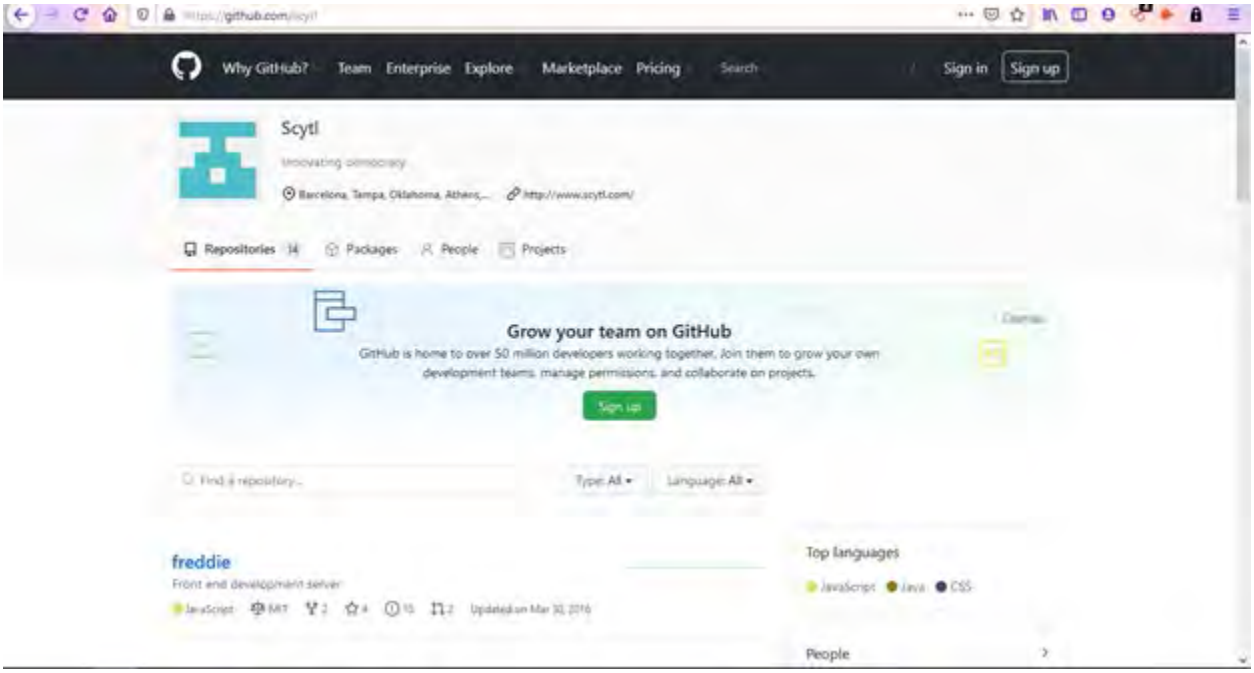
Assignee
HSBC BANK CANADA, AS COLLATERAL AGENT
4TH FLOOR, 70 YORK STREET
TORONTO M5J 1S9
CANADA

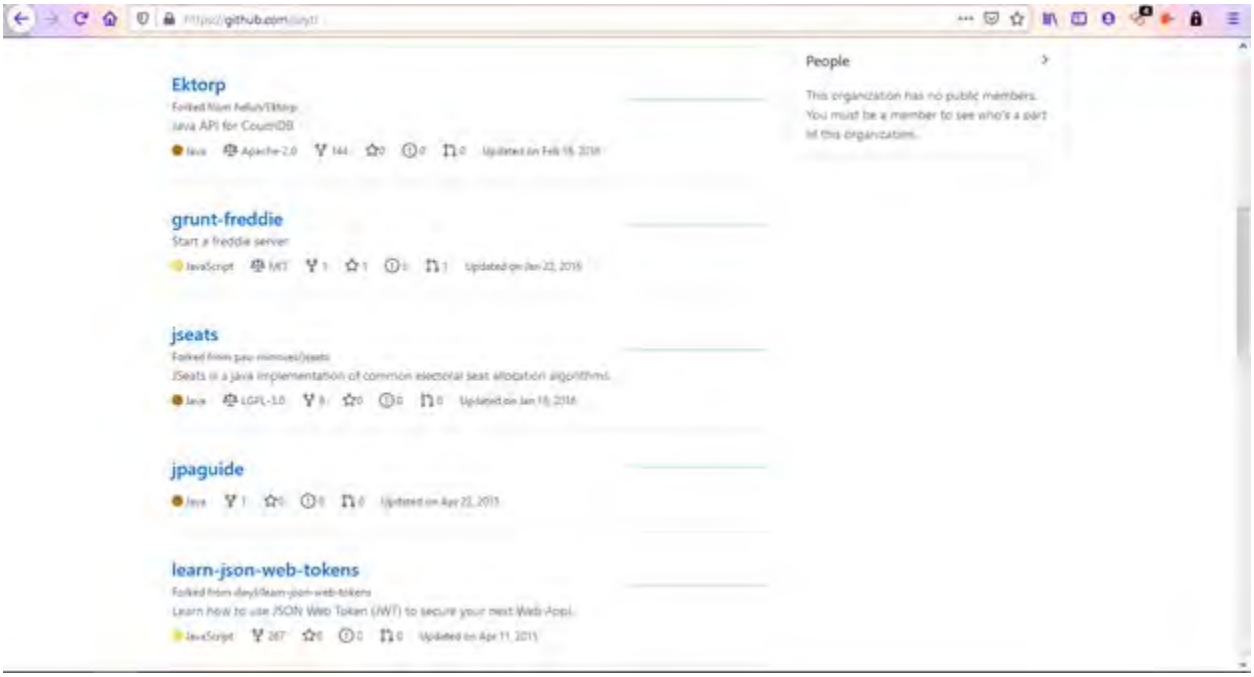
Correspondent
CHAPMAN & CUTLER LLP
1270 AVENUE OF THE AMERICAS, 30TH FLOOR
ATTN: SOREN SCHWARTZ
NEW YORK, NY 10020

Properties (18 total)

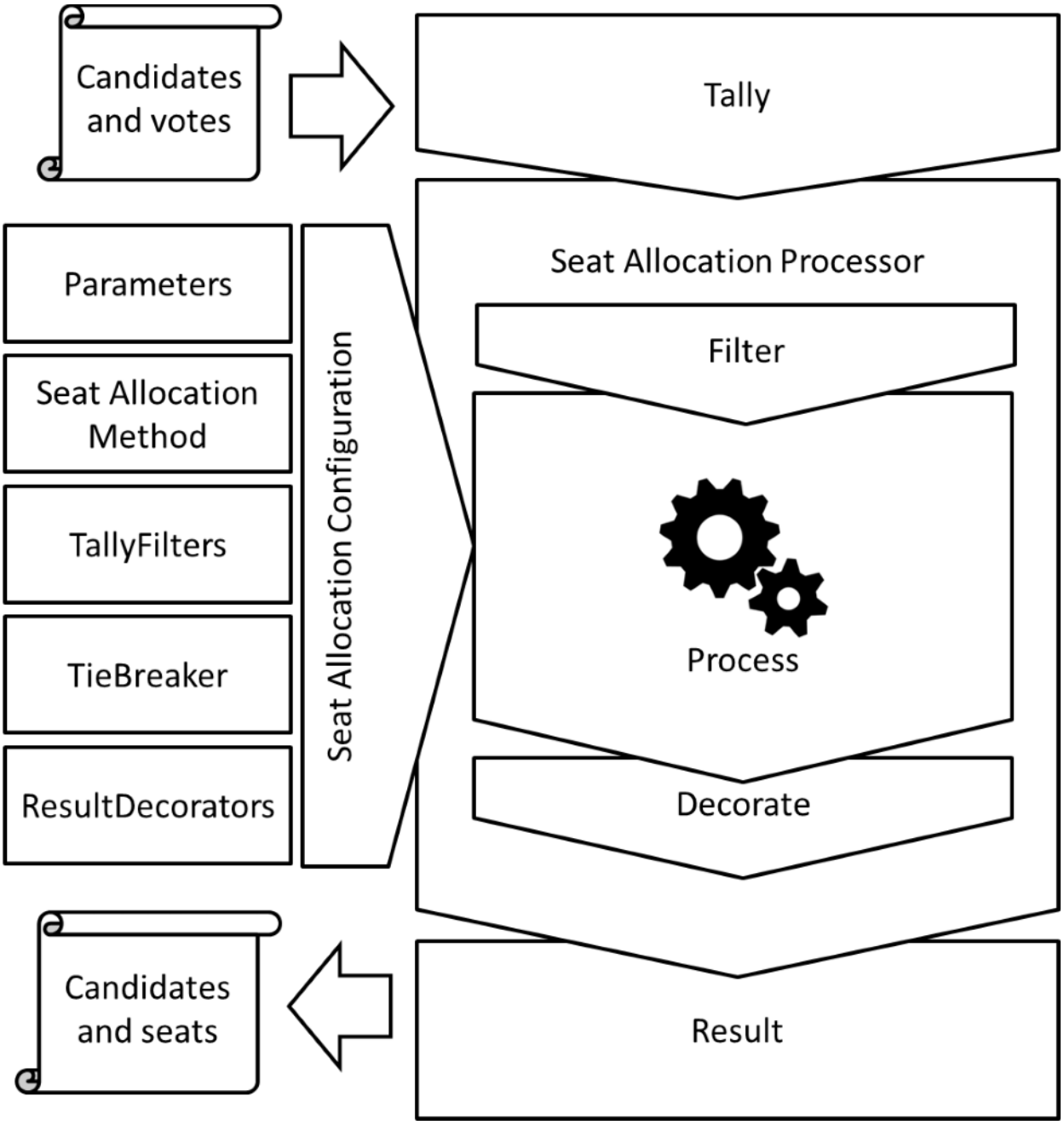
Patent	Publication	Application
1. SYSTEMS AND METHODS FOR PROVIDING SECURITY IN A VOTING MACHINE Inventors: JOHN PAUL HOMEWOOD, THOMAS E. KEELING, PAUL DAVID TERWILLIGER, MARC R. LATOUR		
7111782 Sep 26, 2006	20040238632 Dec 2, 2004	10811969 Mar 30, 2004
2. SYSTEM, METHOD AND COMPUTER PROGRAM FOR VOTE TABULATION WITH AN ELECTRONIC AUDIT TRAIL Inventors: JOHN POULOS, JAMES HOOVER, NICK IKONOMAKIS, GORAN OBRADOVIC		
8195505 Jun 5, 2012	20050247783 Nov 10, 2005	11121997 May 5, 2005
3. SYSTEMS AND METHODS FOR PROVIDING SECURITY IN A VOTING MACHINE Inventors: JOHN PAUL HOMEWOOD, THOMAS E. KEELING, PAUL DAVID TERWILLIGER, MARC R. LATOUR		
7422151 Sep 9, 2008	20070012767 Jan 18, 2007	11526028 Sep 25, 2006
4. BALLOT LEVEL SECURITY FEATURES FOR OPTICAL SCAN VOTING MACHINE CAPABLE OF BALLOT IMAGE PROCESSING, SECURE BALLOT PRINTING, AND BALLOT LAYOUT AUTHENTICATION AND VERIFICATION Inventors: ERIC COOMER, LARRY KORB, BRIAN GLENN LIERMAN		

17. Smartmatic creates the backbone (like the cloud). SCYTL is responsible for the security within the election system.

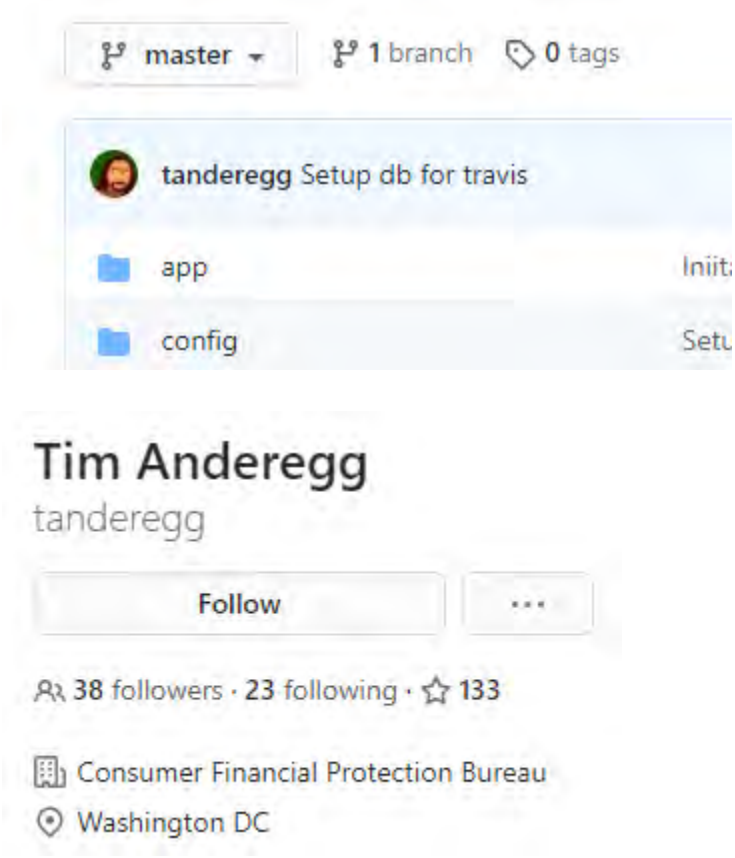




18. In the GitHub account for Scytl, Scytl Jseats has some of the programming necessary to support a much broader set of election types, including a decorator process where the data is smoothed, see the following diagram provided in their source code:



19. Unrelated, but also a point of interest is CTCL or Center for Tech and Civic Life funded by Mark Zuckerberg. Within their github page (https://github.com/ctcl), one of the programmers holds a government position. The Bipcoop repo shows tanderegg as one of the developers, and he works at the Consumer Financial Protection Bureau:



20. As seen in included document titled "AA20-304A-Iranian_Advanced_Persistent_Threat_Actor_Identified_Obtaining_Voter_Registration_Data" that was authored by the Cybersecurity & Infrastructure Security Agency (CISA) with a Product ID of AA20-304A on a specified date of October 30, 2020, CISA and the FBI reports that Iranian APT teams were seen using ACUTENIX, a website scanning software, to find vulnerabilities within Election company websites, confirmed to be used by the Iranian APT teams buy seized cloud storage that I had personally captured and reported to higher authorities. These scanning behaviors showed that foreign agents of aggressor nations had access to US voter lists, and had done so recently.
21. In my professional opinion, this affidavit presents unambiguous evidence that Dominion Voter Systems and Edison Research have been accessible and were certainly compromised by rogue actors, such as Iran and China. By using servers and employees connected with rogue actors and hostile foreign influences combined with numerous easily discoverable leaked credentials, these organizations neglectfully allowed foreign adversaries to access data

and intentionally provided access to their infrastructure in order to monitor and manipulate elections, including the most recent one in 2020. This represents a complete failure of their duty to provide basic cyber security. This is not a technological issue, but rather a governance and basic security issue: if it is not corrected, future elections in the United States and beyond will not be secure and citizens will not have confidence in the results.

I declare under penalty of perjury that the forgoing is true and correct to the best of my knowledge. Executed this November 23th, 2020.

[redacted]

DECLARATION OF RONALD WATKINS

I, Ronald Watkins, hereby state the following:

1. I am a United States citizen currently residing in Japan.

2. I am an adult of sound mind. All statements in this declaration are based on my personal knowledge and are true and correct.

3. I am making this statement voluntarily and on my own initiative. I have not been promised, nor do I expect to receive, anything in exchange for my testimony and giving this statement. I have no expectation of any profit or reward and understand that there are those who may seek to harm me for what I say in this statement.

4. I want to alert the public and let the world know the truth about actual voting tabulation software designed, whether with malicious intent or plain incompetence, in such a way so as to facilitate digital ballot stuffing via simple vote result manipulation and abuse of the digital adjudication manual review system. The Dominion Democracy Suite may both enable voter fraud by unethical officials out to undermine the will of the people, and honest officials making simple, nearly untraceable, mistakes. Voting is a fundamental manifestation of our First Amendment right to free speech and under no circumstance shall we allow a conspiracy of people and companies to subvert and destroy one of our most sacred rights.

5. I am a network and information security expert with nine years of experience as a network and information defense analyst and a network security engineer. In my nine years of network and information security experience, I have successfully defended large websites and networks against major and powerful cyberattacks.

6. The ImageCast Central system is a software and hardware workstation system designed to work with just a common "Windows 10 Pro"[1][2] computer paired via data cable [3] to an off-the-shelf document scanner [4] "for high speed scanning and counting of paper ballots.[5]"

7. When bulk ballot scanning and tabulation begins, the "ImageCast Central" workstation operator will load a batch of ballots into the scanner feed tray and then start the scanning

procedure within the software menu [6]. The scanner then begins to scan the ballots which were loaded into the feed tray while the "ImageCast Central" software application tabulates votes in real-time. Information about scanned ballots can be tracked inside the "ImageCast Central" software application [7].

8. After all of the ballots loaded into the scanner's feed tray have been through the scanner, the "ImageCast Central" operator will remove the ballots from the tray then have the option to "Accept Batch" on the scanning menu [8]. Accepting the batch saves the results into the local file system within the "Windows 10 Pro" machine [9]. Any "problem ballots" that may need to be examined or adjudicated at a later time can be found as ballot scans saved as image files into a standard Windows folder named "NotCastImages" [9]. These "problem ballots" are automatically detected during the scanning phase and digitally set aside for manual review based on exception criteria [10]. Examples of exceptions may include: overvotes, undervotes, blank contests, blank ballots, write-in selections, and marginal marks [11]. “Customizable outstack conditions and marginal mark detection lets [Dominion’s Customers] decide which ballots are sent for Adjudication. [12]”

9. During the ballot scanning process, the "ImageCast Central" software will detect how much of a percent coverage of the oval was filled in by the voter [13]. The Dominion customer determines the thresholds of which the oval needs to be covered by a mark in order to qualify as a valid vote [14][15]. If a ballot has a marginal mark which did not meet the specific thresholds set by the customer, then the ballot is considered a "problem ballot" and may be set aside into a folder named "NotCastImages" [9]. “The ImageCast Central's advanced settings allow for adjustment of the scanning properties” to “[set] the clarity levels at which the ballot should be scanned at. Levels can be set as a combination of brightness and contrast values, or as a gamma value. [16]”

10. Through creatively tweaking the oval coverage threshold settings, and advanced settings on the ImageCast Central scanners, it may be possible to set thresholds in such a way that a non-trivial amount of ballots are marked "problem ballots" and sent to the "NotCastImages" folder.

11. The administrator of the ImageCast Central work station may view all images of scanned ballots which were deemed “problem ballots” by simply navigating via the standard "Windows File Explorer" to the folder named "NotCastImages" which holds ballot scans of "problem ballots" [17][18]. It may be possible for an administrator of the "ImageCast Central" workstation to view and delete any individual ballot scans from the "NotCastImages" folder by simply using the standard Windows delete and recycle bin functions provided by the Windows 10 Pro operating system.

12. Adjudication is "the process of examining voted ballots to determine, and, in the judicial sense, adjudicate voter intent. [19]" A biased poll worker without sufficient honest oversight could abuse the adjudication system to fraudulently switch votes for a specific candidate.

13. After the tabulation process, the ImageCast Central software saves a copy of the tabulation results locally to the "Windows 10 Pro" machine's internal storage. The results data is located in an easy-to-find path which is designed to easily facilitate the uploading of tabulation results to flash memory cards. The upload process is just a simple copying of a "Results" folder containing vote tallies to a flash memory card connected to the "Windows 10 Pro" machine. The copy process uses the standard drag-n-drop or copy/paste mechanisms within the ubiquitous "Windows File Explorer" [20]. While a simple procedure, the report results process may be error prone and is very vulnerable to malicious administrators. Before delivering final tabulation results to the county, it is within the realm of possibility to mistakenly copy the wrong "Results" folder or even maliciously copy a false "Results" folder, which may contain a manipulated data set, to the flash memory card.

References:

[1] Dominion Voting, *Democracy Suite®ImageCast® Central User Guide*, p3, [online document], https://www.sos.state.co.us/pubs/elections/VotingSystems/DVS-DemocracySuite511/documentation/UG-ICC-UserGuide-5-11-CO.pdf (Accessed November 23, 2020) https://web.archive.org/web/20201019175854/https://www.sos.state.co.us/pubs/elections/VotingSystems/DVS-DemocracySuite511/documentation/UG-ICC-UserGuide-5-11-CO.pdf [archive]

[2] Georgia State Certification Testing, *Dominion Voting Systems D-Suite 5.5-A Voting System*, p5, table 2-1, [online document] https://sos.ga.gov/admin/uploads/Dominion_Test_Cert_Report.pdf (accessed November, 23, 2020), https://web.archive.org/web/20201106055006/https://sos.ga.gov/admin/uploads/Dominion_Test_Cert_Report.pdf [archive]

[3] Dominion Voting, *Democracy Suite®ImageCast® Central User Guide*, p2, s2.1, [online document, https://www.sos.state.co.us/pubs/elections/VotingSystems/DVS-DemocracySuite511/ documentation/UG-ICC-UserGuide-5-11-CO.pdf (Accessed November 23, 2020) https://web.archive.org/web/20201019175854/https://www.sos.state.co.us/pubs/elections/VotingSystems/DVS-DemocracySuite511/documentation/UG-ICC-UserGuide-5-11-CO.pdf [archive]

[4] Michigan.gov, *DOMINION VOTING SYSTEMS CONTRACT No. 071B7700117*, p6, 1.1.E.1, [online document],

https://www.michigan.gov/documents/sos/071B7700117_Dominion_Exhibit_2_to_Sch_A_Tech_Req_555357_7.pdf (accessed November 23, 2020), https://web.archive.org/web/20201115084004/https://www.michigan.gov/documents/sos/071B7700117_Dominion_Exhibit_2_to_Sch_A_Tech_Req_555357_7.pdf [archive]

[5] Commonwealth of Pennsylvania Department of State, *Report Concerning the Examination Results of Dominion Voting Systems Democracy Suite 5.5A* p6, s2.4, [online document], https://www.dos.pa.gov/VotingElections/Documents/Voting%20Systems/Dominion%20Democracy%20Suite%205.5-A/Dominion%20Democracy%20Suite%20Final%20Report%20scanned%20with%20signature%20011819.pdf (accessed November 23, 2020), https://web.archive.org/web/20201016161321/https://www.dos.pa.gov/VotingElections/Documents/Voting%20Systems/Dominion%20Democracy%20Suite%205.5-A/Dominion%20Democracy%20Suite%20Final%20Report%20scanned%20with%20signature%20011819.pdf [archive]

[6] Dominion Voting, *ImageCast Central*, p2, [online document], https://www.edcgov.us/Government/Elections/Documents/ImageCast%20Central%20Brochure%202018%20FINAL.pdf (accessed November 23, 2020) https://web.archive.org/web/20201017175507/https://www.edcgov.us/Government/Elections/Documents/ImageCast%20Central%20Brochure%202018%20FINAL.pdf [archive]

[7] Dominion Voting, *Democracy Suite®ImageCast® Central User Guide*, p25, s4.1.2, [online document], https://www.sos.state.co.us/pubs/elections/VotingSystems/DVS-DemocracySuite511/documentation/UG-ICC-UserGuide-5-11-CO.pdf (Accessed November 23, 2020), https://web.archive.org/web/20201019175854/https://www.sos.state.co.us/pubs/elections/VotingSystems/DVS-DemocracySuite511/documentation/UG-ICC-UserGuide-5-11-CO.pdf [archive]

[8] Dominion Voting, *ImageCast Central*, [website], https://www.dominionvoting.com/imagecast-central/ (Accessed November 23, 2020) https://web.archive.org/web/20201101203418/https://www.dominionvoting.com/imagecast-central/ [archive]

[9] Dominion Voting, *Democracy Suite®ImageCast® Central User Guide*, p25, s4.1.2, [online document], https://www.sos.state.co.us/pubs/elections/VotingSystems/DVS-DemocracySuite511/documentation/UG-ICC-UserGuide-5-11-CO.pdf (Accessed November 23, 2020),

https://web.archive.org/web/20201019175854/https://www.sos.state.co.us/pubs/elections/VotingSystems/DVS-DemocracySuite511/documentation/UG-ICC-UserGuide-5-11-CO.pdf [archive]

[10] Michigan.gov, *DOMINION VOTING SYSTEMS CONTRACT No. 071B7700117*, p21, 1.3.B.6, [online document],

https://www.michigan.gov/documents/sos/071B7700117_Dominion_Exhibit_2_to_Sch_A_Tech_Req_555357_7.pdf (accessed November 23, 2020), https://web.archive.org/web/20201115084004/https://www.michigan.gov/documents/sos/071B7700117_Dominion_Exhibit_2_to_Sch_A_Tech_Req_555357_7.pdf [archive]

[11] *MASTER SOLUTION PURCHASE AND SERVICES AGREEMENT BY AND BETWEEN DOMINION VOTING SYSTEMS, INC. as Contractor, and SECRETARY OF STATE OF THE STATE OF GEORGIA as State, p*52, s1.3, [online document], https://georgiaelections.weebly.com/uploads/1/0/8/5/108591015/contract.pdf (Accessed November 23, 2020), https://web.archive.org/web/20201122213728/https://georgiaelections.weebly.com/uploads/1/0/8/5/108591015/contract.pdf [archive]

[12] Dominion Voting, *ImageCast Central*, [website], https://www.dominionvoting.com/imagecast-central/ (Accessed November 23, 2020) https://web.archive.org/web/20201101203418/https://www.dominionvoting.com/imagecast-central/ [archive]

[13] Michigan.gov, *DOMINION VOTING SYSTEMS CONTRACT No. 071B7700117*, p3, 1.1.A.22, [online document],

https://www.michigan.gov/documents/sos/071B7700117_Dominion_Exhibit_2_to_Sch_A_Tech_Req_555357_7.pdf (accessed November 23, 2020), https://web.archive.org/web/20201115084004/https://www.michigan.gov/documents/sos/071B7700117_Dominion_Exhibit_2_to_Sch_A_Tech_Req_555357_7.pdf [archive]

[14] Calhoun County, MI, *ImageCast Central (ICC) 5.5 Operations,* p19, [online document], https://cms5.revize.com/revize/calhouncountymi/Clerk%20&%20Register%20of%20Deeds/local%20clerk%20resources/5_5_icc_operations_manual.pdf (accessed November 23, 2020), https://web.archive.org/web/20200802003507/https://cms5.revize.com/revize/calhouncountymi/Clerk%20&%20Register%20of%20Deeds/local%20clerk%20resources/5_5_icc_operations_manual.pdf [archive]

[15] *IMAGECAST® CENTRAL Brochure,* [website], https://www.edcgov.us/Government/Elections/Documents/ImageCast%20Central%20Brochure%202018%20FINAL.pdf (accessed November 23, 2020), https://web.archive.org/web/20201017175507/https://www.edcgov.us/Government/Elections/Documents/ImageCast%20Central%20Brochure%202018%20FINAL.pdf [archive]

[16] Dominion Voting, *Democracy Suite®ImageCast® Central User Guide*, pp20-21, s3.22, [online document], https://www.sos.state.co.us/pubs/elections/VotingSystems/DVS-DemocracySuite511/documentation/UG-ICC-UserGuide-5-11-CO.pdf (Accessed November 23, 2020), https://web.archive.org/web/20201019175854/https://www.sos.state.co.us/pubs/elections/VotingSystems/DVS-DemocracySuite511/documentation/UG-ICC-UserGuide-5-11-CO.pdf [archive]

[17] Dominion Voting, *Democracy Suite® Use Procedures,* p433, F.3.11, [online document] https://votingsystems.cdn.sos.ca.gov/vendors/dominion/ds510-use-proc-jan.pdf (Accessed November 23, 2020), https://web.archive.org/web/20201101173723/https://votingsystems.cdn.sos.ca.gov/vendors/dominion/ds510-use-proc-jan.pdf [archive]

[18] Calhoun County, MI, *ImageCast Central (ICC) 5.5 Operations,* p27, [online document], https://cms5.revize.com/revize/calhouncountymi/Clerk%20&%20Register%20of%20Deeds/local%20clerk%20resources/5_5_icc_operations_manual.pdf (accessed November 23, 2020), https://web.archive.org/web/20200802003507/https://cms5.revize.com/revize/calhouncountymi/Clerk%20&%20Register%20of%20Deeds/local%20clerk%20resources/5_5_icc_operations_manual.pdf [archive]

[19] Dominion Voting, *Democracy Suite® Use Procedures,* p9, [online document] https://votingsystems.cdn.sos.ca.gov/vendors/dominion/ds510-use-proc-jan.pdf (Accessed November 23, 2020), https://web.archive.org/web/20201101173723/https://votingsystems.cdn.sos.ca.gov/vendors/dominion/ds510-use-proc-jan.pdf [archive]

[20] Calhoun County, MI, *ImageCast Central (ICC) 5.5 Operations,* pp25-28, [online document], https://cms5.revize.com/revize/calhouncountymi/Clerk%20&%20Register%20of%20Deeds/local%20clerk%20resources/5_5_icc_operations_manual.pdf (accessed November 23, 2020),

https://web.archive.org/web/20200802003507/https://cms5.revize.com/revize/calhouncountymi/Clerk%20&%20Register%20of%20Deeds/local%20clerk%20resources/5_5_icc_operations_manual.pdf [archive]

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct and that this Declaration was prepared in Japan. Executed on November 23, 2020.

RONALD WATKINS

EXHIBIT 107

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

DONNA CURLING, ET AL.,	)	
	)	
Plaintiffs,	)	
	)	**CIVIL ACTION**
vs.	)	
	)	**FILE NO. 1:17-cv-2989-AT**
BRAD RAFFENSPERGER,	)	
ET AL.,	)	
	)	
Defendants.	)	

DECLARATION OF HARRI HURSTI

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

1. My name is Harri Hursti. I am over the age of 21 and competent to give this testimony. The facts stated in this declaration are based on my personal knowledge, unless stated otherwise.

2. My background and qualifications in voting system cybersecurity are set forth in my December 16, 2019 declaration. (Doc. 680-1, pages 37 *et seq*). I stand by everything in that declaration and in my August 21, 2020 declaration. (Doc. 800-2).

3. I am also an expert in ballot scanning because of extensive background in digital imaging prior by work researching election systems. In addition, in 2005 I started an open source project for scanning and auditing paper ballots from images. As a result, I am familiar with different scanner types, how scanner settings and image processing features change the images, and how file format choices affect the quality and accuracy of the ballots.

4. I am engaged as an expert in this case by Coalition for Good Governance.

5. In developing this declaration and opinion, I visited Atlanta to observe certain operations of the June 9, 2020 statewide primary, and the August 11 runoff. During the June 9 election, I was an authorized poll watcher in some locations and was a public observer in others. On August 11, I was authorized as an expert inspecting and observing under the Coalition for Good Governance's Rule 34 Inspection request in certain polling places and the Fulton County Election Preparation Center. As I will explain below in this declaration, my extensive experience in the area of voting system security and my observations of these elections lead to additional conclusions beyond those in my December 16, 2019 declaration. Specifically:

a) the scanner and tabulation software settings being employed to determine which votes to count on hand marked paper ballots are likely causing clearly intentioned votes not to be counted;

b) the voting system is being operated in Fulton County in a manner that escalates the security risk to an extreme level; and

c) voters are not reviewing their BMD printed ballots, which causes BMD generated results to be un-auditable due to the untrustworthy audit trail.

Polling Place Observations

6. Election observation on Peachtree Christian Church. The ballot marking devices were installed so that 4 out of 8 touchscreen devices were clearly visible from the pollbook check in desk. Voter's selections could be effortlessly seen from over 50 ft away.

7. Over period of about 45 minutes, I only observed one voter who appeared to be studying the ballot after picking it up from the printer before casting it in the scanner. When voters do not fully verify their ballot prior to casting, the ballots cannot be considered a reliable auditable record.

8. The scanner would reject some ballots and then accept them after they were rotated to a different orientation. I noted that the scanner would vary in the amount of time that it took to accept or reject a ballot. The delay varied between 3

and 5 seconds from the moment the scanner takes the ballot until the scanner either accepts the ballot or rejects it. This kind of behavior is normal on general purpose operating systems multitasking between multiple applications, but a voting system component should be running only a single application without outside dependencies causing variable execution times.

9. Further research is necessary to determine the cause of the unexpected scanning delays. A system that is dedicated to performing one task repeatedly should not have unexplained variation in processing time. As security researcher, we are always suspicious about any unexpected variable delays, as those are common telltale signs of many issues, including a possibility of unauthorized code being executed. So, in my opinion changes of behaviors between supposedly identical machines performing identical tasks should always be investigated.

When ballots are the same and are produced by a ballot marking device, there should be no time difference whatsoever in processing the bar codes. Variations in time can be the result of many things - one of them is that the scanner encounters an error reading the bar code and needs to utilize error correcting algorithms to recover from that error. Further investigation is

necessary to determine the root cause of these delays, the potential impact of the error correcting algorithms if those are found to be the cause, and whether the delay has any impact upon the vote.

10. Election observation in Central Park Recreation Center. The Poll place manager told me that no Dominion trained technician had reported on location to help them that morning.

11. The ballot marking devices were originally installed in a way that voter privacy was not protected, as anyone could observe across the room how people are voting on about 2/3 devices.

12. The ballot scanner took between 4 and 6 seconds to accept the ballot. I observed only one ballot being rejected.

13. Generally, voters did not inspect the ballots after taking it from the printer and casting it into the scanner.

14. Election observation in Fanplex location. Samantha Whitley and Harrison Thweatt were poll watchers at the Fanplex polling location. They contacted me at approximately 9:10am about problems they were observing with the operation of the BMDs and Poll Pads and asked me to come to help them

understand the anomalies they were observing. I arrived at FanPlex at approximately 9:30am.

15. I observed that the ballot scanner located by a glass wall whereby standing outside of the building observe the scanning, would take between 6 and 7 seconds to either accept or reject the ballot.

16. For reasons unknown, on multiple machines, while voters were attempting to vote, the ballot marking devices sometimes printed "test" ballots. I was not able to take a picture of the ballot from the designated observation area, but I overheard the poll worker by the scanner explaining the issue to a voter which was sent back to the Ballot-Marking Device to pick up another ballot from the printer tray. Test ballots are intended to be used to test the system but without being counted by the system during an election. The ballot scanner in election settings rejects test ballots, as the scanners at FanPlex did. This caused confusion as the voters needed to return to the ballot-marking device to retrieve the actual ballot. Some voters returned the test ballot into the printer tray, potentially confusing the next voter. Had voters been reviewing the ballots at all before taking them to the scanner, they would have noticed the "Test Ballot" text on the ballot. I observed no voter really questioning a poll worker why a "Test" ballot was printed in the first place.

17. Obviously, during the election day, the ballot marking device should not be processing or printing any ballot other than the one the voter is voting. While the cause of the improper printing of ballots should be examined, the fact that this was happening at all is likely indicative of a wrong configuration given to the BMD, which in my professional opinion raises another question: Why didn't the device print only test ballots? And how can the device change its behavior in the middle of the election day? Is the incorrect configuration originating from the Electronic Pollbook System? What are the implications for the reliability of the printed ballot and the QR code being counted?

18. Election observation Park Tavern. The scanner acceptance delay did not vary as it had in previous locations and was consistently about 5 seconds from the moment the scanner takes the ballot, to the moment the scanner either accepts the ballot or rejects it. The variation between scanners at different locations is concerning because these are identical physical devices and should not behave differently while performing the identical task of scanning a ballot.

19. The vast majority of voters at Park Tavern did not inspect the ballots after taking them from the printer and before casting them in the scanner.

Fulton Tabulation Center Operation-Election Night, August 11, 2020

20. In Fulton County Election Preparation Center ("EPC") on election night I reviewed certain operations as authorized by Rule 34 inspection.

21. I was permitted to view the operations of the upload of the memory devices coming in from the precincts to the Dominion Election Management System ("EMS") server. The agreement with Fulton County was that I could review only for a limited period of time; therefore, I did not review the entire evening's process. Also, Dominion employees asked me to move away from the monitors containing the information and messages from the upload process and error messages, limiting my ability to give a more detailed report with documentation and photographs of the screens. However, my vantage point was more than adequate to observe that system problems were recurring and the Dominion technicians operating the system were struggling with the upload process.

22. It is my understanding the same EMS equipment and software had been used in Fulton County's June 9, 2020 primary election.

23. It is my understanding that the Dominion technician ("Dominic") charged with operating the EMS server for Fulton County had been performing

these duties at Fulton County for several months, including during the June 9 primary.

24. During my August 11 visit, and a follow-up visit on August 17, I observed that the EMS server was operated almost exclusively by Dominion personnel, with little interaction with EPC management, even when problems were encountered. In my conversations with Derrick Gilstrap and other Fulton County Elections Department EPC personnel, they professed to have limited knowledge of or control over the EMS server and its operations.

25. Outsourcing the operation of the voting system components directly to the voting system vendors' personnel is highly unusual in my experience and of grave concern from a security and conflict of interest perspective. Voting system vendors' personnel have a conflict of interest because they are not inclined to report on, or address, defects in the voting systems. The dangers this poses is aggravated by the absence of any trained County personnel to oversee and supervise the process.

26. In my professional opinion, the role played by Dominion personnel in Fulton County, and other counties with similar arrangements, should be considered an elevated risk factor when evaluating the security risks of Georgia's voting system.

27. Based on my observations on August 11 and August 17, Dell computers running the EMS that is used to process Fulton county votes appeared not to have been hardened.

28. In essence, hardening is the process of securing a system by reducing its surface of vulnerability, which is larger when a system performs more functions; in principle it is to the reduce the general purpose system into a single-function system which is more secure than a multipurpose one. Reducing available ways of attack typically includes changing default passwords, the removal of unnecessary software, unnecessary usernames or logins, grant accounts and programs with the minimum level of privileges needed for the tasks and create separate accounts for privileged operations as needed, and the disabling or removal of unnecessary services.

29. Computers performing any sensitive and mission critical tasks such as elections should unquestionably be hardened. Voting system are designated by the Department of Homeland Security as part of the critical infrastructure and certainly fall into the category of devices which should be hardened as the most fundamental security measure. In my experience, it is unusual, and I find it unacceptable for an EMS server not to have been hardened prior to installation.

30. The Operating System version in the Dominion Election Management computer, which is positioned into the rack and by usage pattern appears to be the main computer, is Windows 10 Pro 10.0.14393. This version is also known as the Anniversary Update version 1607 and it was released August 2, 2016. Exhibit A is a true and correct copy of a photograph that I took of this computer.

31. When a voting system is certified by the EAC, the Operating System is specifically defined, as Windows 10 Pro was for the Dominion 5.5-A system. Unlike consumer computers, voting systems do not and should not receive automatic "upgrades" to newer versions of the Operating System. without undergoing tests for conflicts with the new operating system software.

32. That computer and other computers used in Georgia's system for vote processing appear to have home/small business companion software packages included. Exhibits B and C are true and correct copies of photographs that I took of the computer located in the rack and the computer located closest to the rack on the table to the right. The Start Menu shows a large number of game and entertainment software icons. As stated before, one of the first procedures of hardening is removal of all unwanted software, and removal of those game icons and the associated games and installers alongside with all other software which is not absolutely needed in the computer for election processing purposes would be

one of the first and most basic steps in the hardening process. In my professional opinion, independent inquiry should be promptly made of all 159 counties to determine if the Dominion systems statewide share this major deficiency.

33. Furthermore, when I asked the Dominion employee Dominic assigned to the Fulton County election server operation about the origin of the Windows operating system, he answered that he believed that "it has been provided by the State."

34. Since Georgia's Dominion system is new, it is a reasonable assumption that all machines in the Fulton County election network had the same version of Windows installed. However, not only the two computers displayed different entertainment software icons, but additionally one of the machines in Fulton's group of election servers had an icon of computer game called "*Homescapes"* which is made by Playrix Holding Ltd., founded by Dmitry and Igor Bukham in Vologda, Russia. Attached as Exhibit C is a true and correct copy of a photograph that I took of the Fulton voting system computer" Client 02". The icon for Homescapes is shown by the arrow on Exhibit C.

35. The *Homescapes* game was released in August 2017, one year after Fulton County's operating system release. If the *Homescapes* game came with the operating system it would be unusual, because at the time of the release of

Homescapes, Microsoft had already released 3 major Microsoft Windows 10 update releases after build 14393 and before the release of that game. This calls into question whether all Georgia Dominion system computers have the same operating system version, or how the game has come to be having a presence in Fulton's Dominion voting system.

36. Although this Dominion voting system is new to Georgia, the Windows 10 operating system of at least the 'main' computer in the rack has not been updated for 4 years and carries a wide range of well-known and publicly disclosed vulnerabilities. At the time of this writing, The National Vulnerability Database maintained by National Institute of Standards and Technology lists 3,177 vulnerabilities mentioning "Windows 10 Pro" and 203 vulnerabilities are specifically mentioning "Windows 10 Pro 1607" which is the specific version number of the build 14393 that Dominion uses.

37. Even without internet connectivity, unhardened computers are at risk when those are used to process removable media. It was clear that when Compact Flash storage media containing the ballot images, audit logs and results from the precinct scanners were connected to the server, the media was automounted by the operating system. When the operating system is automounting a storage media, the operating system starts automatically to interact with the device. The zero-day

vulnerabilities exploiting this process has been recurringly discovered from all operating systems, including Windows. Presence of automount calls also into question presence of another setting which is always disabled in hardening process. It is autorun, which automatically executes some content on the removable media. While this is convenient for consumers, it poses extreme security risk.

38. Based on my experience and mental impression observing the Dominion technician's activities, Fulton County's EMS server management seems to be an *ad hoc* operation with no formalized process. This was especially clear on the manual processing of the memory cards storage devices coming in from the precincts on election night and the repeated access of the operating system to directly access filesystem, format USB devices, etc. This kind of operation in naturally prone to human errors. I observed personnel calling on the floor asking if all vote carrying compact flash cards had been delivered from the early voting machines for processing, followed by later finding additional cards which had been overlooked in apparent human error. Later, I heard again one technician calling on the floor asking if all vote carrying compact flashes had been delivered. This clearly demonstrates lack of inventory management which should be in place to ensure, among other things, that no rogue storage devices would be inserted into the computer. In response, 3 more compact flash cards were hand-delivered. Less

than 5 minutes later, I heard one of the county workers say that additional card was found and was delivered for processing. All these devices were trusted by printed label only and no comparison to an inventory list of any kind was performed.

39. In addition, operations were repeatedly performed directly on the operating system. Election software has no visibility into the operations performed directly on the operating system, and therefore those are not included in election system event logging. Those activities can only be partially reconstructed from operating system logs – and as these activities included copying election data files, election software log may create false impression that the software is accessing the same file over a period of time, while in reality the file could had been replaced with another file with the same name by activities commanded to the operating system. Therefore, any attempt to audit the election system operated in this manner must include through analysis of all operating system logs, which complicates the auditing process. Unless the system is configured properly to collect file system auditing data is not complete. As the system appears not to be hardened, it is unlikely that the operating system has been configured to collect auditing data.

40. A human error when operating live election system from the operating system can result in a catastrophic event destroying election data or even rendering the system unusable. Human error is likely given the time pressure involved and,

at least in Fulton County, no formal check lists or operating procedures were followed to mitigate the human error risk. The best practice is to automate trivial tasks to reduce risk of human error, increase the quality assurance of overall operations and provide auditability and transparency by logging.

41. Uploading of memory cards had already started before I arrived at EPC. While one person was operating the upload process, the two other Dominion employees were troubleshooting issues which seemed to be related to ballot images uploads. I repeatedly observed error messages appearing on the screen of the EMS server. I was not able to get picture of the errors on August 11th, I believe the error was the same or similar that errors recurring August 17th as shown on Exhibit D and discussed later in this declaration. Dominion employees were troubleshooting the issue with 'trial-and-error' approach. As part of this effort they accessed "Computer Management" application of Windows 10 and experimented with trouble shooting the user account management feature. This demonstrates that they had complete access to the computer. This means there are no meaningful access separation and privileges and roles controls protecting the county's primary election servers. This also greatly amplifies the risk of catastrophic human error and malicious program execution.

42. I overheard the Dominion technician's conversation that they had issues with file system structure and "need 5 files out of EMS server and paste. Delete everything out of there and put it there." To communicate the gravity of the situation to each other they added "Troubleshooting in the live environment". These conversations increased the mental image that they were not familiar the issue they were troubleshooting.

43. After about 45 minutes of trying to solve the issue by instructions received over the phone, the two Dominion employees' (who had been troubleshooting) behavior changed. The Dominion staff member walked behind the server rack and made manual manipulations which could not be observed from my vantage point. After that they moved with their personal laptops to a table physically farther away from the election system and stopped trying different ways to work around the issue in front of the server, and no longer talked continuously with their remote help over phone.

44. In the follow-up-calls I overheard them ask people on the other end of the call to check different things, and they only went to a computer and appeared to test something and subsequently take a picture of the computer screen with a mobile phone and apparently send it to a remote location.

45. Based on my extensive experience, this all created a strong mental impression that the troubleshooting effort was being done remotely over remote access to key parts of the system. Additionally, new wireless access point with a hidden SSID access point name appeared in the active Wi-Fi stations list that I was monitoring, but it may have been co-incidental. Hidden SSIDs are used to obscure presence of wireless networking from casual observers, although they do not provide any real additional security.

46. If in fact remote access was arranged and granted to the server, this has gravely serious implications for the security of the new Dominion system. Remote access, regardless how it is protected and organized is always a security risk, but furthermore it is transfer of control out of the physical perimeters and deny any ability to observe the activities.

47. I also observed USB drives marked with the Centon DataStick Pro Logo with no visible inventory control numbering system being taken repeatedly from the EMS server rack to the Fulton managers' offices and back. The Dominion employee told me that the USB drives were being taken to the Election Night Reporting Computer in another office. This action was repeated several times during the time of my observation. Carrying generic unmarked and therefore unidentifiable media out-of-view and back is a security risk – especially when the

exact same type of devices was piled on the desk near the computer. During the election night, the Dominion employees reached to storage box and introduced more unmarked storage devices into the ongoing election process. I saw no effort made to maintain a memory card inventory control document or chain of custody accounting for memory cards from the precincts.

48. I also visited the EPC on August 17. During that visit, the staff working on uploading ballots for adjudication experienced an error which appeared similar to the one on election night. This error was repeated with multitude of ballots and at the time we left the location, the error appeared to be ignored, rather that resolved. (EXHIBIT D - the error message and partial explanation of the error being read by the operator.).

49. The security risks outlined above – operating system risks, the failure to harden the computers, performing operations directly on the operating systems, lax control of memory cards, lack of procedures, and potential remote access, are extreme and destroy the credibility of the tabulations and output of the reports coming from a voting system.

50. Such a risk could be overcome if the election were conducted using hand marked paper ballots, with proper chain of custody controls. For elections conducted with hand marked paper ballots, any malware or human error involved

in the server security deficiencies or malfunctions could be overcome with a robust audit of the hand marked paper ballots and in case of irregularities detected, remedied by a recount. However, given that BMD ballots are computer marked, and the ballots therefore unauditable for determining the result, no recovery from system security lapses is possible for providing any confidence in the reported outcomes.

Ballot Scanning and Tabulation of Vote Marks

51. I have been asked to evaluate the performance and reliability of Georgia's Dominion precinct and central count scanners in the counting of votes on hand marked paper ballots.

52. On or about June 10th, Jeanne Dufort and Marilyn Marks called me to seek my perspective on what Ms. Dufort said she observed while serving as a Vote Review Panel member in Morgan County. Ms. Dufort told me that she observed votes that were not counted as votes nor flagged by the Dominion adjudication software.

53. Because of the ongoing questions this raised related to the reliability of the Dominion system tabulation of hand marked ballots, I was asked by Coalition Plaintiffs to conduct technical analysis of the scanner and tabulation accuracy. That analysis is still in its early stages.

54. Before addressing the particulars of my findings and research into the accuracy of Dominion's scanning and tabulation, I will address the basic process by which an image on a voted hand marked paper ballot is processed by scanner and tabulation software generally. It is important to understand that the Dominion scanners are Canon off the shelf scanners and their embedded software were designed for different applications than ballot scanning which is best conducted with scanners specifically designed for detecting hand markings on paper ballots.

55. Contrary of public belief, the scanner is not taking a picture of the paper. The scanner is illuminating the paper with a number of narrow spectrum color lights, typically 3, and then using software to produce an approximation what the human eye would be likely to see if there would had been a single white wide-spectrum light source. This process takes place in partially within the scanner and embedded software in the (commercial off the shelf) scanner and partially in the driver software in the host computer. It is guided by number of settings and configurations, some of which are stored in the scanner and some in the driver software. The scanner sensors gather more information than will be saved into the resulting file and another set of settings and configurations are used to drive that part of the process. The scanners also produce anomalies which are automatically removed from the images by the software. All these activities are performed

outside of the Dominion election software, which is relying on the end product of this process as the input.

56. I began reviewing Dominion user manuals in the public domain to further investigate the Dominion process.

57. On August 14, I received 2 sample Fulton County August 11 ballots of high-speed scanned ballot from Rhonda Martin, who stated that she obtained them from Fulton County during Coalition Plaintiff's discovery. The image characteristics matched the file details I had seen on the screen in EPC. The image is TIFF format, about 1700 by 2200 pixels with 1-bit color depth (= strictly black or white pixels only) with 200 by 200 dots per square inch ("dpi") resolution resulting in files that are typically about 64 or 73 kilo bytes in size for August 11 ballots. With this resolution, the outer dimension of the oval voting target is about 30 by 25 pixels. The oval itself (that is, the oval line that encircles the voting target) is about 2 pixels wide. The target area is about 450 pixels; the area of the target a tight bounding box would be 750 pixels and the oval line encircling the target is 165 pixels. In these images, the oval itself represented about 22% value in the bounding box around the vote target oval.

58. Important image processing decisions are done in scanner software and before election software threshold values are applied to the image. These

scanner settings are discussed in an excerpt Dominion's manual for ICC operations My understanding is that the excerpt of the Manual was received from Marilyn Marks who stated that she obtained it from a Georgia election official in response to an Open Records request. Attached as Exhibit E is page 9 of the manual. Box number 2 on Exhibit E shows that the settings used are not neutral factory default settings.

59. Each pixel of the voters' marks on a hand marked paper ballot will be either in color or gray when the scanner originally measures the markings. The scanner settings affect how image processing turns each pixel from color or gray to either black or white in the image the voting software will later process. This processing step is responsible for major image manipulation and information reduction before the election software threshold values are calculated. This process has a high risk of having an impact upon how a voter mark is interpreted by the tabulation software when the information reduction erases markings from the scanned image before the election software processes it.

60. In my professional opinion, any decision by Georgia's election officials about adopting or changing election software threshold values is premature before the scanner settings are thoroughly tested, optimized and locked.

61. The impact of the scanner settings is minimal for markings made with a black felt pen but can be great for markings made with any color ballpoint pens. To illustrate this, I have used standard color scanning settings and applied then standard conversion from a scanned ballot vote target with widely used free and open source image processing software "GNU Image Manipulation Program version 2.10.18" EXHIBIT G shows the color image being converted with the software's default settings from color image to Black-and-White only. The red color does not meet the internal conversion algorithm criteria for black, therefore it gets erased to white instead.

62. Dominion manual for ICC operations clearly show that the scanner settings are changed from neutral factory default settings. EXHIBIT H shows how these settings applied different ways alter how a blue marking is converted into Black-and-White only image.

63. The optimal scanner settings are different for each model of scanner and each type of paper used to print ballots. Furthermore, because scanners are inherently different, the manufacturers use hidden settings and algorithms to cause neutral factory settings to produce similar baseline results across different makes and models. This is well-studied topic; academic and image processing studies published as early as 1979 discuss the brittleness of black-or-white images in

conversion. Subsequently, significance for ballot counting has been discussed in academic USENIX conference peer-reviewed papers.

64. On the August 17th at Fulton County Election Preparation Center Professor Richard DeMillo and I participated in a scan test of August 11 test ballots using a Fulton County owned Dominion precinct scanner. Two different ballot styles were tested, one with 4 races and one with 5 races. Attached as Exhibits I and J show a sample ballots with test marks.

65. A batch of 50 test ballots had been marked by Rhonda Martin with varying types of marks and varying types of writing instruments that a voter might use at home to mark an absentee ballot. Professor DeMillo and I participated in marking a handful of ballots.

66. Everything said here concerning the August 17 test is based on a very preliminary analysis. The scanner took about 6 seconds to reject the ballots, and one ballot was only acceptable "headfirst" while another ballot only "tail first." Ballot scanners are designed to read ballots "headfirst" or "tail first," and front side and backside and therefore there should not be ballots which are accepted only in one orientation. I observed the ballots to make sure that both ballots had been cleanly separated from the stub and I could not identify any defects of any kind on the ballots.

67. There was a 15 second cycle from the time the precinct scanner accepted a ballot to the time it was ready for the next ballot. Therefore, the maximum theoretical capacity with the simple 5 race ballot is about 4 ballots per minute if the next ballot is ready to be fed into the scanner as soon as the scanner was ready to take it. In a real-world voting environment, it takes considerably longer because voters move away from the scanner, the next voter must move in and subsequently figure where to insert the ballot. The Dominion precinct scanner that I observed was considerably slower than the ballot scanners I have tested over the last 15 years. This was done with a simple ballot, and we did not test how increase of the number of races or vote targets on the ballot would affect the scanning speed and performance.

68. Though my analysis is preliminary, this test reveals that a significant percentage of filled ovals that would to a human clearly show voter's intent failed to register as a vote on the precinct count scanner.

69. The necessary testing effort has barely begun at the time of this writing, as only limited access to equipment has been made available. I have not had access to the high-volume mail ballot scanner that is expected to process millions of mail ballots in Georgia's upcoming elections. However, initial results suggest that significant revisions must be made in the scanning settings to avoid a

widespread failure to count certain valid votes that are not marked as filled in ovals. Without testing, it is impossible to know, if setting changes alone are sufficient to cure the issue.

Scanned Ballot Tabulation Software Threshold Settings

70. Georgia is employing a Dominion tabulation software tool called "Dual Threshold Technology" for "marginal marks." (See Exhibit M) The intent of the tool is to detect voter marks that could be misinterpreted by the software and flag them for review. While the goal is admirable, the method of achieving this goal is quite flawed.

71. While it is compelling from development cost point of view to use commercial off the shelf COTS scanners and software, it requires additional steps to ensure that the integration of the information flow is flawless. In this case, the software provided by the scanner manufacturer and with settings and configurations have great impact in how the images are created and what information is removed from the images before the election software processes it. In recent years, many defective scanner software packages have been found. These software flaws include 'image enhancement' features which have remained enabled even when the feature has been chosen to be disabled from the scanner software provided by the manufacturer. An example of dangerous feature to keep

enabled is 'Punch Hole Removal', intended to make images of documents removed from notebook binders to look more aesthetically pleasing. The software can and in many cases will misinterpret a voted oval as a punch hole and erase the vote from the image file and to make this worse, the punch holes are expected to be found only in certain places near the edge of the paper, and therefore it will erase only votes from candidates whose targets are in those target zones.

72. Decades ago, when computing and storage capacity were expensive black-and-white image commonly meant 1-bit black-or-white pixel images like used by Dominion system. As computer got faster and storage space cheaper during the last 2-3 decades black-and-white image has become by default meaning 255 shades of gray grayscale images. For the purposes of reliable digitalization of physical documents, grayscale image carries more information from the original document for reliable processing and especially when colored markings are being processed. With today's technology, the difference in processing time and storage prices between grayscale and 1-bit images has become completely meaningless, and the benefits gained in accuracy are undeniable.

73. I am aware that the Georgia Secretary of State's office has stated that Georgia threshold settings are national industry standards for ballot scanners (Exhibit K). This is simply untrue. If, there were an industry standard for that, it

would be part of EAC certification. There is no EAC standard for such threshold settings. As mentioned before, the optimal settings are products of many elements. The type of the scanner used, the scanner settings and configuration, the type of the paper used, the type of the ink printer has used in printing the ballots, color dropout settings, just to name few. Older scanner models, which were optical mark recognitions scanners, used to be calibrated using calibration sheet – similar process is needed to be established for digital imaging scanners used this way as the ballot scanners.

74. Furthermore, the software settings in Exhibit E box 2 show that the software is instructed to ignore all markings in red color ("Color drop-out: Red"), This clearly indicates that the software was expecting the oval to be printed in Red and therefore it will be automatically removed from the calculation. The software does not anticipate printed black ovals as used in Fulton County. Voters have likely not been properly warned that any pen they use which ink contains high concentration of red pigment particles is at risk of not counting, even if to the human eye the ink looks very dark.

75. I listened to the August 10 meeting of the State Board of Elections as they approved a draft rule related to what constitutes a vote, incorporating the following language:

Ballot scanners that are used to tabulate optical scan ballots marked by hand shall be set so that:

1. Detection of 20% or more fill-in of the target area surrounded by the oval shall be considered a vote for the selection;

2. Detection of less than 10% fill-in of the target area surrounded by the oval shall not be considered a vote for that selection;

3. Detection of at least 10% but less than 20% fill-in of the target area surrounded by the oval shall flag the ballot for adjudication by a vote review panel as set forth in O.C.G.A. 21-2-483(g). In reviewing any ballot flagged for adjudication, the votes shall be counted if, in the opinion of the vote review panel, the voter has clearly and without question indicated the candidate or candidates and answers to questions for which such voter desires to vote.

76. The settings discussed in the rule are completely subject to the scanner settings. How the physical marking is translated into the digital image is determined by those values and therefore setting the threshold values without at the same time setting the scanner settings carries no value or meaning. If the ballots will be continuing to be printed with black only, there is no logic in having any drop-out colors.

77. Before the State sets threshold standards for the Dominion system, extensive testing is needed to establish optimal configuration and settings for each step of the process. Also, the scanners are likely to have settings additional configuration and settings which are not visible menus shown in the manual excerpt. All those should be evaluated and tested for all types of scanners approved for use in Georgia, including the precinct scanners

78. As temporary solution, after initial testing, the scanner settings and configuration should be locked and then a low threshold values should be chosen. All drop-out colors should be disabled. This will increase the number of ballots chosen for human review and reduce the number of valid votes not being counted as cast.

Logic and Accuracy Testing

79. Ballot-Marking Device systems inherits the same well-documented systemic security issues embedded in direct-recording electronic (DRE) voting machine design. Such design flaws eventually are causing the demise of DRE voting system across the country as it did in Georgia. In essence the Ballot Marking Device is a general-purpose computer running a general-purpose operating system with touchscreen that is utilized as a platform to run a software, very similar to DRE by displaying a ballot to the voter and recording the voter's intents. The main difference is that instead of recording those internally digitally, it prints out a ballot summary card of voter's choices.

80. Security properties of this approach would be positively different from DREs if the ballot contained only human-readable information and all voters are required to and were capable of verifying their choices from the paper ballot summary. That of course is unrealistic.

81. When voter fails to inspect the paper ballot and significant portion of the information is not in human readable from as a QR barcode, Ballot-Marking Device based voting effectively inherits most of the negative and undesirable security and reliability properties directly from DRE paradigm, and therefore should be subject to the same testing requirements and mitigation strategies as DREs.

82. In response to repeating myriad of issues with DREs, which have been attributed to causes from screen calibration issues to failures in ballot definition configuration distribution, a robust Logic & Accuracy testing regulation have been established. These root causes are present in BMDs and therefore should be evaluated in the same way as DREs have been.

I received the Georgia Secretary of State's manual "Logic and Accuracy Procedures "Version 1.0 January 2020 from Rhonda Martin. Procedure described in section D "Testing the BMD and Printer" is taking significant shortcuts, presumably to cut the labor work required. (Section D is attached as Exhibit L) These shortcuts significantly weaken the security and reliability posture of the system and protections against already known systemic pitfalls, usability predicaments and security inadequacies.

CONCLUSIONS

83. The scanner software and tabulation software settings and configurations being employed to determine which votes to count on hand marked paper ballots are likely causing clearly intentioned votes not to be counted as cast.

84. The method of using 1-bit images and calculated relative darkness values from such pre-reduced information to determine voter marks on ballots is severely outdated and obsolete. It artificially and unnecessarily increases the failure rates to recognize votes on hand-marked paper ballots. As a temporary mitigation, optimal configurations and settings for all steps of the process should be established after robust independent testing to mitigate the design flaw and augment it with human assisted processes, but that will not cure the root cause of the software deficiency which needs to be addressed.

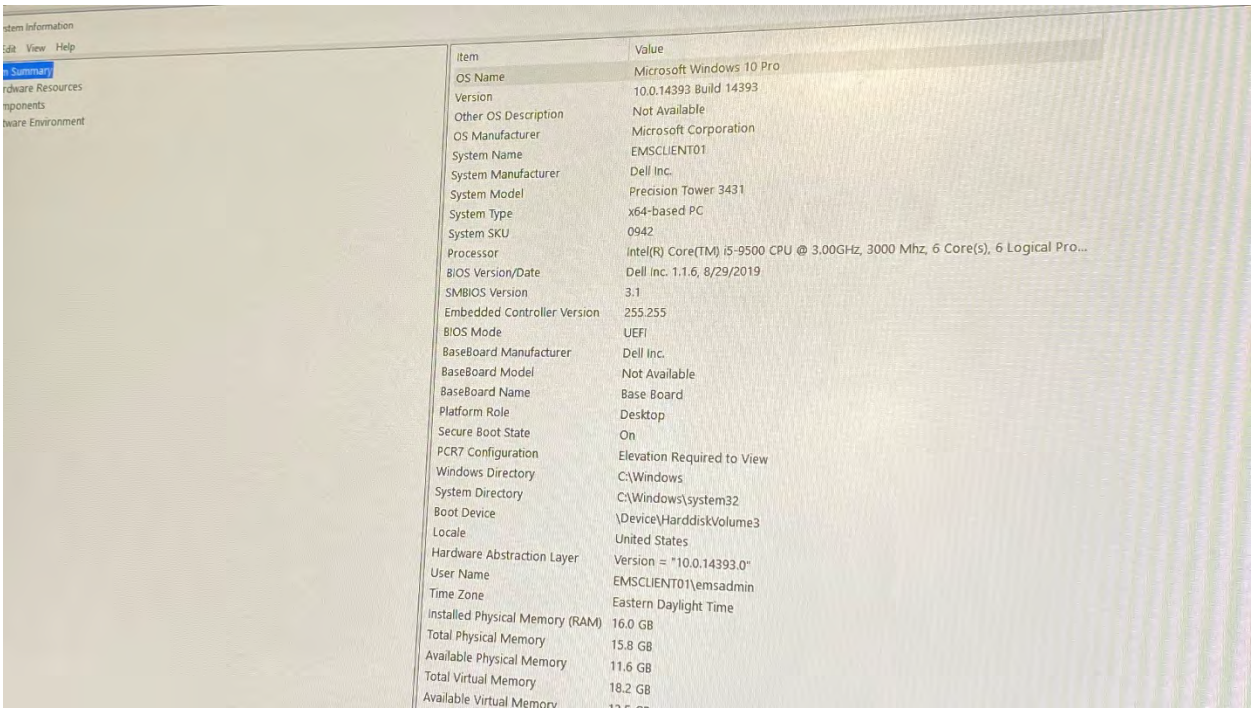
85. The voting system is being deployed, configured and operated in Fulton County in a manner that escalates the security risk to an extreme level and calls into question the accuracy of the election results. The lack of well-defined process and compliance testing should be addressed immediately using independent experts. The use and the supervision of the Dominion personnel operating Fulton County's Dominion Voting System should be evaluated.

86. Voters are not reviewing their BMD printed ballots before scanning and casting them, which causes BMD-generated results to be un-auditable due to the untrustworthy audit trail. Furthermore, because BMDs are inheriting known fundamental architectural deficiencies from DREs, no mitigation and assurance measures can be weakened, including but not limited to Logic and Accuracy Testing procedures.

This 24th day of August 2020.

Harri Hursti

EXHIBIT A:



Item	Value
OS Name	Microsoft Windows 10 Pro
Version	10.0.14393 Build 14393
Other OS Description	Not Available
OS Manufacturer	Microsoft Corporation
System Name	EMSCLIENT01
System Manufacturer	Dell Inc.
System Model	Precision Tower 3431
System Type	x64-based PC
System SKU	0942
Processor	Intel(R) Core(TM) i5-9500 CPU @ 3.00GHz, 3000 Mhz, 6 Core(s), 6 Logical Pro...
BIOS Version/Date	Dell Inc. 1.1.6, 8/29/2019
SMBIOS Version	3.1
Embedded Controller Version	255.255
BIOS Mode	UEFI
BaseBoard Manufacturer	Dell Inc.
BaseBoard Model	Not Available
BaseBoard Name	Base Board
Platform Role	Desktop
Secure Boot State	On
PCR7 Configuration	Elevation Required to View
Windows Directory	C:\Windows
System Directory	C:\Windows\system32
Boot Device	\Device\HarddiskVolume3
Locale	United States
Hardware Abstraction Layer	Version = "10.0.14393.0"
User Name	EMSCLIENT01\emsadmin
Time Zone	Eastern Daylight Time
Installed Physical Memory (RAM)	16.0 GB
Total Physical Memory	15.8 GB
Available Physical Memory	11.6 GB
Total Virtual Memory	18.2 GB
Available Virtual Memory	

EXHIBIT B:

Most used
EMS Election Event Designer
File Explorer
EMS Results Tally and Reporting
Notepad
ImageCast® Adjudication
Calculator
1-Wire Drivers x64
3D Builder
Acrobat Reader DC
Alarms & Clock
Calculator
Calendar
Camera
Life at a glance
Monday
17
Get all your mail in one place
Mail
Microsoft Edge
Photos
Weather
Skype Preview
Microsoft News
Store
Play and explore
Xbox
Groove Music
Movies & TV
Paint 3D
WinZip Univer...
Get Office
OneNote

EXHIBIT C:

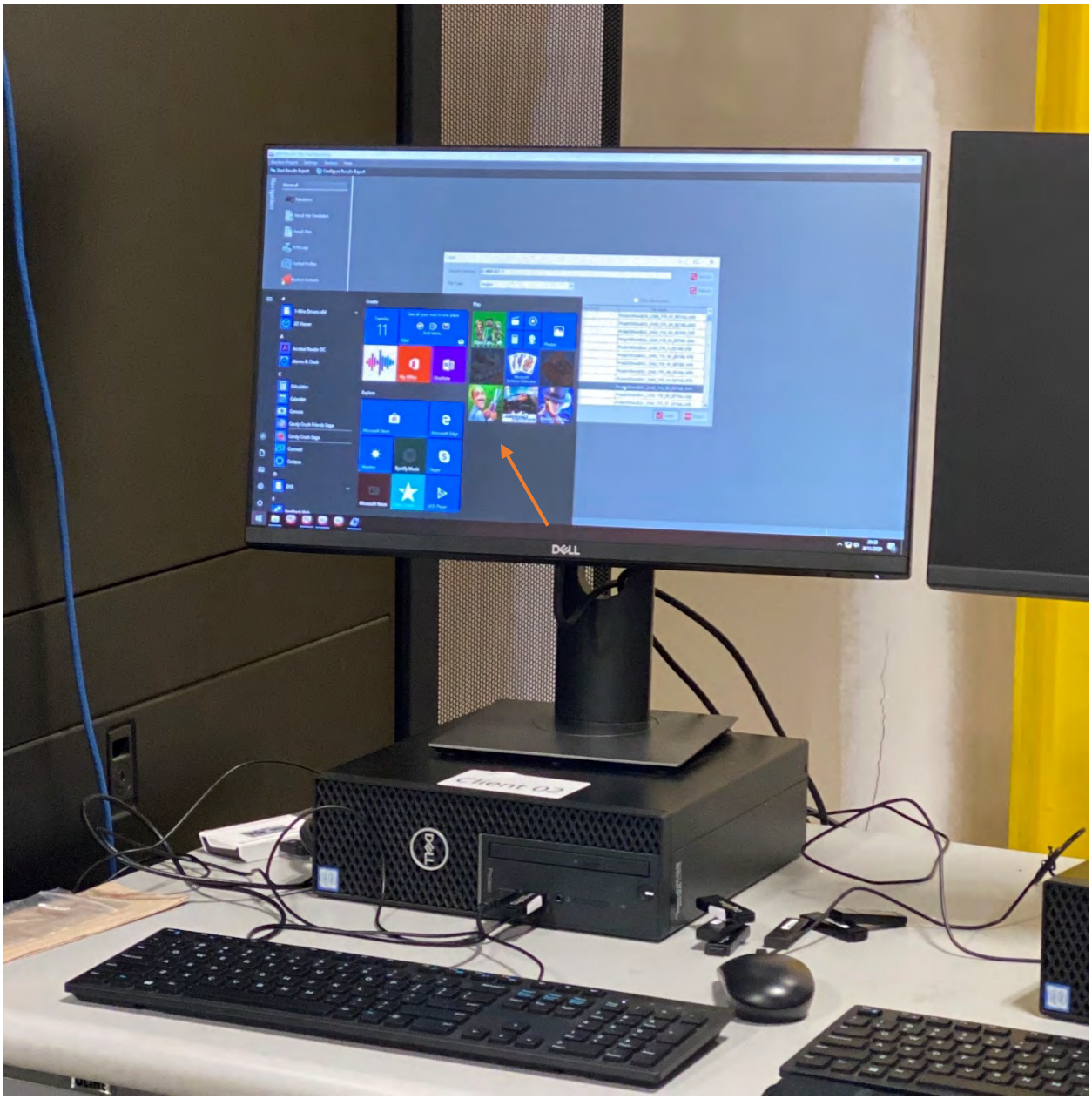


EXHIBIT D:

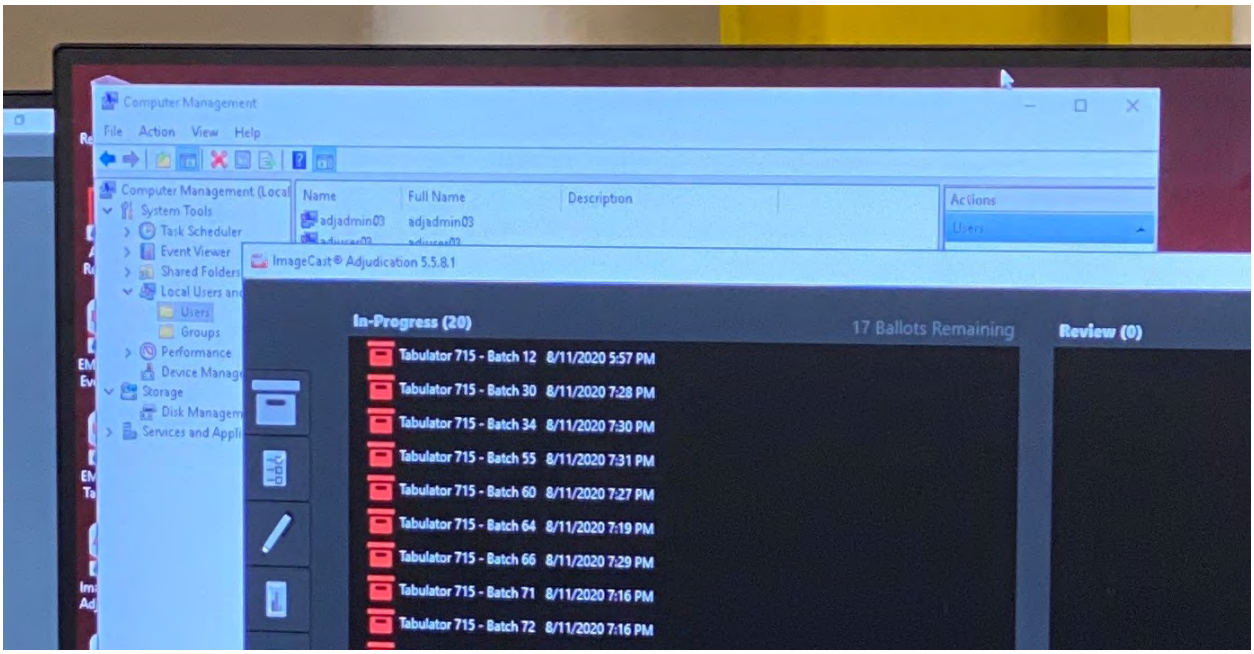
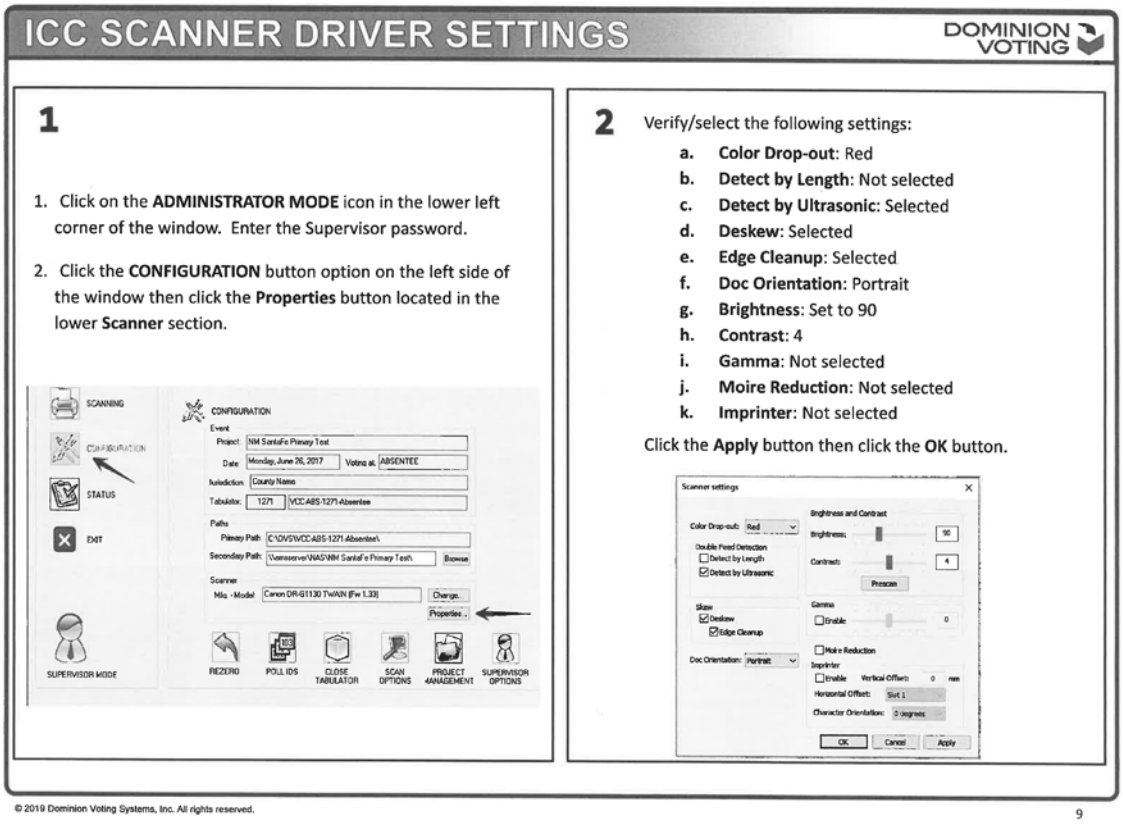

Computer Management
File Action View Help
Computer Management (Local
System Tools
Task Scheduler
Event Viewer
Shared Folders
Local Users and
Users
Groups
Performance
Device Manag
Storage
Disk Managem
Services and Appli
Name
Full Name
Description
adjadmin03
adjadmin03
Actions
Users
ImageCast® Adjudication 5.5.8.1
In-Progress (20)
17 Ballots Remaining
Review (0)
Tabulator 715 - Batch 12 8/11/2020 5:57 PM
Tabulator 715 - Batch 30 8/11/2020 7:28 PM
Tabulator 715 - Batch 34 8/11/2020 7:30 PM
Tabulator 715 - Batch 55 8/11/2020 7:31 PM
Tabulator 715 - Batch 60 8/11/2020 7:27 PM
Tabulator 715 - Batch 64 8/11/2020 7:19 PM
Tabulator 715 - Batch 66 8/11/2020 7:29 PM
Tabulator 715 - Batch 71 8/11/2020 7:16 PM
Tabulator 715 - Batch 72 8/11/2020 7:16 PM

EXHIBIT E:



ICC SCANNER DRIVER SETTINGS

DOMINION VOTING

1

1. Click on the **ADMINISTRATOR MODE** icon in the lower left corner of the window. Enter the Supervisor password.
2. Click the **CONFIGURATION** button option on the left side of the window then click the **Properties** button located in the lower **Scanner** section.

2

Verify/select the following settings:

a. **Color Drop-out**: Red
b. **Detect by Length**: Not selected
c. **Detect by Ultrasonic**: Selected
d. **Deskew**: Selected
e. **Edge Cleanup**: Selected
f. **Doc Orientation**: Portrait
g. **Brightness**: Set to 90
h. **Contrast**: 4
i. **Gamma**: Not selected
j. **Moire Reduction**: Not selected
k. **Imprinter**: Not selected

Click the **Apply** button then click the **OK** button.

© 2019 Dominion Voting Systems, Inc. All rights reserved.

9

EXHIBIT F:

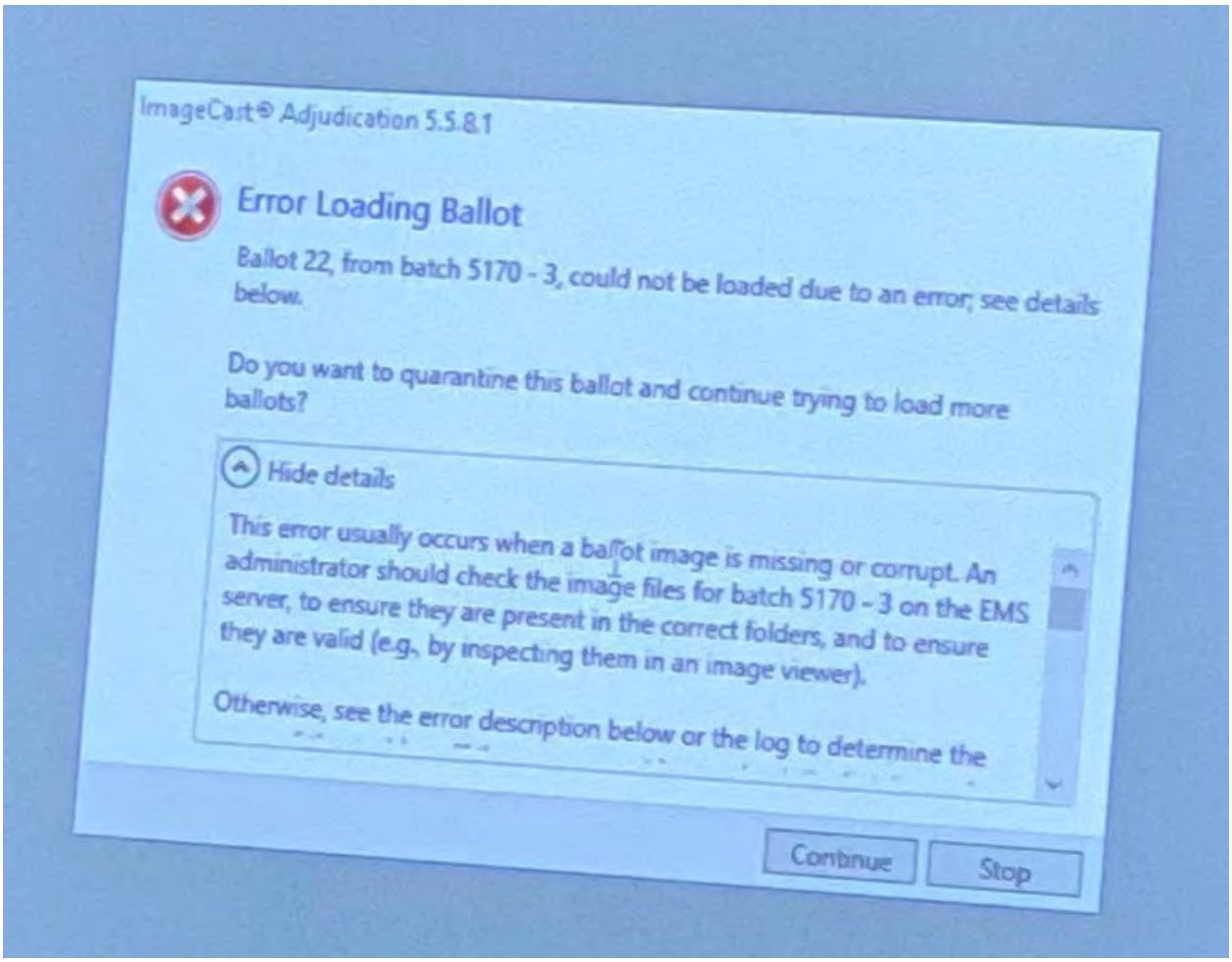

ImageCast® Adjudication 5.5.8.1
Error Loading Ballot
Ballot 22, from batch 5170 - 3, could not be loaded due to an error; see details below.
Do you want to quarantine this ballot and continue trying to load more ballots?
Hide details
This error usually occurs when a ballot image is missing or corrupt. An administrator should check the image files for batch 5170 - 3 on the EMS server, to ensure they are present in the correct folders, and to ensure they are valid (e.g., by inspecting them in an image viewer).
Otherwise, see the error description below or the log to determine the
Continue
Stop

EXHIBIT G:

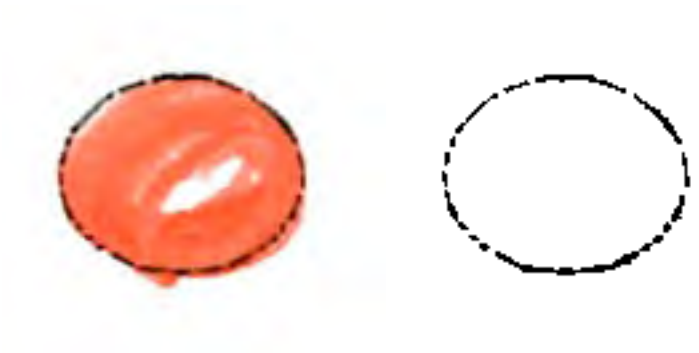


EXHIBIT H:

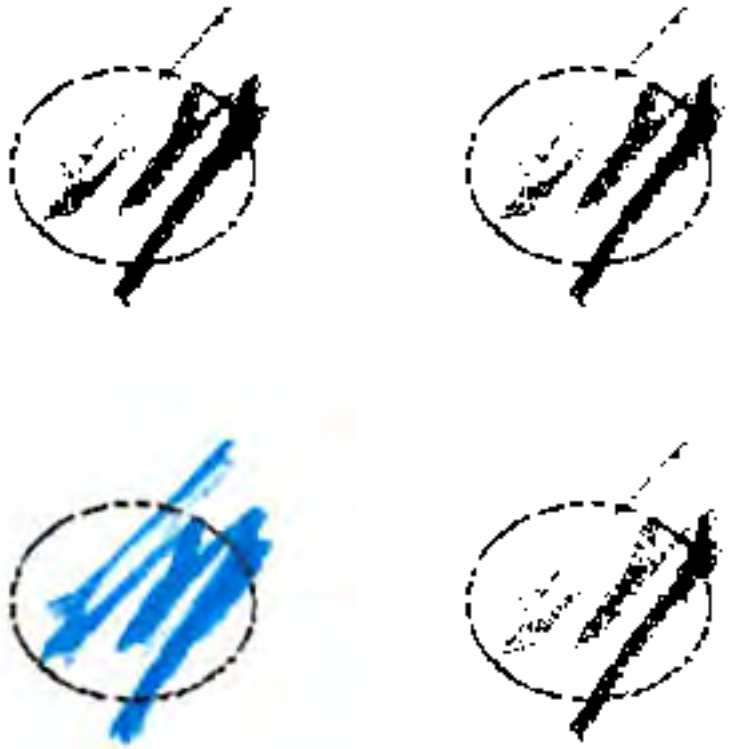
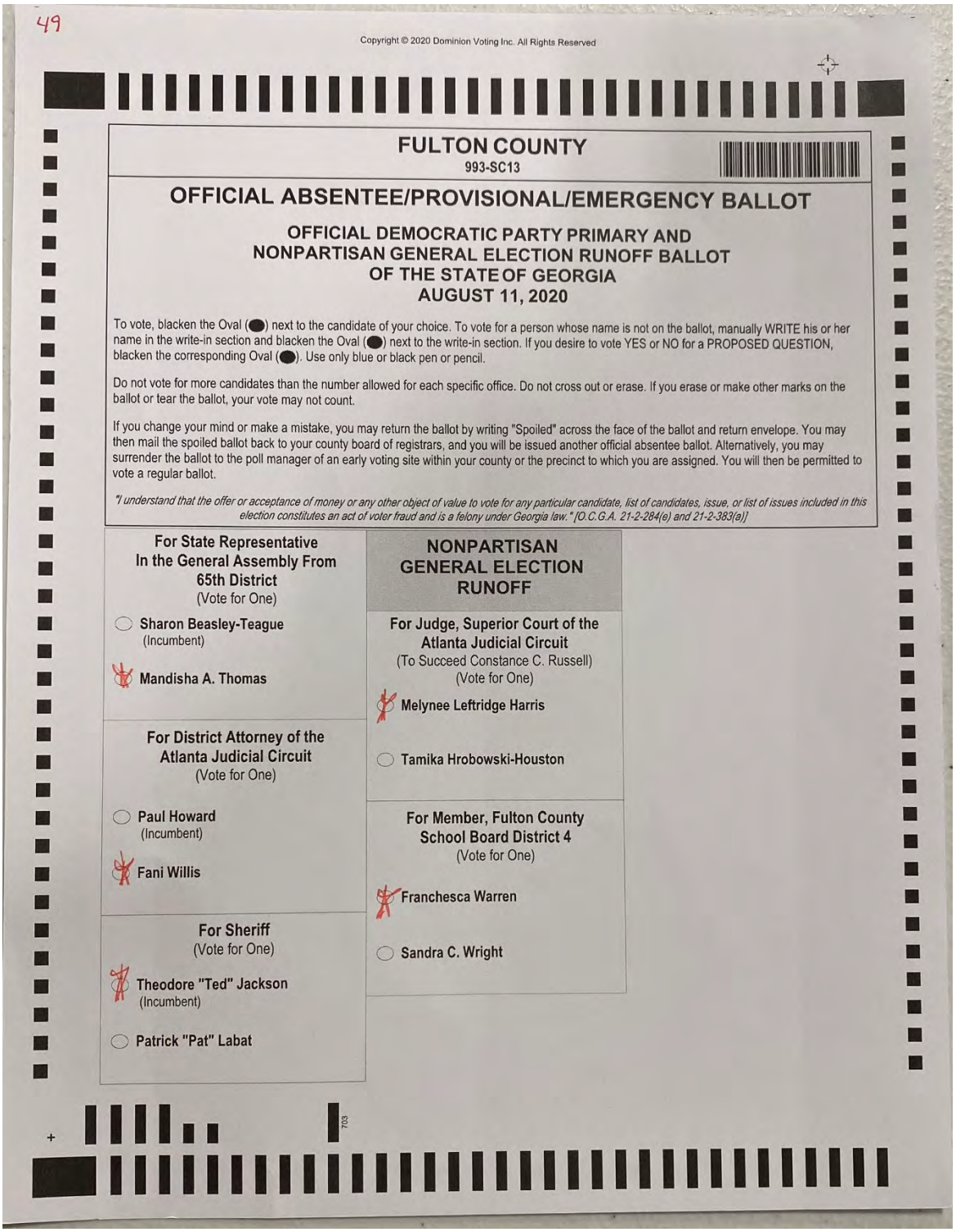


EXHIBIT I:



49

Copyright © 2020 Dominion Voting Inc. All Rights Reserved

FULTON COUNTY
993-SC13

OFFICIAL ABSENTEE/PROVISIONAL/EMERGENCY BALLOT

OFFICIAL DEMOCRATIC PARTY PRIMARY AND
NONPARTISAN GENERAL ELECTION RUNOFF BALLOT
OF THE STATE OF GEORGIA
AUGUST 11, 2020

To vote, blacken the Oval (●) next to the candidate of your choice. To vote for a person whose name is not on the ballot, manually WRITE his or her name in the write-in section and blacken the Oval (●) next to the write-in section. If you desire to vote YES or NO for a PROPOSED QUESTION, blacken the corresponding Oval (●). Use only blue or black pen or pencil.

Do not vote for more candidates than the number allowed for each specific office. Do not cross out or erase. If you erase or make other marks on the ballot or tear the ballot, your vote may not count.

If you change your mind or make a mistake, you may return the ballot by writing "Spoiled" across the face of the ballot and return envelope. You may then mail the spoiled ballot back to your county board of registrars, and you will be issued another official absentee ballot. Alternatively, you may surrender the ballot to the poll manager of an early voting site within your county or the precinct to which you are assigned. You will then be permitted to vote a regular ballot.

"I understand that the offer or acceptance of money or any other object of value to vote for any particular candidate, list of candidates, issue, or list of issues included in this election constitutes an act of voter fraud and is a felony under Georgia law." [O.C.G.A. 21-2-284(e) and 21-2-383(a)]

For State Representative
In the General Assembly From
65th District
(Vote for One)

- Sharon Beasley-Teague (Incumbent)
- Mandisha A. Thomas

For District Attorney of the
Atlanta Judicial Circuit
(Vote for One)

- Paul Howard (Incumbent)
- Fani Willis

For Sheriff
(Vote for One)

- Theodore "Ted" Jackson (Incumbent)
- Patrick "Pat" Labat

NONPARTISAN
GENERAL ELECTION
RUNOFF

For Judge, Superior Court of the
Atlanta Judicial Circuit
(To Succeed Constance C. Russell)
(Vote for One)

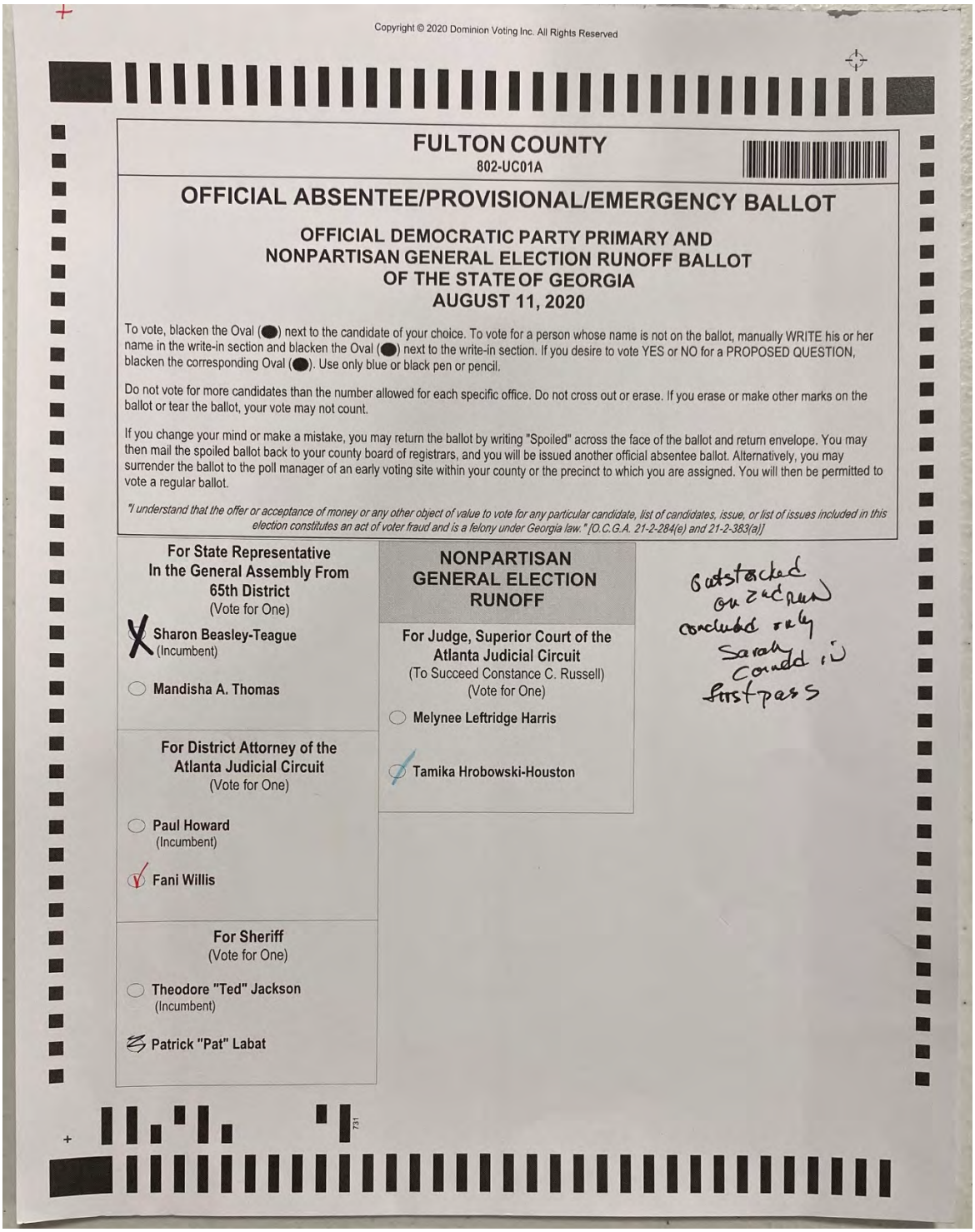
- Melynee Leftridge Harris
- Tamika Hrobowski-Houston

For Member, Fulton County
School Board District 4
(Vote for One)

- Franchesca Warren
- Sandra C. Wright

703

EXHIBIT J:



Copyright © 2020 Dominion Voting Inc. All Rights Reserved

FULTON COUNTY
802-UC01A

OFFICIAL ABSENTEE/PROVISIONAL/EMERGENCY BALLOT

OFFICIAL DEMOCRATIC PARTY PRIMARY AND
NONPARTISAN GENERAL ELECTION RUNOFF BALLOT
OF THE STATE OF GEORGIA
AUGUST 11, 2020

To vote, blacken the Oval (●) next to the candidate of your choice. To vote for a person whose name is not on the ballot, manually WRITE his or her name in the write-in section and blacken the Oval (●) next to the write-in section. If you desire to vote YES or NO for a PROPOSED QUESTION, blacken the corresponding Oval (●). Use only blue or black pen or pencil.

Do not vote for more candidates than the number allowed for each specific office. Do not cross out or erase. If you erase or make other marks on the ballot or tear the ballot, your vote may not count.

If you change your mind or make a mistake, you may return the ballot by writing "Spoiled" across the face of the ballot and return envelope. You may then mail the spoiled ballot back to your county board of registrars, and you will be issued another official absentee ballot. Alternatively, you may surrender the ballot to the poll manager of an early voting site within your county or the precinct to which you are assigned. You will then be permitted to vote a regular ballot.

"I understand that the offer or acceptance of money or any other object of value to vote for any particular candidate, list of candidates, issue, or list of issues included in this election constitutes an act of voter fraud and is a felony under Georgia law." [O.C.G.A. 21-2-284(e) and 21-2-383(a)]

For State Representative In the General Assembly From 65th District
(Vote for One)

- [X] Sharon Beasley-Teague (Incumbent)
- [ ] Mandisha A. Thomas

For District Attorney of the Atlanta Judicial Circuit
(Vote for One)

- [ ] Paul Howard (Incumbent)
- [✓] Fani Willis

For Sheriff
(Vote for One)

- [ ] Theodore "Ted" Jackson (Incumbent)
- [ ] Patrick "Pat" Labat

NONPARTISAN GENERAL ELECTION RUNOFF

For Judge, Superior Court of the Atlanta Judicial Circuit
(To Succeed Constance C. Russell)
(Vote for One)

- [ ] Melynee Leftridge Harris
- [✓] Tamika Hrobowski-Houston

Outstacked on 2nd run concluded only Sarah counted in first pass

EXHIBIT K:

Gabriel Sterling
@GabrielSterling
Replying to @MarilynRMarks1 @rahulbali and 9 others
Again, all Central scanners were set at the industry standard 0-13% is not a mark (the oval is 5%) 14-28% is the ambiguous level to be checked by review panels, 29%+ is a mark. You ar pointing out the inherent issues with HMPBs that we don't see with BMD marked ballots.
8:02 PM · Jun 13, 2020 from Georgia, USA · Twitter for iPhone

EXHIBIT L:

SECURE THE VOTE

- Create a voter card from Poll Pad for each unique ballot style within the designated Polling Location
  - Recommend labels be placed on card identifying what ballot style will be displayed by BMD once card is inserted
  - BMD removes the activation code from the Voter Card once used, therefore create the card again from Poll Pad after each use by a BMD

D. Testing the BMD and Printer

Use a combination of Poll Worker Card with Ballot Activation Codes for the polling location, and Voter Cards created from a Poll Pad loaded with the LA/Advance Voting dataset to bring up ballots on the BMD

- Produce at least one printed ballot from each BMD assigned to the polling location
- Produce a test deck from the BMDs assigned to the polling location for each unique ballot style within the polling location. The test deck must contain at least one vote for each candidate listed in each race within the unique ballot style
  - **Example**: Ballot from BMD 1 contains a vote for only the first candidate in each race listed on Ballot Style 1, Ballot from BMD 2 contains a vote only for the second candidate in each race on Ballot Style 1, and continue through the line of devices until all candidates in all races within the unique ballot style have received a single vote
  - **If Number of BMDs outnumber the number of vote positions on the unique ballot style**, start the vote pattern over until all BMDs have produced one printed ballot
  - **If Number of unique ballot styles in the polling place is greater than 1,** once the vote pattern is complete for a unique ballot style, proceed to the next BMD in line to start the review of the next unique Ballot Style
  - **All unique ballot styles do not have to be tested on each BMD**
- Review BMD-generated Test Deck and confirm the vote content before placing in the designated Polling Place Scanner

E. Testing the Polling Place Scanner

- Scan the BMD-generated Test Deck into the Polling Place Scanner
- Scan one blank optical scan ballot style(s) associated to the Polling Place to verify the Polling Place Scanner will recognize the ballot style in case of emergency
- Verify Scanner(s) shows a number of Ballot Cast equal to the number of ballots in the BMD-generated test deck plus the scanned blank Optical Scan ballot styles
- Firmly place the Security Key Tab in the Security Key Slot
- Touch Close Polls
- Enter the passcode
- Touch Enter
- Touch Yes
- Touch No for additional tapes (Scanner will automatically produce 3 copies of the closing tape)

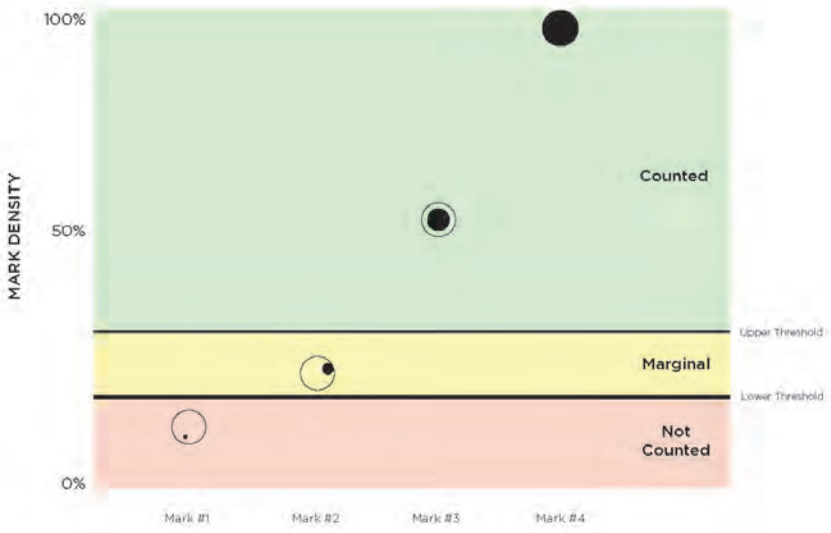
EXHIBIT M:

THE DOMINION DIFFERENCE

DUAL THRESHOLD TECHNOLOGY (MARGINAL MARKS)

From its early beginnings, Dominion Voting has emphasized the use of digital scanning, and continues to set the standard in digital image acquisition and analysis in the tabulation of digitally scanned ballots. When a ballot is fed into an ImageCast® tabulator – at the precinct level or centrally - a complete duplex image is created and then analyzed for tabulation by evaluating the pixel count of a voter mark. The pixel count of each mark is compared with two thresholds (which can be defined through the Election Management System) to determine what constitutes a vote. If a mark falls above the upper threshold, it's a valid vote. If a mark falls below the lower threshold, it will not be counted as a vote.

However, if a mark falls between the two thresholds (known as the "ambiguous zone"), it will be deemed as a marginal mark and the ballot will be returned to the voter for corrective action (please see diagram below). With this feature, the voter is given the ability to determine his or her intent, not an inspection or recount board after the fact, when it is too late. The chart below illustrates the Marginal Mark threshold interpretation.



Case 1:17-cv-02989-AT Document 1859-4 Filed 01/25/21 Page 1 of 119

Exhibit 4

From: Samantha Whitley <cgganalyst2@gmail.com>
Sent: Wednesday, October 7, 2020 9:11 AM
To: elections@lowndescounty.com; elections@lumpkincounty.gov; tdean@mcelections.us; Marion County Elections & Registrations <marioncountyelect@gmail.com>; Phyllis Wheeler <Phyllis.Wheeler3@thomson-mcduffie.net>; Doll Gale <egale@darientel.net>; Patty Threadgill <p.threadgill@meriwethercountyga.gov>; Jerry C <registrars@millercountyga.com>; Terry Ross <tross@mitchellcountyga.net>; Kaye Warren <kwarren@monroecoga.org>; rmoxsand@hotmail.com; Jennifer Doran <jdoran@morgancountyga.gov>; vote@murraycountyga.gov; Nancy Boren <nboren@columbusga.org>; Angela Mantle <amantle@co.newton.ga.us>; Fran Leathers <fleathers@oconee.ga.us>; Steve McCannon <smccannon@oglethorpecountyga.gov>; Deidre Holden <deidre.holden@paulding.gov>; Adrienne Ray <adrienne-ray@peachcounty.net>; Julie Roberts <jroberts@pickenscountyga.gov>; Leah Williamson <leah.williamson@piercecountyga.gov>; Sandi Chamblin <schamblin@pikecoga.com>; Lee Ann George <lgeorge@polkga.org>; quit.judge@gqc-ga.org; twhitmire@rabuncounty.ga.gov; Todd Black <rcc.boe@gmail.com>; Lynn Bailey <lbailey@augustaga.gov>; cynthia.welch@rockdalecountyga.gov; Schley Registrars <registrars_schley@yahoo.com>
Subject: Followup - new unsealed documents and response to Harvey bulletin

Providing the Facts—BMD Security Risks and Software Update

The events of the last 11 days have made it clearer than ever that county election officials have the duty to abandon the county-wide use of BMD touchscreen machines and adopt hand marked paper ballots because the BMD units cannot be used securely or legally---certainly making their deployment "impossible," "impractical" or "unusable." [Those are the conditions in the statute and new election rule that call for the superintendent's decision to use hand marked paper ballots.] We offer more facts as your board makes this significant decision.

The 2020 General Election is underway, and last week the Secretary of State ordered election officials across the state to erase the original certified software from 34,000 Ballot Marking Devices and install new software, which was uncertified and untested.

Channel 11 in Atlanta featured the issue tonight. (https://youtu.be/lMJU2p4_LDM) We are aware that several other reporters are trying to get answers as well, without success.

Yesterday the Court unsealed critical information about the voting system changes, which is important for election officials to read. Meantime, the State is pressuring county officials to comply with their instructions, without considering the consequences.

On Monday Chris Harvey issued a bulletin titled***, "Be Wary of False and Misleading Information re: ICX Update"***

The extra capitalization probably tipped you off to be wary of what was to follow.

If you've read many of the Court documents in our Curling v. Raffensperger case, you'll be familiar with the pattern: Coalition for Good Governance presents testimony from the nation's most respected expert witnesses, evidence, science, law, and facts. State responds with hyperbole and unsubstantiated claims, and sometimes name-calling.

The State is attempting to force you into a difficult choice –to follow their orders, and trust that nothing goes wrong, or to use your authority do follow what the statutes and election rules require, risking retribution from the State Election Board. It comes down to this - use the un-auditable BMDs with altered software, or use ballots marked by pen for in-person voting.

The experts confirm that installing hastily written software on the eve of in-person voting is akin to redesigning an aspect of an airplane as it is about to take off.

Here's what's wrong with assertions made in the Monday's Bulletin from Chris Harvey:

Fact: EAC certification requires pre-approval of de minimis changes before they are implemented. The vendor declaring software error-correcting changes "de minimis" does not make it so. When you received the new software on Sept 30, with, instructions to immediately wipe your BMDs clean and install it, the test lab had NOT issued its report (dated Oct 2) and Dominion had not submitted the proposed "de minimis" change to the EAC. We can find no evidence that the proposed change has been submitted to the EAC for certification, despite the Secretary's commitment to the Court that it had been done.

Fact: the lab that tested the software change did not test to be sure it did not "cause any other issues with the operation of the ICX."

Fact: When you were asked to install the software on 9/30, the updated version of the ICX touchscreen software (version 5.5.10.32) was NOT certified by the Secretary of State. It was technically certified (but without conducting the mandated prerequisite tests) yesterday, October 5. This is risk for your voters and their candidates that the county boards simply cannot tolerate.

Fact: The Secretary made no mention that state law requires counties to conduct acceptance testing after installing modified software, and before installing the November programming and conducting LAT, leaving the counties to deal with the consequences of the failure to do so.

With regards to the shocking assertion that the Secretary of State helped draft an intended loophole in the law to make required EAC system certification meaningless – it boggles the imagination. He claims that while the General Assembly ordered that only EAC software be purchased, he can change it behind closed doors to do whatever he wants. The Secretary is shamelessly defending his "election security be damned" policies, despite the his disingenuous "Secure the Vote" logo.

Don't take our word for any of this. The transcript of the October 1 court conference was just unsealed, along with new declarations from experts Alex Halderman, Kevin Skoglund, and Harri Hursti, plus the Pro V&V test lab letter. We attached them for you to read the grave concerns of the nationally respected experts along with the transcript from the sealed proceedings. The State has been unable to engage experts who support their use of BMDs or this software. Instead they only have (often inaccurate) testimony from vendors.

The SOS wants you to bet your voters' ballots, and your counties' candidates' campaigns, on the high-risk notion that the software change solves the original problem, with no unintended consequences, including the introduction of more errors or malware. Also he wants you to bet that losing candidates won't challenge the election on the basis of the host of BMD risks, problems and legal non-compliance from ballot secrecy to failing software that may well hide its defects.

The experts are clear: if you use the altered BMDs, your elections will not be defensible.

The only sound choice is to draw a line in the sand and strictly comply with the law. The law holds the County Superintendent responsible for the conduct of elections. And when things go wrong, and the lawsuits come, the Secretary of State ***will*** blame the counties.

The November 2020 election is consequential. All eyes are on election administrators. And on Georgia. We urge you to put voters first, set aside the problematic BMDs, and use ballots marked by pen for in-person voting as authorized by O.C.G.A 21-2-281 and SEB Rule 183-1-12-.11(2)(c)-(d)—the only legal path before you for conducting an accountable and constitutionally compliant election.

As always, we are happy to hear from you to discuss this further.

Marilyn Marks

Executive Director

Coalition for Good Governance

Marilyn@USCGG.org

704 292 9802

--

Samantha Whitley

Research Analyst

Coalition for Good Governance

Cell: 704 763 8106

Case 1:13-cv-02989-WT Document 159-4 Filed 08/09/2011 Page 6 of 119

cgganalyst2@gmail.com

Case 1:13-cv-02989-WT Document 85-4 Filed 10/09/20 Page 7 of 119

Exhibit A

OFFICIAL ELECTION BULLETIN

October 5, 2020

TO: **County Election Officials and County Registrars**

FROM: **Chris Harvey, Elections Division Director**

RE: **Be Wary of False and Misleading Information re: ICX Update**

You may have received correspondence today from activists for hand-marked paper ballots and their attorney. These activists have been suing the state and Georgia counties for years because they disagree with the decision of the Georgia General Assembly to use electronic ballot-marking devices instead of hand-marked paper ballots. Because their preferred policy was not enacted, they have tried to force their preferred policy on the state through litigation. The latest correspondence makes false and misleading allegations regarding the recent update to the ICX (touchscreen) component of Georgia's voting system.

As you know, an issue was discovered during Logic and Accuracy testing that, in certain rare circumstances, caused the second column of candidates in the U.S. Senate Special Election to not correctly display on the touchscreen. The issue was caught prior to any in-person voting due to excellent L&A testing by county election officials. Soon after the issue was brought to our attention, Dominion diagnosed the issue and began to work on a solution.

Dominion's solution required a *de minimis* software update to the touchscreen. That update was tested at Dominion, tested again at the state's EAC-certified test lab, and tested again at the Center for Election Systems to determine that it resolved the display issue and did not cause any other issues with the operation of the ICX. The state only distributed the update after verifying the test results with the EAC-certified test lab and acceptance testing the update at CES prior to distribution to counties. This is the normal process to follow for a state certification update. The updated version of the ICX touchscreen software (Version 5.5.10.32) has been certified by the Secretary of State as safe for use in Georgia's elections. You should continue to install the update as instructed

by CES. You should also confirm both the confidential hash value and the version number on each ICX BMD touchscreen during L&A testing.

The correspondence you may have received today also misstates Georgia law when it says that the update has to first be certified by the EAC. Georgia law required the *initial* system procured to be EAC certified, but it does not require that all updates first be certified by the EAC. The law was drafted that way intentionally, with input from our office, to ensure that the state did not have to wait on the EAC when important updates were needed.[1] Even with these provisions of Georgia law, Dominion advises that it has already submitted the update to the EAC for approval as a *de minimis* change, as recommended by the EAC-certified test lab.

Thank you to the counties whose diligent L&A testing allowed this issue to be identified and resolved quickly. And thank you to all county election officials for your continued hard work in this difficult year for election administration.

[1] You probably remember that the EAC was without a quorum for two years, and therefore unable to take any action.

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

DONNA CURLING, ET AL., **Plaintiffs,** **v.** **BRAD RAFFENSPERGER, ET AL.,** **Defendants.**	**DECLARATION OF** **J. ALEX HALDERMAN** **Civil Action No. 1:17-CV-2989-AT**

Pursuant to 28 U.S.C. § 1746, J. ALEX HALDERMAN declares under penalty of perjury that the following is true and correct:

1. I hereby incorporate my previous declarations as if fully stated herein. I have personal knowledge of the facts in this declaration and, if called to testify as a witness, I would testify under oath to these facts.

2. I have reviewed the "Letter Report" prepared by Pro V&V concerning version 5.5.10.32 of the Dominion BMD software (Dkt. No. 939). The report makes clear that Pro V&V performed only cursory testing of this new software. The company did not attempt to independently verify the cause of the ballot display problem, nor did it adequately verify that the changes are an effective solution. Pro

V&V also appears to have made no effort to test whether the changes create new problems that impact the reliability, accuracy, or security of the BMD system.

3. This superficial testing is deeply concerning, because Pro V&V's characterization of the source code changes indicates that they are considerably more complicated than what Dr. Coomer previously testified was the threshold for considering a change to be "de minimis": "literally a one-line configuration change in some config file that would have no material impact on the system" (Dkt. No. 905 at 102:18-103:14). Instead, Pro V&V states that Dominion made two kinds of changes and modified lines in five different source code files. In general, changes that affect more lines of source code or more source code files are riskier than smaller change, as there is a greater likelihood that they will have unintended side-effects. Changes to source code files, as Dominion made here, also tend to be riskier than changes to "config[uration] files."

4. The nature of the changes gives me further reason for concern. According to Pro V&V, one change involved changing a "variable declaration" to modify the "type" of a variable. A variable's type determines both what kind of data it holds and how operations on it function. Although changing a variable declaration often involves differences in only one line of source code, the effect is a change to how the program operates everywhere the variable is used, which could involve

many parts of the source code and span multiple files. For this reason, changing a variable's type frequently introduces new bugs that are difficult to detect. I have often experienced such problems while writing software myself.

5. It is not possible to evaluate the effects of such a change by analyzing only the lines of source code that have been modified. Yet Pro V&V's description of its "source code review" is consistent with having done nothing more. The company could have engaged an expert in the specific programming language to analyze the quality of the changes and look for subtle side-effects throughout the code, but it appears that they did not.

6. Instead, the report states that "Pro V&V conducted functional regression testing." Regression testing has a well-defined meaning in computer science: checking that a change to a system does not break its existing functionality. After a change to a voting system like this, rigorous regression testing is essential for ensuring that the system's reliability, accuracy, and security are not degraded. Yet the testing Pro V&V describes performing is not regression testing at all. Instead, the company focused entirely on checking whether the ballot display problem was fixed and makes no mention of testing any other functionality whatsoever.

7. Even for this limited purpose, Pro V&V's testing methodology is inadequate. They first tried to observe the error while using the current version of the BMD software, 5.5.10.30. They managed to trigger it using an artificial test ballot but failed to reproduce it using the real ballot design from Douglas County (where the problem was observed during L&A testing) even after 400 attempts.[1] They then performed the same checks using the 5.5.10.32 software. Pro V&V's basis for concluding that the new software corrects the problem is that they were unable to trigger the error with either ballot after 400 tries. Yet this ignores the obvious possibility that the error might simply be eluding them, as it did with the Douglas County ballot under version 5.5.10.30.

8. That is the full extent of the testing described in Pro V&V's report. They did not test that the other functionalities of the machine are not impacted by the change. They did not test that the BMD selected and printed results accurately, nor did they test that security was unaffected. Tests only answer the questions you ask. Here—regardless of what Pro V&V intended—the only questions asked were: "Is the stated error observed when using the old software?" and "Is the stated error observed when using the new software?" They did not ask, "Is Dominion correct

[1] It is curious that Pro V&V was unable to reproduce the problem experienced in Douglas County, but they appear not to have made any effort to investigate this.

about the cause of the problem?" They did not ask, "Does this change absolutely and completely fix the issue?" Most importantly, they never asked or answered the key question for determining whether the change is de minimis, "Will these modifications have any impact on the rest of the voting system's functionality?"

9. Even if the change does correct the bug without introducing new problems, it still represents a significant security risk, because of the possibility that attackers could hijack the replacement software to spread malware to Georgia's BMDs.

10. Defendants say they will guard against this using hash comparisons, but the hash comparison process they have described is inadequate in several ways.[2] As I have previously explained, examining the hash that the BMD displays on screen provides no security, because malware on the BMD could be programmed to calculate and display the expected hash. Although the State now says it will perform some acceptance testing at a central facility, such testing has limited value at best. Even if performed correctly—by securely computing the hash of the software using a device that is assuredly not affected by malware—acceptance testing can only

[2] The Pro V&V report lists the hash of a file named ICX.iso, which presumably contains the APK as well as other files. Without access to the ICX.iso file, I cannot confirm whether that the software purportedly being installed on the BMDs is the same as the software Pro V&V built and tested.

confirm that the new software was not modified between Pro V&V and the test facility. It does not ensure that the new software actually matches Dominion's source code or that it will not be modified during later distribution to counties or installation on the tens of thousands of BMDs statewide.

11. The report mentions that Pro V&V performed a "trusted build" of the new software. This refers to the process by which Pro V&V compiled the source code to produce the APK file for distribution and installation throughout Georgia. The result of compiling source code, often called a software "binary," is in a non-human readable format, and it is not possible in general to confirm that a binary faithfully matches source code from which it was purportedly compiled. As a result, if Pro V&V were to modify the BMD software to introduce malicious functionality—or if attackers who infiltrated their systems were to do so[3]—there

---

[3] Notably, Pro V&V's website (http://www.provandv.com/) does not support HTTPS encryption, and modern web browsers warn users that it is not secure, as shown below. In my experience, organizations that fail to support HTTPS are likely to be ignoring other security best practices too, which increases the likelihood of attackers successfully infiltrating their systems.

would be no readily available way for the State or Dominion to detect the change. The State's election security experts themselves have emphasized the risk of election manipulation by so-called "insiders."

12. Defendants state that Pro V&V has submitted the report to the EAC to seek approval for a de minimis change. The EAC's de minimis software change process was introduced less than a year ago, and, as far as I am aware, it has only been invoked on one or two occasions so far. In my opinion, the EAC cannot make an informed determination as to whether the new Dominion software meets the de minimis standard based on the information contained in Pro V&V's report, and I sincerely hope the agency demands more rigorous testing before allowing the software to be used under its certification guidelines.

I declare under penalty of the perjury laws of the State of Georgia and the United States that the foregoing is true and correct and that this declaration was executed this 3rd day of October, 2020 in Ann Arbor, Michigan.

J. ALEX HALDERMAN

IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF GEORGIA ATLANTA DIVISION

DONNA CURLING, et al. **Plaintiff,** **vs.** **BRAD RAFFENSPERGER, et al.** **Defendant.**	**CIVIL ACTION FILE NO.: 1:17-cv-2989-AT**

SUPPLEMENTAL DECLARATION OF KEVIN SKOGLUND

KEVIN SKOGLUND declares, under penalty of perjury, pursuant to 28 U.S.C. § 1746, that the following is true and correct:

1. I hereby incorporate my previous declarations as if fully stated herein. I have personal knowledge of all facts stated in this declaration, and if called to testify, I could and would testify competently thereto.
2. I have read the Letter Report regarding "Dominion Voting Systems ICX Version 5.5.10.32" from Pro V&V to Michael Barnes dated October 2, 2020 ("Letter Report").
3. The Letter Report describes Pro V&V's evaluation of a proposed code change by Dominion to address a flaw in the current ICX software related to reliably displaying two columns of candidates.

4. Pro V&V's evaluation is inadequate to verify Dominion's opinion of the root cause of the error, Dominion's proposed fix for the error, or whether the nature of the proposed change is considered "de minimis" as defined by the U.S. Election Assistance Commission ("EAC").

High Impact Changes

5. The Letter Report describes changes that are potentially high impact.
6. I expected the change to be limited to one or two lines in a configuration file based its description in the hearings. A configuration file change would provide a new value for the existing code to use.
7. The impact of changing a value being *used* by code is far less than the impact of changing the code *itself*, in the same way that changing the furniture in a house has less impact than moving walls. The value may be different but it will travel the same pathways through the code during operation. The structure and governing rules are unchanged.
8. Instead, the Letter Report describes two sets of changes to the source code *itself* in a total of five files. It does not quantify the number of lines changed, but it must be at least five. These are not merely configuration changes. Variable and function definitions in the source code are changed.

9. The changes described may sound minor, for example changing a variable from an integer (e.g., 123) to a string (e.g., “123”), but I would give them no less consideration. I have broken plenty of code making similar changes.

10. One reason is that any code elsewhere in the program that uses a changed variable or function could be impacted. Another part of the code may act correctly when given 123 but act incorrectly when given “123”. The first can have numbers added and subtracted, while the second can be searched for a specific character, but the reverse is often not true.

11. The Letter Report describes a source code review limited to the changed lines of source code. The code comparison performed is similar to reviewing the changed text in a legal blackline. It does not appear that Pro V&V looked throughout the source code for other interactions which could prove problematic.

12. The Letter Report states that Dominion believes the problem is a collision of resource identifiers between their software and the underlying operating system. I think it’s a fair analogy to say that Dominion’s software and the operating system sometimes try to park in the same parking space.

13. In my experience, an abundance of caution is necessary when the operating system and software running on it are working in a shared

space and not playing well together. A misstep could create additional problems in their interactions and any change should be carefully considered and well tested.

14. The Letter Report does not describe any review of the proposed software's interaction with the operating system. It does not mention the involvement of any expert on the operating system or an opinion regarding colliding resource identifiers—the reported cause and the target of the resolution. This is a concerning oversight.

Inadequate Testing of the Root Cause of the Error

15. Pro V&V was unable to reliably reproduce the error with the current version of the software, ICX 5.5.10.30. In fact, they reported producing the error only once out of 810 total attempts.

16. Pro V&V appears to have taken Dominion's word for the root cause of the error. The Letter Report does not mention any independent investigation to determine the cause.

17. The description of Pro V&V's first test, using a sample election database, begins with a procedure likely suggested by Dominion—toggling between font sizes to trigger the error. When the 10th toggle produced the error, Pro V&V considered the root cause to be confirmed. That is in itself not unreasonable.

18. However, the same test procedure was later performed using an actual election database, from Douglas County where logic and accuracy testing had revealed the error previously, and 400 toggles and several reboots could not produce the error. Of two test cases that should have both failed, one failed and one did not.

19. Despite these conflicting test results, Pro V&V did not investigate further. They did not consider what might be different between these two test cases to cause contradictory results. They did not consider if the sample election database at the center of their tests was a poor substitute for a real database. They did not consider that the root cause could be different, or that toggling the font size might not be a good trigger for the error.

20. Pro V&V wrote the Letter Report without having confirmed that Dominion's opinion of the root cause was correct.

Inadequate Testing of the Proposed Fix for the Error

21. It is impossible to verify that a proposed change sufficiently addresses an error if the root cause is unconfirmed. A change may only appear to fix the error due to coincidence. Correlation is not causation. A change may incompletely fix the error or create subtle side effects.

22. I have learned this lesson many times while fixing software bugs during my 23 years as a programmer, and I teach that lesson in a course on

software testing. I have also had the practical experience of taking a car to the auto mechanic over and over as they try different solutions for an uncertain cause.

23. Pro V&V's basis for determining that the error was fully resolved by the proposed change, ICX 5.5.10.32, was that the error was not observed after 400 toggles and several reboots.

24. This is not an ideal test case because "absence of evidence is not evidence of absence." The conclusion requires an assumption that subsequent attempts would not surface the error. Given that the first test required only 10 toggles to trigger the error, after 400 toggles and several reboots I might have made a similar assumption.

25. However, when Pro V&V performed the subsequent test on the Douglas County database and also could not observe the anticipated error after 400 toggles and several reboots, they did not revisit their conclusion about ICX 5.5.10.32. They should have.

26. They did not consider that the error could be eluding them in ICX 5.5.10.32 as it was with ICX 5.5.10.30 using Douglas County's database. They did not consider that their assumption that 400 toggles was enough to surface the error was wrong. They did not consider that the proposed change might be an insufficient remedy for the problem.

27. To be clear, I am not suggesting that Dominion's opinion of the root cause is incorrect or that Dominion's proposed change does not fix it. I am saying that testing was insufficient to verify either one. Pro V&V showed no skepticism about their findings when the results created a logical fallacy.

28. Even more surprising, Pro V&V had a real election database from Douglas County in hand, yet they did not test it with ICX 5.5.10.32. The stated purpose of this eleventh-hour software change was to resolve this error for the current election database, rather than create and distribute a new one. The test lab hired to confirm that the new software will work with the current database in a matter of days did not even check.

29. Pro V&V wrote the Letter Report without having confirmed that Dominion's proposed fixed correctly addressed the error, neither on the sample election database nor on the election county database counties are planning to use.

Inadequate Testing of "De Minimis"

30. The EAC defines a de minimis change as:

> A de minimis change is a change to a certified voting system's hardware, software, TDP, or data, the nature of which will not materially alter the system's reliability, functionality, capability, or

operation. Under no circumstances shall a change be considered de minimis if it has reasonable and identifiable potential to impact the system's performance and compliance with the applicable voting Standard.[1]

31. The Letter Report does not describe any testing to demonstrate that the nature of the proposed change does not "materially alter the system's reliability, functionality, capability, or operation" and does not have a "reasonable and identifiable potential to impact the system's performance and compliance with the applicable voting Standard."

32. Pro V&V ignored these critical, foundational requirements in their testing.

33. Pro V&V did not test whether *any* other functionalities of the device are impacted. They did not test whether the new build of the software correctly selects candidates in a series of contests and accurately prints them on a ballot. They did not test other screens to ensure that a fix to the two-column layout did not break another. They did not check if it was still possible to change languages or screen contrast, or whether the audio ballot, used by voters with disabilities, was still working. They did not test whether the device's security was impacted.

---

[1] "Testing and Certification Program Manual," Section 3.4.2, available at: https://www.eac.gov/sites/default/files/eac_assets/1/6/Cert_Manual_7_8_15_FINAL.pdf

34. Pro V&V did not answer the litmus test for de minimis. Does the change materially alter the system's reliability, functionality, capability, or operation?

35. The Letter Report describes "functional regression testing," which might help answer this question, but it misuses the term.

36. Regression testing is a "re-running functional and non-functional tests to ensure that previously developed and tested software still performs after a change."[2] It is so named because a regression is a step backwards in the development of software, the proverbial "two steps forward, one step back."

37. Pro V&V examined the rendering of the two-column layout in their tests. Regression testing would validate that *other* parts of the software still perform correctly.

38. Regardless of Pro V&V's determination, this change is not a de minimis change until the EAC reviews it and approves in writing. "The EAC has sole authority to determine whether any VSTL endorsed change constitutes a de minimis change under this section. The EAC will inform the Manufacturer and VSTL of its determination in writing."[3]

---

[2] "Regression Testing", Wikipedia, available at https://en.wikipedia.org/wiki/Regression_testing

[3] "Testing and Certification Program Manual," Section 3.4.3

39. The EAC prohibited *any* software changes to be considered de minimis until recently out of concern that even small changes might alter the system functionality, due to potential ripple effects I described earlier.

40. Given that the process is new, I expect that the EAC will scrutinize any request for a software de minimis change carefully. I expect the EAC to ask for more rigorous testing and reporting than the Letter Report.

Concerns about the Time Remaining for Review and Testing

41. In my previous declaration I expressed concern about a software change at this late date and fear that time pressures may result in less thorough review and testing of the proposed change.

42. The Letter Report is a wholly inadequate review. Its tests are incomplete.

43. The EAC has not yet begun to review this proposed software change. Using the revised software without the EAC's approval will void the federal certification. EAC approval must be granted in the next five business days to allow early voting to commence on the following Monday.

44. Yet the uncertified software has been distributed and counties have been instructed to install it on over 30,000 ImageCast X devices and to begin testing them.

45. Last week, I heard Michael Barnes describe the current procedures for logic and accuracy testing. The procedures do not test every device, for every ballot style, for every candidate. The procedures do not include any additional testing related to this error. This problem and others could pass through logic and accuracy testing undetected.

Executed on this date, October 4, 2020.

Kevin Skoglund

DECLARATION OF HARRI HURSTI

Pursuant to 28 U.S.C. § 1746, HARRI HURSTI declares under penalty of perjury that the following is true and correct:

1. This declaration supplements my prior declarations (Docs. 680-1, 800-2, 809-3, 860-1, 877, and 923-2) a nd I stand by the statements in those declarations.

2. I arrived at the Fulton County Election Preparation Center ("EPC") on October 1, 2020 around 3:45pm. I was there in my capacity as an expert engaged by the Coalition Plaintiffs to conduct a Rule 34 inspection. (Exhibit 1) . I was accompanied during part of my visit by Marilyn Marks of Coalition for Good Governance.

3. My goal for this observation and inspection was to review the ongoing updating of the Dominion software for Fulton County ballot marking device ("BMD") touchscreen units to ICX software version 5.5.10.32. It is my understanding that Fulton has an inventory of over 3,300 BMD touchscreens, all of which are to be updated with this software. A number of the machines were in the EPC warehouse and were staged to be updated or marked after the update had been completed.

4. Upon our arrival, Ms. Marks and I were informed by Derrick Gilstrap, the manager of EPC, that all of the people working to upgrade the devices were

Dominion technicians. Mr. Gilstrap stated that he did not feel comfortable installing a last-minute software change, and did not want Fulton County staff to be responsible for installing it. He told us that he told Dominion to conduct this operation, prior to having his staff install the November 2020 election programming and Logic and Accuracy testing ("LAT").

5. Mr. Gilstrap told us that after the software update step that LAT would immediately begin, and made no mention of Acceptance Testing that should occur prior to LAT.

6. Acceptance Testing is an almost universally mandated basic test of the hardware and software when a change or repair to either has been made before counties are permitted to install election programming and deploy voting system components. Acceptance testing must be performed on each unit, and cannot be performed on a sample basis. Fulton's failure to conduct such testing should be a serious warning sign of further recklessness in the installation of inadequately tested software.

7. Mr. Gilstrap stated that Dominion had started the software update project with four workers, but soon realized that the task would take extended periods of time. Mr. Gilstrap stated that Dominion had accordingly increased the workforce to 14 and expected the installation work to be completed on Monday, October 5.

8. The new software was contained on USB sticks. However, there was no inventory management present for the USB sticks. There also was no inventory control for the technician authorization smartcards, which provide access to the controls of the touchscreen. Workers did not sign or otherwise document when they took possession or returned the technician cards and software upgrade USB sticks. Those items were in an open plastic bag which was sometimes placed on table, and sometimes carried around the working area by the manager. Anyone was able to pick up a USB stick or drop them there freely, permitting the easy substitution of USB sticks containing malware or to leave the premises with copies of the software update.

9. Some workers worked one BMD touchscreen machine at the time, while others simultaneously worked on 2 or 3 machines. There was no accountability for how many sticks and technician smart-cards each worker had in their possession. Clearly, the USB sticks were not considered to be security sensitive items at all.

10. Some of the workers had instructions for software update visible in their pockets, while others did not seem to have the instructions readily available. One worker showed me the instructions, but it was different from the instructions I had seen that were sent to the counties. None of the technicians that I observed were following the instructions as they installed the new software.

11. Technicians were not following a common process, and they all made their own variations on the workflow. In my experience, this can negatively affect the quality and reliability of the software installation. Many workers were texting and making phone calls while working and not focusing on their work. As a result, I observed repeated human errors such as skipping steps of the process.

12. Some workers consistently took an extra step to destroy previous application data before uninstalling the old version of the software. Uninstalling software packages results in destroying application data, but that is known to be unreliable in old versions of Android. The step they took is ensuring, among other things, destruction of forensic evidence of Fulton's use of the equipment in prior elections.

13. To avoid destruction of all forensic evidence from the BMDs, a number of images of the electronic data contained on the BMDs should be taken from a sample of them before installation of the new software.

14. As part of the updating process, the workers are directed to enable the "Install from Unknown Sources" setting. This is an insecure mode because it turns off the operating system verification of trusted sources and therefore allows software from any source to be installed. During the 45 minutes of my observation, I observed that many units had been left in insecure mode. I estimate 15% of the units were already in the insecure mode when the work began on them, having

been left that way during the last software installations, or because of interim tampering.

15. As described before, most workers I observed were not focusing on the work they were tasked to do, and as result, they were accidentally skipping steps. I observed that, as result of these human errors, the units were erroneously left in the insecure mode either by the workers skipping the step to place the machine into the secure mode after upgrade, or doing the step at such a fast pace that the system did not register the touch to toggle the switch and the worker did not stop to verify the action.

16. The State Defendants and Dominion have repeatedly overstated the value of their hash test, but my observation showed that they themselves are not relying on such test as a control measure. Dominion workers are not even checking the hash value. I deliberately followed many workers when they processed the units. During over 45 minutes of observation, none of the workers took the step of verifying the hash value. Some workers did not realize that the upgrade had failed and the mistake was only caught by persons who were closing the cabinets when and if they looked at the software version numbers before closing the doors.

17. I also observed random errors that were not caused by humans. For example, software sometimes refused to uninstall because the uninstall button was

disabled, or the installation silently failed. The technicians treated devices with issues by simply rebooting them. Technicians made no effort to diagnose or document the cause of the issues. The casual nature of dealing with the irregularities caused me to conclude that these abnormal incidents are commonplace.

18. Based on my observations of the software update, I would anticipate that these machines are likely to behave inconsistently in the polling place, depending on a number of factors including the care taken in the software installation process.

19. The current abbreviated LAT protocol adopted by Fulton County and the State cannot be relied on to identify problems created by the new software or its installation (or other problems with programming and configuration unrelated to the new software). Even if counties were conducting the full LAT required, it is but one step that is needed, and is quite insufficient for ensuring the reliability of the BMD touchscreens—which at the end of the day, simply cannot be done.

20. In my professional opinion, the methods and processes of adopting and installing this software change is completely unacceptable. The methods and processes adopted by Dominion and Fulton County do not meet national standards for managing voting system technical problems and remedies, and should not be accepted for use in a public election under any circumstances.

21. It is important that full details of the software change made be available for analysis and testing to determine the potential impact of the changes. I concur with Dr. Halderman's opinion in Paragraph 8 of his September 28, 2020 declaration (Doc. 923-1), in which he states that if the problem is as limited as described by Dominion, it could have been addressed with far less risk by the State without making an uncertified, untested software change.

22. In my opinion, the installation of the last-minute software change adds intolerable risk to the upcoming election, and the simple solution of removing the BMD units from the process and adopting hand marked paper ballots is imperative.

23. I note that I wanted to document the upgrading process, but Mr. Gilstrap told me that I was prohibited from taking photographs or video. I showed him the Rule 34 inspection document and pointed out the paragraph permitting photographing. He read that carefully but told me that he needed to clear that with his superiors before I could start taking pictures. He never cleared this with his superiors while we were there.

I declare under penalty of the perjury laws of the State of Georgia and the United States that the foregoing is true and correct and that this declaration was executed this 4th day of October, 2020 in Atlanta, Georgia.

Harri Hursti

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

DONNA CURLING, *et al.* *Plaintiffs*, v. BRAD RAFFENSPERGER, *et al.*, *Defendants*.	CIVIL ACTION FILE NO. 1:17-cv-2989-AT

STATE DEFENDANTS' NOTICE OF FILING
REDACTED VOTING SYSTEM TEST LABORATORY REPORT

Pursuant to the Court's September 30, 2020 docket entry, and as discussed in Defendants' Notice of Filing Regarding the Court's Request for Documentation, [Doc. 929], State Defendants provide notice of filing a redacted copy of the Voting System Test Laboratory Report, attached hereto as **Exhibit 1.**

Respectfully submitted this 5th day of October 2020,

/s/ Carey Miller
Vincent R. Russo
Georgia Bar No. 242628
vrusso@robbinsfirm.com
Josh Belinfante
Georgia Bar No. 047399
jbelinfante@robbinsfirm.com
Carey A. Miller
Georgia Bar No. 976240

cmiller@robbinsfirm.com
Alexander Denton
Georgia Bar No. 660632
adenton@robbinsfirm.com
Robbins Ross Alloy Belinfante Littlefield LLC
500 14th Street, N.W.
Atlanta, Georgia 30318
Telephone: (678) 701-9381
Facsimile: (404) 856-3250

Bryan P. Tyson
Georgia Bar No. 515411
btyson@taylorenglish.com
Bryan F. Jacoutot
Georgia Bar No. 668272
bjacoutot@taylorenglish.com
Diane F. LaRoss
Georgia Bar No. 430830
dlaross@taylorenglish.com
Loree Anne Paradise
Georgia Bar No. 382202
lparadise@taylorenglish.com
TAYLOR ENGLISH DUMA LLP
1600 Parkwood Circle, Suite 200
Atlanta, GA 30339
Telephone: 678-336-7249

Counsel for State Defendants

CERTIFICATE OF COMPLIANCE

Pursuant to L.R. 7.1(D), the undersigned hereby certifies that the foregoing **STATE DEFENDANTS' NOTICE OF FILING REDACTED VOTING SYSTEM TEST LABORATORY REPORT** has been prepared in Century Schoolbook 13, a font and type selection approved by the Court in L.R. 5.1(B).

/s/ Carey Miller
Carey Miller

Exhibit 1

Letter Report

To: Michael Barnes

From: Wendy Owens - Pro V&V, Inc.

CC: Jack Cobb - Pro V&V, Inc.

Date: October 02, 2020

Subject: Dominion Voting Systems ICX Version 5.5.10.32

Dear Mr. Barnes:

Pro V&V is providing this letter to report the results of the evaluation effort on the ICX version 5.5.10.32. An examination was performed to confirm that this version of the ICX software corrected the issue with displaying of two column contests found in ICX version 5.5.10.30.

Background

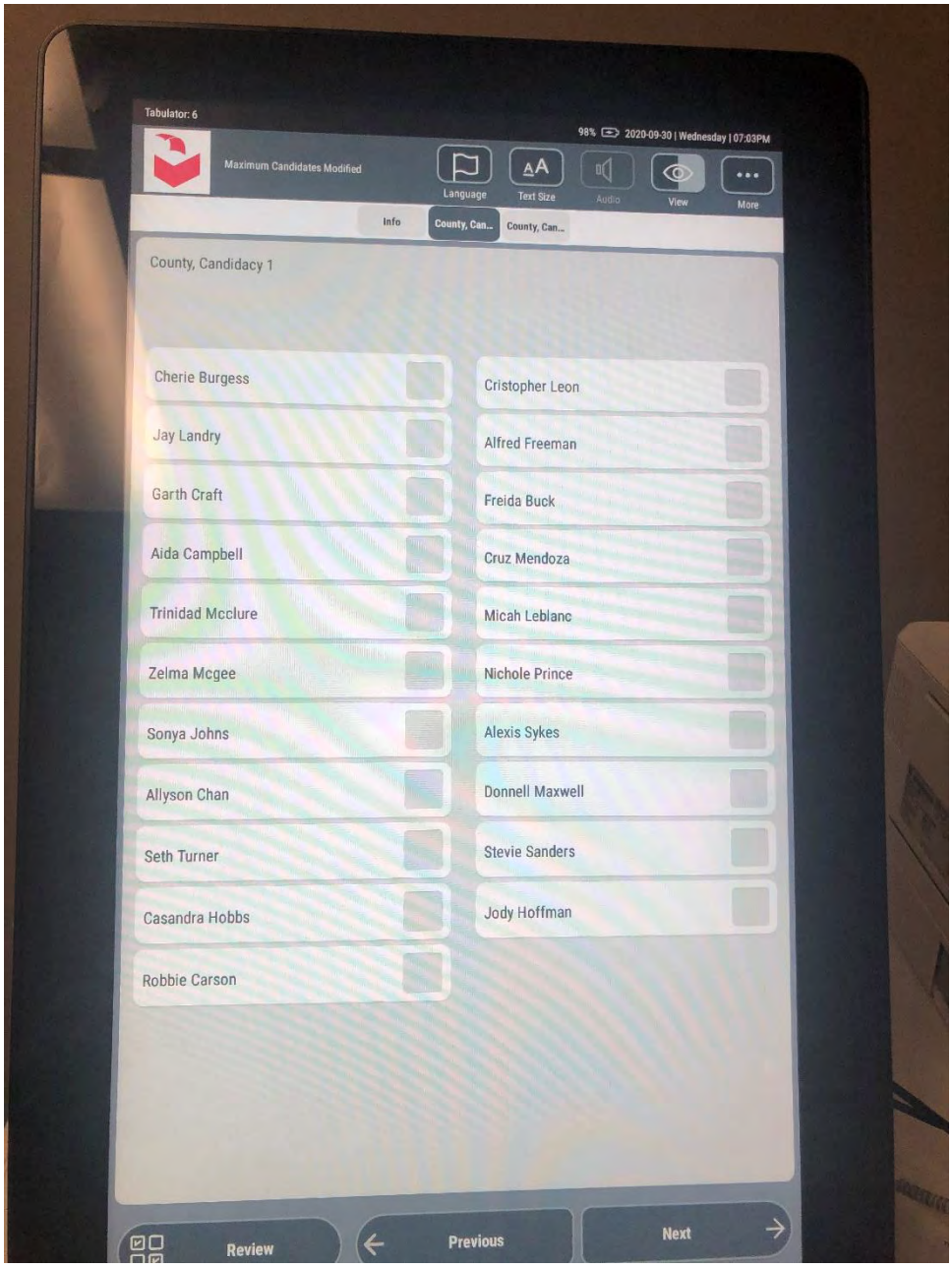
Pro V&V was contacted by Georgia Secretary of State Office and Dominion Voting System to analyze an issue that was discovered in Georgia's Election Logic and Accuracy Testing (L&A testing) for the 2020 General Election. It was discovered during L&A testing that a display error, under certain conditions, would occur where the second column of candidates would not be displayed properly. Dominion Voting Systems researched the issue and found that a static container identifier was causing a collision with an Android automated process for assigning container identifiers. This collision caused the display for the second column candidates not to be rendered on the screen properly and occurred so infrequently that it appeared intermittent.

Test Summary

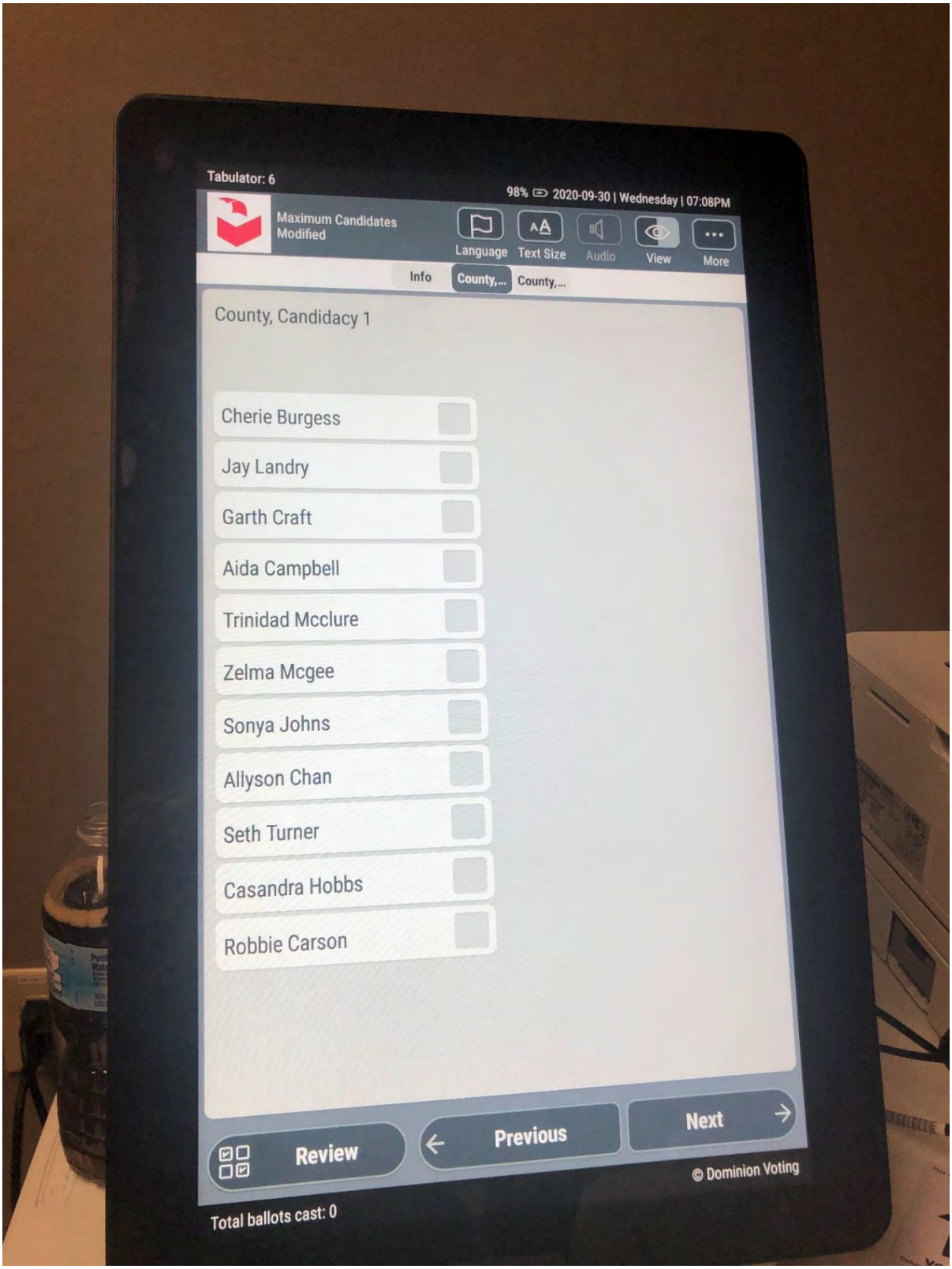
Dominion Voting Systems submitted source code for ICX version 5.5.10.32 to Pro V&V. Pro V&V then conducted a comparative source code review comparing ICX version 5.5.10.32 to the VSTL-provided previous ICX version 5.5.10.30. The source code review found two source code changes in a total of five files. One change was a variable declaration change the variable type to a string from an integer and changing the assignment from a static number to assigning another variable. The other update was to change a function call passing a "wrapper tag" instead of a "wrapper ID". All other source code remained constant. After conducting the source code review, a Trusted Build process was conducted. The Product from this build is the ICX.iso file. The SHA-256 hash for this file is as follows:

ICX.iso - [redacted]

Pro V&V conducted functional regression testing using version 5.5.10.30 and 5.5.10.32. An ICX machine was loaded with 5.5.10.30 and an election containing two 2 column contests. Pro V&V toggled between "Normal" and "Big" font sizes. Approximately on the 10th toggle the column disappeared as presented in Photograph 1.and 2 below:



Photograph 1: Max Candidate Election Contest One



Photograph 2: Second column was not rendered.

After reproducing the issue. The same device was load with the ICX version 5.5.10.32 and the same election. Pro V&V toggled 50 times then rebooted, 100 times then rebooted and finally 250 times. Pro V&V never observed the issue.

Pro V&V requested Douglas County Georgia's 2020 General Election database that had produced the issue, but could not reproduce the issue for the ICX software version 5.5.10.30. Even though Pro V&V could not reproduce the issue, Pro V&V ran the same test as the test election toggling 50 times then rebooted, 100 times then rebooted and finally 250 times. Pro V&V never observed the issue.

Conclusion

Based on the review of the source code and nature of the change, Pro V&V recommends the change be deemed as de minimis. Based on the testing performed and the results obtained, it was verified through source code review and functional testing that the issue found in ICX version 5.5.10.30 can not be reproduced in ICX version 5.5.10.32.

Should you require additional information or would like to discuss this matter further, please contact me at 256-713-1111.

Sincerely,

Wendy Owens

Wendy Owens
VSTL Program Manager
wendy.owens@provandv.com

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

DONNA CURLING, ET AL.,	:	
	:	
PLAINTIFFS,	:	
vs.	:	DOCKET NUMBER
	:	1:17-CV-2989-AT
BRAD RAFFENSPERGER, ET AL.,	:	
	:	
DEFENDANTS.	:	

TRANSCRIPT OF ZOOM VIDEO CONFERENCE PROCEEDINGS

BEFORE THE HONORABLE AMY TOTENBERG

UNITED STATES DISTRICT JUDGE

OCTOBER 1, 2020

9:08 A.M.

MECHANICAL STENOGRAPHY OF PROCEEDINGS AND COMPUTER-AIDED TRANSCRIPT PRODUCED BY:

OFFICIAL COURT REPORTER: ***SHANNON R. WELCH, RMR, CRR***
2394 UNITED STATES COURTHOUSE
75 TED TURNER DRIVE, SOUTHWEST
ATLANTA, GEORGIA 30303
(404) 215-1383

A P P E A R A N C E S O F C O U N S E L

FOR THE PLAINTIFFS DONNA CURLING, DONNA PRICE, JEFFREY SCHOENBERG:

DAVID D. CROSS
MORRISON & FOERSTER, LLP

FOR THE PLAINTIFFS COALITION FOR GOOD GOVERNANCE, LAURA DIGGES, WILLIAM DIGGES, III, AND RICARDO DAVIS:

BRUCE BROWN
BRUCE P. BROWN LAW

ROBERT ALEXANDER McGUIRE, III (VIA VIDEO CONFERENCE)
ROBERT McGUIRE LAW FIRM

FOR THE STATE OF GEORGIA DEFENDANTS:

VINCENT ROBERT RUSSO, JR.
CAREY A. MILLER
ROBBINS ROSS ALLOY BELINFANTE LITTLEFIELD, LLC

FOR THE FULTON COUNTY DEFENDANTS:

CHERYL RINGER
OFFICE OF THE FULTON COUNTY ATTORNEY

P R O C E E D I N G S

(Atlanta, Fulton County, Georgia; October 1, 2020.)

THE COURT: Good morning. Counsel, would you just check the extra numbers here -- anyone with an extra number here or person here to make sure everyone here is identified with you. I can see what they appear to be.

Mr. Martin, is this everybody that you have let in?

COURTROOM DEPUTY CLERK: Yes, ma'am, this is everybody.

THE COURT: All right. So if -- the two individuals who are just solely appearing by telephone, can you identify yourselves?

MS. RINGER: Phone number ending in 8737 is Cheryl Ringer from Fulton County.

THE COURT: Okay. Very good. That is fine.

And the person whose number ends in 8993, would you identify yourself.

MR. FRONTERA: Your Honor, can you hear me? This is Mike Frontera, general counsel, with Dominion Voting Systems.

THE COURT: Very good. Thank you very much. All right. That is fine. Everyone is authorized to be on.

Thank you, everyone, for being here. I want to say from the start that we have this now on the platform -- a different Zoom platform, and we are -- I am -- I have authorized the videotaping of the hearing solely for the

purpose of if I determine that some portion of this really should have been on the public record that it can be made available on the record.

Not knowing what was going to be discussed exactly and understanding that there might be some confidentiality issues, I decided that we should just proceed in this way, rather than by making it open and then trying to pull it back. So that is the purpose of videotaping it. I don't really -- normally wouldn't do that.

But under the emergency circumstances here, I have proceeded this way. And I think it is the soundest way of proceeding in that way. And also I can make any portion of this that would be public be available to the public.

Additionally, I want to note though that the videotape is not -- will not be the transcript of record. The only transcript of record of that will be created by Ms. Welch as the court reporter in this matter. And you are not to refer to the videotape at any point as kind of the official record in this matter. And, of course, the transcript will be filed.

I am -- just was, frankly, perplexed by the response that the State filed last night. And I know everyone is busy. I'm not trying to in any way minimize how busy you are. And -- and Mr. Russo already has told me from the start that he has to be out -- that he has to be complete by 10:00.

Are you starting the hearing in front of Judge Brown

at 10:00, Mr. Russo?

MR. RUSSO: Your Honor, that hearing is at 10:00. But we have sent two of our colleagues there to do it so we could be here. So Mr. Belinfante and Mr. Tyson are there, and Mr. Miller and me are here. So you have got us today.

THE COURT: Okay. Very good. Wonderful.

MR. MILLER: And I think the 10:00 issue was specific to Dr. Coomer's availability.

THE COURT: All right. Very good. So please, everyone, bear that in mind as to Dr. Coomer's availability because if there is something that he needs to address early on, whether it is from the perspective of the Court or the State, let's be sure we just jump ahead and get his input.

MR. RUSSO: Your Honor, also, we have the staff from the Secretary's office on standby. We have Mr. Germany, the general counsel, on right now. But Mr. Sterling and Mr. Barnes are -- we told them to continue working since they have election stuff going on and that if you needed something from them we would patch them in accordingly.

THE COURT: That's fine. All right. Well, as I understand it, the -- from what you -- from what the State submitted last night -- and it wasn't on the record. That was just, I think, a letter from counsel. It was that you -- that basically the State defendants were proceeding, that you were sending the software out today -- the software to jurisdictions

across the state, and basically this is a distraction that I was causing, and it was none of my business. Well, that was the tonality of it. It was a quick letter.

But let me just say -- start from the start is that I think I have endeavored to work cooperatively with everyone. I have an order to issue. I need to -- whatever it says, whether it is just simply -- you know, doesn't do anything at all, which is certainly -- you know, given everything I have told you in the past that I am very reluctant to even consider in this election saying, oh, suddenly do a sudden change to the paper ballot.

But I still -- this is still a record. And I don't know what will happen in the days ahead. But I think that the Court is entitled to, with respect, be given the information needed to issue an intelligent decision. And this was a change of circumstances.

And I am -- I don't know who thought I wouldn't have issued a decision without full knowledge of the circumstances that have arisen. I don't mean this personally against anyone. I think everyone has generally been very professional with me. But this is not an acceptable response, and I know everyone is short on sleep and at their wits' end on some things. So I understand it that way. I sure am very short on sleep too.

And there is a lot of stress under these circumstances. So I humanly recognize all of that. And so I

just sort of had to breathe in and say, all right, where are we going from now, once I got the response and just say, all right, you know, without any drama, I want to understand what is going on.

And that -- the expectation I had was not the -- that things were just proceeding and that I wouldn't basically know what was happening.

So I think that is -- just as an initial matter, that is where we're at. I mean, I am, you know, at 95 percent on having an order ready to be timely issued. And I held it back while this is going on.

And, of course, that is why on Monday we issued the order on the one thing that was clearest that needed to be acted upon as soon as possible. But I was holding back as soon as I heard anything was going on.

So let's just talk about what has happened. My understanding from the letter on September 29th that is on the record that -- as opposed to the letter that I received yesterday from counsel that the acceptance testing -- there would be acceptance testing that would occur before there was going to be distribution.

I guess it is a filing now. I'm sorry. I didn't realize that counsel's letter was filed. So excuse me for that.

In any event, I thought there was going to be

acceptance testing before there was distribution. And maybe there was, and maybe I misunderstood what was instead stated in the brief letter.

So, first of all, let's just start off just as to that. Did that occur?

MR. RUSSO: Your Honor, yes. So, first, you know, let me say we filed the letter under seal because that is what was discussed on Monday. As a letter, you said to file it under seal. So that is why we filed it that way.

THE COURT: That is fine.

MR. RUSSO: We didn't necessarily think there was something in there that was attorneys' eyes only or anything to that extent.

THE COURT: All right. Then I will lift the seal. Okay. Fine.

MR. RUSSO: In terms of the acceptance testing, the Secretary of State's office did conduct acceptance testing prior to distribution of the update. That is correct. Mr. Barnes did that. And then the distribution proceeded.

THE COURT: And when did Mr. Barnes do that?

MR. RUSSO: I believe his acceptance testing was done -- conducted yesterday. Mr. Miller might -- might know if it was done yesterday or the day before. Frankly, my days are starting to run together right now.

THE COURT: Yeah.

MR. MILLER: Your Honor, I believe it was done Monday and Tuesday. And so the kind of process through that -- the acceptance testing was, you know, essentially receiving the application from Pro V&V and running through just a typical acceptance testing and, you know, primarily ensuring also that the rendering issue that was discovered in logic and accuracy testing was not recurring.

And, importantly, you know, there's -- acceptance testing was not the only thing being done. The voting system test laboratory was also doing its part.

And, frankly, Your Honor, as to the filing, we certainly didn't intend any disrespect. We do, you know, have to note our objections. And, of course, it becomes an awkward situation to do so. And we do appreciate your understanding throughout this thing.

But we also, frankly, understood that you may be seeking the Pro V&V evaluation, which the formal evaluation we just -- we don't have right now. They have completed the evaluation. The written report is not done yet.

MR. RUSSO: That's right, Your Honor. That was in our filing yesterday. And we didn't -- you know, we expect that report -- to have it by the end of the week.

To the extent there is any delay from Pro V&V getting us the report, we just didn't want, you know, there to be any -- any misunderstanding about a delay if we made that

representation. But we do expect it by the end of the week, and we will file it upon receipt.

In terms of the EAC issue, you know, the order said to file -- to file anything that is filed with the EAC, presuming a filing is made with the EAC. Dominion actually does -- Dominion would make the filing with the EAC, not the State. And Dr. Coomer can speak to that.

But there appeared to be some misunderstanding in counsel's email yesterday regarding the EAC filing. But to be -- to be clear, we -- since it has not been filed yet, we didn't have any update for you. But that is a Dominion issue, not a Secretary of State issue.

THE COURT: Well, it is obviously the responsibility under the state law still though for you to have an EAC-certified system.

MR. RUSSO: Well, Your Honor, I mean, the update is a de minimis update. So that is according to Dominion.

In terms of what state law requires and what state law doesn't require, I mean, there is not a claim in this case regarding our compliance with state -- with state law. The only state law claim that was in this case was abandoned by plaintiffs earlier and dismissed in Your Honor's order on the dismissal a couple of months ago.

THE COURT: All right. Let me just put it this way. I mean, it is an indicia of -- it is an important indicia of

what is going on and is this -- and from an evidentiary perspective certainly relevant.

So I would -- you know, I went back at least and looked at the most recent regulations issued by the EAC. And I didn't see it as not being a requisite step to -- even a software modification as being requisite. Maybe I will hear differently from Mr. Coomer or Dr. Coomer -- excuse me. And Dr. Coomer is welcome to address at this point where things stand.

DR. COOMER: Good morning, Your Honor. This is Dr. Coomer. Yeah. So I'll try to describe the process again.

So we identified this change. And it was our feeling that it was de minimis. But we do not make that determination ourselves as a company.

So the way the EAC process works is we submit that change to an accredited laboratory, in this case Pro V&V. They analyze the change. They look at the code. And they determine whether it is de minimis or not.

If it is de minimis, then they do whatever testing they need to do to prove the nature of the change and verify it. And then they label it a de minimis change. They write a report. And at that point, it is just submitted to the EAC as what is called an ECO, an engineering change order.

So there is no new EAC certification effort. It is simply updating the current certification for this ECO. And

that is what we --

THE COURT: I'm sorry. ECO? I'm sorry.

DR. COOMER: ECO, engineering change order. And this is a software ECO. And that is how the process works.

So once Pro V&V has the final report, we will submit that to the EAC, Election Assistance Commission, certification as an ECO, engineering change order, for the current EAC-certified system, the 5.5-A.

THE COURT: So the November 15 clarification -- notice of clarification from the EAC that indicates that a proposed de minimis change may not be implemented as such until it has been approved in writing by the EAC, that is meaningless? That is Provision 3.4.3.

DR. COOMER: I have got to be honest. We might be a little bit out of my bounds of understanding of the exact rules and regs there.

THE COURT: And Mr. Maguire, as counsel for you -- it looks like he is present.

MR. MAGUIRE: Yes. That's correct, Your Honor.

THE COURT: Is that said at all?

MR. MAGUIRE: I'm sorry. I'm unprepared to address it, Your Honor.

THE COURT: All right. That is fine. I didn't ask you to be prepared. I just wanted to -- in case you wanted to, I wanted to give you that opportunity.

MR. CROSS: Your Honor, if it is helpful to you, Mr. Skoglund -- this is an area of expertise for him.

Your Honor has hit the nail on the head, which what Dr. Coomer's explanation left off was once that EAC paperwork goes in you still have to wait for approval from the EAC. The EAC has to agree that it is a de minimis change and that it can operate under the existing certification.

If they disagree, then you have got to get a new certification. But until that is approved, you do not have EAC approval to proceed. And Mr. Skoglund can explain that in more detail. So right now they would be proceeding without EAC approval. That is where we stand. That should be undisputed.

THE COURT: Maybe that is what they have determined they must do. But I'll let Mr. Skoglund briefly discuss it. I mean, I think it is sort of evident.

But, Mr. Skoglund, can we -- thank you.

MR. RUSSO: Your Honor, one quick point. O.C.G.A. 21-2-300(a)(3) is clear that the equipment has to be EAC-certified prior to purchase, lease, or acquisition. The ongoing EAC certification that is now being raised, that is not in the statute. But Mr. Skoglund can go ahead and explain the rest of the process.

THE COURT: All right. And I'll get back to you, Mr. Russo.

MR. SKOGLUND: So I would just agree with what has

been represented already. That is correct. You void your certification if you don't have written approval before making this change.

So the correct process is to go to the VSTL, then go to the EAC, have them review it. They are the ones who make the determination of de minimis based on the recommendation of the VSTL. But it is really up to them to decide that. And then they are the ones who bless it as being part of the certification.

THE COURT: Either Mr. Russo or Dr. Coomer, is there any -- has there been any type of contact at this point with the EAC to say you are in emergency circumstances?

DR. COOMER: This is Dr. Coomer. I don't -- I don't believe so. But we were waiting for that final report from Pro V&V. And then that would be immediately submitted to the EAC.

MR. RUSSO: That's right. The Pro V&V report --

THE COURT: I'm sorry. Who is speaking right now?

MR. RUSSO: Vincent Russo.

THE COURT: All right. I'm sorry. We've got a lot of people here.

MR. RUSSO: No problem. The Pro V&V report or Pro V&V has indicated it is a de minimis change. So as Mr. Skoglund mentioned, the EAC will take that report and that recommendation and proceed from there.

But, again, we will file that report with you. And

Dominion will move forward with its piece in reliance on that report.

MR. MILLER: Your Honor, I do also just want to point out briefly that, you know, EAC certification is not necessarily across the board. There are other states that don't have EAC-certified systems. Of course, we're still seeking to -- Dominion is still seeking to obtain the certification. But I did just want to point that out for the Court as well.

THE COURT: This is a -- obviously, it is a provision the EAC has because it is -- no matter whether you call it de minimis or not, it always obviously raises issues when you change a piece of software and then you have to redo everything.

You are obviously all doing testing, and I am glad that you are doing the testing. But the fact that you could be in a place that doesn't require anything is one thing. But, you know, we are using a statewide system. So it has larger repercussions when you have a statewide system also.

All right. And so the software -- the new software is supposed to be distributed today. And what is the schedule from -- since you have said you are going forward even without the EAC approval or without seeing the actual testing documentation, what is your next plan? What is going to happen next?

MR. MILLER: Your Honor, it was distributed yesterday, I think, with the dropoff. And which also I do want to briefly mention, you know, we sent an email about the confidentiality of the dropoff process.

At this point, that is no longer confidential. It was the prior to -- you know, it is a schedule of secure transfer of files that was filed on the public docket. And so that is the issue. I did just want to make sure we don't have a loose thread there.

But in terms of the process next, the counties will begin engaging in that logic and accuracy testing that was put on pause after the last issue was discovered. And so we started that. The counties will also verify the hash value on the software that was given to them, which has already been verified by Pro V&V, the hash outside of the system at the Center for Election Systems, and additionally a hash again outside of the BMD system before those software was copied to the drives that were sent to the counties in sealed envelopes -- sealed, numbered envelopes via the post-certified investigators connected with the Secretary of State's office who met their county liaisons at Georgia State Patrol posts. That was --

THE COURT: What was verified at the Georgia State post?

MR. MILLER: That was where the transfer occurred.

So when the software was received -- you know, Pro V&V conducted their verification and validation, provided the trusted build hash to the Secretary's office. The Secretary's office then compared that trusted build hash to the hash of the actual software they had received outside of the BMD system.

You have heard here before the concept that the BMD can trick you into saying that the hash is verified. But, again, this is wholly outside of the system such that that is -- that is a separate issue entirely.

After that delivery to the counties, the counties will also verify the hash and will then conduct their logic and accuracy testing.

THE COURT: All right. All I was asking was when you said something was verified when they picked it up at the Georgia State Patrol.

That was just the sealing -- the seal of the envelope?

MR. MILLER: Your Honor, yes. So the envelope was sealed by -- right, was sealed by the Center for Election Systems. And then the investigators of the Secretary's office met county superintendents at Georgia State Patrol posts.

THE COURT: Okay. That's fine. Have you in any way expanded the scope of your logic and accuracy testing in light of these circumstances?

MR. MILLER: Your Honor, so I think -- I guess I

would separate it out briefly in that the Center for Election Systems conducted their own sort of modified logic and accuracy testing, which I referred to earlier as logic and accuracy testing within CES, on BMDs that they themselves had that have never been used in elections to verify that -- first of all, that that same issue was not recurring but also to continue the logic and accuracy testing such that -- to confirm that there were no ancillary issues brought in to do so.

At the time it is sent to the counties, the counties will then conduct their logic and accuracy testing, which now also includes before inserting anything into the BMD verifying that hash number, verifying it is the correct software. That is kind of the initial step, which I believe -- I don't have the letter in front of me. But we laid out kind of that first couple of steps of the logic and accuracy testing.

THE COURT: All right. But you haven't decided at this juncture -- to your knowledge that there have been no change in the logic and accuracy testing protocols or just going from one electoral race to the next in the machines so that you don't do the entire ballot on every -- on a larger number of machines in each of the counties?

And that is the process you-all described, one race for one and then round-robin.

MR. MILLER: And I'm not sure I can speak to any of the -- any detailed adjustments. What I will say is the

testing that was done within CES included five different ballot styles that were chosen from Dekalb County being a county that would have large ballot styles -- basically, you know, a number of races, number of different types of ballots on there. And then they were conducted on those different styles and also conducted on the four different machines and printing out basically hundreds of ballots to confirm the testing.

THE COURT: Well, as far as you know, there has been no -- no one has considered trying to test a larger range of the ballot -- the full ballot in a larger range of machines as testified to in -- at the hearing and which was the protocol that Mr. Harvey indicated was the protocol in his testimony? Is that right?

MR. MILLER: Your Honor, as I understand it, the full ballot is tested on all of the machines.

THE COURT: That wasn't his testimony. The testimony was -- is that one race -- you picked a race. You went to the next machine, and it would do the next race. And then you would -- if you exhaust the race, which in Georgia you probably wouldn't exhaust the race, you would start with the next one -- if you had 12 machines, you did the 12 first races. Then you would go back to Number 1 machine, and you would go -- and it would do the 13th race. Then it would go to Number 2 machine, and it would do the 14th race.

That is what I'm getting at. So that, really, you

have a fraction of the machines that are actually doing the race at issue. But it might screw up other races. So that is really what I'm trying to get at.

But it doesn't sound like there have been any change in the process, in any event, from what you know.

MR. MILLER: Your Honor, I would defer to the testimony and the written instructions on logic and accuracy testing. But yes. To answer your question, I couldn't comment as to any sort of very specific minutia within that.

THE COURT: All right. I'm really not asking you to testify yourself as to it.

As far as you know, no one has indicated to you that they changed any of the --

MR. RUSSO: That's correct, Your Honor. As far as we know, the process is the same as Mr. Harvey has discussed previously.

THE COURT: That's all I'm trying to get at.

MR. RUSSO: You know, with respect to printing the ballots and each race that we discussed at the hearing, that hasn't changed. The only change is with the logic and accuracy testing are to ensure that the hash value -- check the hash value of the new software and the version on the front end.

THE COURT: And does Dr. Coomer know what was -- what type of testing was done on the software at PV&V?

DR. COOMER: Your Honor, I'm not sure of the complete

test plan that they completed. Again, Pro V&V themselves determine what test plan is necessary based on their analysis of the code itself.

THE COURT: They didn't tell you?

DR. COOMER: I don't have the details. I would just -- I could probably get that. But I don't have the details.

THE COURT: When did they complete it?

DR. COOMER: I believe they completed that either late Monday or Tuesday.

THE COURT: Do you know who was performing the testing there?

DR. COOMER: The individual employees' names, no, I do not.

THE COURT: I mean, is there a head of the unit that deals with security or not at this point? Because we had very vague testimony of that at the hearing.

DR. COOMER: I don't know the makeup of Pro V&V's employees.

THE COURT: And do you have a backup plan in case, in fact, there are issues that are arising in connection with this? I mean, you are hoping for the best. You are thinking the best will occur. But what -- if there are issues again, what is the plan?

DR. COOMER: We'll work with our -- we'll work with

our partners at the State to do whatever is necessary.

MR. RUSSO: Your Honor, this issue, as you recall, came up as a result of this U.S. Senate special election having too long of a -- too many candidates and the Secretary of State not wanting to have any candidates claim that they were unfairly treated by being on the second page because surely someone would say that by being on the second page they lost votes.

We are not aware of any other issues with the BMDs that would change, you know, the processes going forward. I mean, Mr. Barnes conducted logic and accuracy -- his logic and accuracy testing -- his acceptance testing I should say -- on the machines.

The machines will go through acceptance testing. If anything new is discovered in that process, we'll, of course, have to address that. But we have no reason to believe at this juncture there is anything new since this issue with the ballot -- the number of candidates being on one screen has been resolved.

THE COURT: Dr. Coomer, did you get an opportunity to read Dr. Halderman's affidavit that was filed that if it really was just simply only the first time ran on a machine why wouldn't it have been adequate essentially to address this by just basically running it the first time?

DR. COOMER: Well, so there is a

mischaracterization -- I'm not sure where that came from. So I did not have a chance to --

THE COURT: Uh-oh. Everyone put themselves on mute, and we'll try to --

DR. COOMER: So I didn't read -- I didn't have time to read the entire declaration. But I will say that -- and not to disparage Dr. Halderman whatsoever. But he is making assumptions when he does not have an understanding of the actual issue.

If I had time and charts and I could work on a whiteboard, I could explain exactly what the issue is. But it is not that it happens the first time. I said that it only happens once -- can -- not that it always does -- but can happen only once during a voting cycle. And that is a power cycle of the machine. It is a rare occurrence that based on -- not just the ballot layout but, you know, the sequence of how the voters have gone through the ballot.

There are essentially some indexes that are created by Android operating systems. And we have an index that we are referencing. And if there is a collision between those two, the issue happens. And it can only happen once because Android keeps incrementing these indexes.

So it can only collide once. And there is a very specific set of circumstances that leads to this collision. And it doesn't happen every time.

Our analysis showed us how to actually reproduce that deterministically. So I have seen some other things -- I'm not sure if it was in Dr. Halderman's declaration or not -- that we didn't understand the root cause of this and it was undetermined how and when this could happen. And those statements are not correct either.

So this is why we felt very confident in this change because it is very minimal. Instead of referencing this particular ID, we reference it now as what is called a tag. There is no collision possible between our tag and these Android IDs.

And then just to hit on this point, you know, asking what if something else happens, well, this version -- you know, the certified version that is being used in Georgia has been -- has been used by millions of voters across the U.S.

This is the first time we have seen this issue. And, again, it is due to the unique layout to handle the special Senate contest with the two columns of candidates.

So I just wanted to sort of make that known. You are still on mute, Your Honor.

THE COURT: Can you explain to me what the -- to make sure I don't misunderstand what you mean by power cycle, is it -- basically it could happen every time that -- is it when you turn the power on and then the next time when you turn the power on?

DR. COOMER: Correct. Yeah. When you turn the power off and you turn it back on, Android starts those indexes back over.

THE COURT: All right. Then does it happen each time just in the beginning or any time in the cycle? That was the other part that was a little confusing to me because I had thought you indicated before or somebody had indicated it was right at the start of the cycle.

DR. COOMER: No, it is not right at the start. Again, it depends on a variety of factors. So, you know, it depends on the number of -- the number of display elements that are on the ballot itself and how the voters walk through.

So it could be -- it could be several voters. And, again, it doesn't happen all the time because you have to have this unique overlap, you know. And that is wholly dependent on, you know, the sort of behavior of the voters going through the ballot of whether they just happened to hit on this unique circumstance. But it is not -- it is not necessarily within, you know, X number of voters.

THE COURT: Okay. And it is not -- so if you -- it is not dependent on the fact that this is the first time you've -- it is not the first ballot in any event?

DR. COOMER: Correct.

THE COURT: It is not the voter who gets -- who is the first one in line who gets it necessarily?

DR. COOMER: Correct.

MR. CROSS: Your Honor, could I ask a quick clarifying question?

THE COURT: Yes.

MR. CROSS: I just want to make sure I understand. On Monday, Dr. Coomer said -- he said this happens only once for one voter during a complete machine cycle. That was where Dr. Halderman's understanding was coming from.

So is it right that it is not just once for one voter during a machine cycle? It could happen more than once?

DR. COOMER: No, not during the machine cycle. When I say machine cycle, I was referring to power cycle. So it can only happen once.

MR. CROSS: So then why is Dr. Halderman wrong? Why couldn't you just power it on?

DR. COOMER: Because once is not the same as first.

(Unintelligible cross-talk)

MR. RUSSO: We are here to answer your questions, frankly. Plaintiffs can go do discovery if they would like to. We are in discovery. So you can continue to answer for now. But I did want to raise that before we --

THE COURT: I think -- Mr. Russo, I appreciate that. But it was -- I certainly had the impression that Mr. Cross did too. So I'm very happy that Dr. Coomer is explaining it.

So if Mr. Cross had a misunderstanding too, then I

think he is entitled to try to --

MR. RUSSO: And that is fine. I just wanted to make sure before we got too far down this road that I raised this.

THE COURT: All right.

MR. CROSS: So, Dr. Coomer, all I was asking you: It will happen only once in a power cycle, but you don't know when it will happen, meaning you couldn't just do a single test ballot? You would have to do test ballots until it happened the one time and then you --

DR. COOMER: Right. And, again, to be clear, it doesn't always happen. Right? It is this unique way of going through the ballot. So you could -- you could say, oh, I'm going to wait until this happens and it never happens because you have passed those conditions.

MR. CROSS: Got it. Okay. Thank you. That is really helpful, Dr. Coomer.

DR. COOMER: Sure.

THE COURT: So -- and maybe one has to have Mr. Barnes here or someone else from the department present. So I'm just trying to understand how the logic and accuracy testing that is being performed at this juncture mirrors that -- those conditions since it is not necessarily the first time it has been done.

What were -- what are the instructions to make sure that it doesn't happen, partially because, you know, the point

really is the size -- the vote should be counted properly is you just don't -- it could -- there are repercussions if it does in terms of people getting confused at the polls and other sorts of problems that can happen there that it triggers -- the people are worried about their votes and one comes to a halt, et cetera.

MR. CROSS: Your Honor, could I ask one more question?

Dr. Coomer, you mentioned that you could do -- you figured out a way to do it deterministically, which means you could trigger it. Would that work to -- rather than doing new software, could the counties trigger it using this deterministic approach? Then you could trust it wouldn't happen again with the existing software. Would that be a fix?

DR. COOMER: I mean, that is -- theoretically, that is possible because it depends on, again, a lot of variables. So each -- you know, obviously each county and each machine has -- may have a different set of ballots on there.

So like -- so what we did is -- obviously, this was identified in two counties. And we know the ballot styles that they were testing in those counties. So we zeroed in on that and found a way using those two projects how to make it happen.

We would have to do that for every machine in every location because it is dependent on the ballots that are in that machine to then want to determine whether you could make

those IDs collide.

Does that -- does that clarify? That would be, again, theoretically possible. A nightmare. And then that whole process would have to be done every time the machine is turned on.

THE COURT: Let me start this way simply: You-all did some logic and accuracy testing yourself when you were trying to do the software modification?

DR. COOMER: Oh, extensive testing. Extensive.

THE COURT: All right. How did you modify -- how did you do it so that -- in light of these circumstances in terms of the protocol so that you would -- it would be at least randomly captured?

DR. COOMER: Right. So -- well, the first thing we did is obviously analyze the projects where it was -- where the issue arose. And that led us to figuring out what the root problem was.

Then our initial testing was we actually set up a quick project where -- knowing how the code behaved we knew exactly the steps to take within a few clicks to make this issue happen. Right? And so we set that up, verified on multiple machines that we could make it happen according to step A, B, C.

So then we applied the change and then redid those steps, verified that that issue no longer arose, and then we

took that back to, you know, the actual -- some of the actual real Georgia elections that would be tested and ran full regression tests over several days to verify that nothing else was impacted.

THE COURT: You ran full regression tests to determine what? I didn't hear the last part of your sentence.

DR. COOMER: That no other functionality was impacted.

THE COURT: So have you made any recommendation to the State regarding any additional measures that should be taken in order to test the functionality of both the fix as well as that it didn't impact anything else?

DR. COOMER: So I don't -- I don't know all of the information that was communicated to the State. But I believe we did -- again, as I mentioned, we had those two counties where we -- you know, where the issue was experienced. We know how to make it happen in those two counties. I believe we provided those steps to the State for verification. But, again, I'm not the one that is actually communicating the operational aspects directly with the State.

And then as far as the other functionality again, the pre-logic and accuracy testing process we feel is enough to verify that the system as a whole is still functioning as it should.

THE COURT: Let me just say that in your testimony

before this Court you indicated that you had not been aware that -- that the full ballot had been tested in each machine.

So I guess would it be wise to have more of the full ballot tested in every machine? I mean, for instance, among other things, this particular race?

DR. COOMER: I'm not sure -- I'm not sure I'm following. But, again, you know, the logic and accuracy testing that I'm aware of from the State I believe is adequate.

THE COURT: I don't want to get into a cross-examination with you myself about that. But you do understand that there is only a small fraction of the machines each that are tested for -- for instance, as to this particular race that are going to be out in the field?

DR. COOMER: Again, I don't -- I don't know every single detail of the L&A that they are doing.

THE COURT: All right. That is fine. Then we'll just -- we'll stop at that then.

Mr. Russo and Mr. Miller, is there anyone who is familiar with the -- what the instructions have been to the field with the State available just to talk for -- speak for a minute or two?

I know Dr. Coomer has to leave in four minutes. So before we do that, I want to make sure that there is not anything else that counsel wish for Dr. Coomer to address.

MR. BROWN: Your Honor, this is Bruce Brown. I have

one question for Dr. Coomer.

Our information is that the version of the software that was certified was .30 and the current version is .32.

What was .31, and what is .32? And have the incremental changes from the various versions been tested, certified, or approved?

MR. MILLER: Your Honor, we're just going to raise the same objection earlier as far as cross-examination of the witness right now.

THE COURT: Well, I think it is --

DR. COOMER: Version numbers change for a variety of reasons. I'm not even sure what that question is trying to get at.

THE COURT: Well, it is trying to understand if there have been software change or some other change between the 5.5-A, I guess, .30 and 5.5-A.32, which this is. In other words, what happened -- do you know what was .31?

DR. COOMER: There is absolutely no other change than the one we supplied that we alluded to.

MR. BROWN: So why are there two version numbers?

DR. COOMER: There is not two version numbers. There are a variety of reasons why when you do a build a version number turns out the way it does.

I don't know what you are digging at. But I can tell you -- I can state as fact -- and I just did -- that the

only --

MR. MILLER: Your Honor --

DR. COOMER: -- between those two builds is this change that we submitted.

THE COURT: All right.

MR. BROWN: So there is not a version 31?

(Unintelligible cross-talk)

MR. MILLER: Your Honor, we just reraise the same objection. Dr. Coomer is here voluntarily right now. Dominion is not a party to this. He is trying to be helpful to the Court. And we are going down a path of cross-examination again.

MR. CROSS: Why are they scared to answer questions?

THE COURT: All right. No more commentary, let me just say. My understanding --

DR. COOMER: I'm not scared to answer your questions.

THE COURT: All right.

MR. CROSS: I wasn't talking to you, Dr. Coomer.

THE COURT: My understanding just from what Dr. Coomer said was very -- there were a lot of people speaking -- is that Dr. Coomer said that there was no separate change from the 5.5-A that has been made so that there is -- to the extent the other one had a .30, there was no .31 separate change.

DR. COOMER: That's correct.

THE COURT: Is that correct?

DR. COOMER: That's correct.

THE COURT: All right. Fine. Thank you. Is there anything else?

All right. Doctor, you are welcome to stay as long as you want to stay. But I understood that you had a hard deadline.

DR. COOMER: Yeah. I do have a hard stop, and I do appreciate that.

THE COURT: All right. Thank you very much.

MR. CROSS: Thank you, Dr. Coomer.

THE COURT: Is it Mr. Barnes who is giving directions to people in the field about the L&A testing at this point?

MR. RUSSO: I think Mr. Barnes would be the best person to try to answer your questions. He is involved with the development of logic and accuracy testing.

THE COURT: All right. Is he --

MR. RUSSO: We're going to -- if you can give us one minute here to get in touch with him.

THE COURT: That is fine.

(There was a brief pause in the proceedings.)

THE COURT: Good afternoon, again, or good morning. Morning, Mr. Barnes, also.

I just -- we were discussing the circumstances around the software being distributed and subject to logic and

accuracy testing again. And I wanted to find out whether there were -- to your knowledge, whether there were any additional instructions about conducting logic and accuracy testing that was given to any -- all or any of the counties relative to the software.

MR. BARNES: The one additional instruction was for the counties to verify the new hash signature for the new version number of the ICX application.

THE COURT: And therefore am I to assume that there were no -- there was no other modification and in particular there was no expansion as to the number of the ICX machines that were going to be tested for purposes of looking at that race in particular or any other races?

MR. BARNES: Again, we did not give them another list of instructions to follow for their L&A testing. Part of their normal L&A testing is to check every vote position on every ballot as they go through the ballot style. And that is how the occurrence was found with the old version. So we were just going to have counties follow the same protocols with the new version.

THE COURT: Mr. Harvey had confirmed before though that the instructions were that you would run the ballot -- let's say -- let's -- just consider that there were ten machines, let's say, that were being tested. That you would run race Number 1, which would presumably be the presidential

race, on Number 1 machine. Then you would run race Number 2 in priority on machine Number 2. And when you had finished the ten, then you would go back -- the 11th race would be tested again -- would be tested on the machine Number 1 again.

Is that something different than you know of?

MR. BARNES: No. What my understanding of the L&A procedure is is the ballot is loaded on to the L&A -- on to the test screen ballot. And then the first race of the ballot is displayed. And then on that race, they will mark each -- they will touch the first candidate, validate that the mark is there; proceed to the next race on the ballot; mark the candidate, make sure it is there; and proceed all the way through the ballot until they arrive to the summary screen. And they validate that they see those selections on the summary screen.

They then backtrack. Go back to the first race in the ballot, remove the mark from the first candidate, and then mark the second candidate in that race and proceed through the ballot again all the way through the summary screen.

And this is done to make sure that every vote position is responsive and that the system shows that summary selection at the end. They will produce one printed ballot through that exercise with at least one of those candidates per contest marked. But they won't produce a ballot for every instance, for every candidate in every race on every machine.

They will just produce one printed ballot at the end of that test of that particular BMD.

THE COURT: And have you looked at the instructions that were given in January via Mr. Harvey's office?

MR. BARNES: Yes, ma'am.

THE COURT: And that is what you think is consistent with what -- what you have described is consistent with the protocol described?

MR. BARNES: Yes, ma'am.

THE COURT: Well, let me walk through it again. Because that certainly was not my understanding from the testimony provided or from the observations that were provided by people at the -- observers at the polling.

So I'm not -- so you are saying basically the member of the staff who was testing it will go in and vote on the presidential race? And just walk me through it again so I can stop you now that I have heard the whole -- what you think is supposed to happen.

MR. BARNES: Okay. So we'll take it as a single race, single -- single ballot, single race. And we will say the presidential race, which has four candidate options.

On the testing, they would load the ballot, bring up the contest that shows the four -- the four contestants. They will mark the first contestant and then leave that screen and go to the summary screen to validate that that mark is showing.

They would then go back to the race itself, remove the mark, and then put a mark for the second candidate and then proceed back to the summary screen, confirm that that is showing. Go back again to the ballot, remove the mark, mark the third candidate in the race, proceed to the summary screen, confirm that is showing. And then go back to the race, remove the mark of the third candidate, put a mark for the fourth candidate, which is the write-in, type in some form of a name, proceed to the summary screen, verify again that that is showing.

Then they would backtrack, go back to the race itself, remove the mark, go to the summary screen, verify that that mark again is not showing. Then go back to the race. And now they are going to put a mark on the ballot so that they can produce a printed ballot from the machine.

And they may select the first candidate or second candidate or third candidate depending on what they are needing to produce for their test deck. So they may do the first candidate and then proceed back to the summary screen and then print the ballot.

THE COURT: So is the printed ballot the one with all of the choices?

MR. BARNES: The printed ballot will only have the one selection made at that last operation. The ballot can only have one mark for the race.

THE COURT: I don't -- because I don't know whether -- is anyone with you from -- are you able to receive an email if I send counsel the L&A procedure -- January procedure and they sent it to you at this point?

MR. BARNES: Yes, ma'am. I have access to email.

THE COURT: I don't want to be the person directly sending it to you. But -- all right. But if counsel doesn't have it directly offhand, Ms. Cole can send it to one of you right away so you can send it on.

Send it both to Mr. Miller and Mr. Russo.

LAW CLERK COLE: Okay. I can also send it to Harry, and he can share it on the screen.

THE COURT: Okay. Why don't we do both? Why don't we send it because it is harder for -- let's do both and give Mr. Barnes an opportunity to look at it. All right?

(There was a brief pause in the proceedings.)

MR. BARNES: I haven't received anything as of yet.

LAW CLERK COLE: Mr. Martin has it now if you want him to share his screen.

THE COURT: I want Mr. Barnes to be able to review it without having to see it on the screen first.

MR. RUSSO: My email might be running a little slow. So I emailed it. So it is just a matter of --

THE COURT: That is fine.

Ms. Cole, can you pull up Mr. Harvey's affidavit

also?

LAW CLERK COLE: Yes.

MR. RUSSO: Do you know what docket number that is?

THE COURT: Well, the affidavit?

MR. RUSSO: Yes, ma'am.

LAW CLERK COLE: My recollection is it is 834-3.

MR. RUSSO: Thank you. I was just trying to look through the transcript for that explanation. I was not finding it. I appreciate that.

MR. CROSS: Do you mind forwarding that document that Ms. Cole sent you so that I can pull it up too?

MR. RUSSO: Yes.

MR. CROSS: Thank you.

THE COURT: Does everyone have the procedure?

Mr. Barnes, you don't have it still?

MR. BARNES: No, Your Honor, I do not.

THE COURT: Mr. Russo, did you send it?

MR. RUSSO: I did. Let me try again.

THE COURT: Okay. Very good.

MR. MILLER: I think we both actually sent it.

THE COURT: All right.

(There was a brief pause in the proceedings.)

THE COURT: All right. Mr. Barnes, did you get it yet?

MR. BARNES: Yes, Your Honor. I just received it.

THE COURT: Very good. Let me give you an opportunity -- I'll give you the opportunity to read the portion that deals with the process for looking -- testing the polling place scanner, that one -- I'm sorry -- right above it, testing the BMD and printer.

And have you had an opportunity to look at that, that Section D?

MR. BARNES: Yes, ma'am. I'm reviewing that.

(There was a brief pause in the proceedings.)

MR. BARNES: Your Honor, I've read it.

THE COURT: Thank you very much. So my understanding both from Mr. Harvey's testimony on this particular procedure and what the witnesses to the L&A testing observed when they were able to observe this in a -- because it was public was that the description provided in the text under -- in connection with the word example was what was occurring, that there was not -- every race was not in a particular ballot -- ballot machine -- every race that was listed on the ballot was not, in fact, tested on that one machine. That, in fact, it was -- you went from machine to machine as described under the word example.

MR. BARNES: My -- excuse me.

THE COURT: Yes. Go ahead.

MR. BARNES: My reading of the document outlines that the ballot style will be displayed on, we'll say, machine one

and that the process of creating the ballot that is going to be used for the test deck for machine one would be that the -- that the operator would select the first candidate not for just one race but the first candidate in every race on that ballot, proceed through the whole ballot, and then at the end would then print that one ballot that had the first candidate selected.

So that the machine one would have ballot style one and then it would have the selection of the first candidate in every race selected and print it.

On the second machine, the ballot would be loaded. And then from that machine, the ballot that would be printed for the test deck would be the second candidate in each race. And then that ballot would be printed for the test deck.

And then they would go to machine three, load the ballot. And on this one, the ballot that would be produced for the test deck would be the third candidate in each race within that ballot and so forth and so on.

THE COURT: Well, that certainly is somewhat different than my understanding the testimony and evidence. And -- but I understand what you are saying.

What is the -- so just to summarize again is that you understood that if I -- whoever was Number 3 in each race would have been picked -- if you were on the third machine, you would have picked Number 3 -- the candidate in the third position for

every single race?

MR. BARNES: Yes, Your Honor.

THE COURT: And what if there wasn't a candidate?

MR. BARNES: If there is not a third -- if one race has four candidates but the second race only has two candidates, then you do not make a selection at all. You would skip. There is not a third option to choose. So you would leave that race blank.

THE COURT: Then you would continue down the ballot?

MR. BARNES: Yes, Your Honor.

THE COURT: I think this is sufficiently a material change in the way that perhaps it has been presented. I'm not saying anything -- that you are wrong in any way or -- but I just think that I would like to make sure there is nothing that the plaintiffs want to ask in light of that testimony.

And have you observed this yourself or not?

MR. BARNES: I have not been in the field to observe the L&A testing with the new system, Your Honor.

THE COURT: All right. So you haven't been in the field to observe their application of this procedure?

MR. BARNES: That's correct.

THE COURT: All right.

MR. RUSSO: Your Honor, I pulled up Mr. Harvey's declaration, and I'm looking at that. And he seems to indicate that all -- that testing the ballots -- a test deck where you

use every permutation would be overly burdensome and unnecessary, as the Coalition plaintiffs urge, in other words, to generate test ballots so that all candidates in all races within the unique style have received a single vote.

I think maybe that is where some confusion is coming into play. And I think Mr. Harvey was under the impression -- and his declaration seems clear to me. But to the extent there is some confusion that maybe you thought every permutation on the ballot maybe had to run a test deck with every combination, is that -- and I'm just maybe trying to understand it also myself -- where the disconnect is here, frankly.

THE COURT: Mr. Skoglund was, I think, the Coalition's witness or -- is that right? Or was he Mr. Cross' witness?

MR. CROSS: Mr. Skoglund was a witness for the Coalition.

THE COURT: Okay.

MR. BROWN: I'm sorry, Your Honor.

THE COURT: So I'm assuming that you spent some more time -- particular time on this, Mr. Brown.

So are there any -- anything you want to point out or ask Mr. Barnes about?

MR. BROWN: Thank you, Your Honor. My question would be, sort of to cut to the chase -- and that is: On the logic and accuracy testing as described by Mr. Barnes, all of the way

through tabulation, there is only one ballot that is actually tested and that the other testing that Mr. Barnes described was testing the accuracy of the summary screen rather than the accuracy of the final output.

Is that correct, Mr. Barnes?

MR. BARNES: What I was describing was the generation of the test deck that has to be generated at the end of the L&A testing.

THE COURT: Wait a second. I think we should put ourselves on -- everyone but you on mute so that we make sure that we --

Go ahead.

MR. BARNES: Again, what I was describing was the generation of -- it is two parts. It is the L&A test to validate display of ballot operation of the touchscreen being receptive to touch and then the generation of the record from each device that is used to organize the test deck that is then scanned by the scanner.

So the tester wants to go through and look at each race on the ballot, make sure that all the candidates are displayed, make sure that all candidates are receptive to touch, and take that all the way to the end of the summary screen. And then they back out and continue that through all positions.

But when they have completed that, they have to

produce a record. But they are only required to produce one printed record from that BMD. And then they accomplish to get all positions voted and a vote registered by doing the machine one, the machine two, the machine three through the ballot style.

MR. BROWN: Thanks.

MR. CROSS: Your Honor, could I ask a follow-up question?

Mr. Barnes, did I understand you right so if you've got -- well, let's just take a concrete example. There is a Senate race this year that has, as we understand it, it sounds like 20 or so candidates.

So that means you would generate a test ballot that has -- you would generate a separate test ballot for each of those candidates on however many machines correspond. Right?

So let's say there are 20 candidates. You would generate 20 separate test ballots on 20 consecutive machines selecting each candidate in turn.

Do I have that right?

MR. BARNES: What you would do -- let's say that there are -- let's say that there are 20 machines. We'll make a balanced number. Let's say -- actually we'll say there are 10 machines and there's 20 candidates.

Then you will start with machine one, check all the races, check all of the candidates, make sure they are

responsive. But when you are done with that machine, at the end of that machine, you would select the first candidate in that Senate race and produce a ballot printout.

Then you would go to the second machine. The second machine, again, you would check the full race, check all positions, check responses. But when you are done with that, you would produce one ballot from the second machine and that would have the second candidate.

And you would repeat that process through those ten machines. When you got to the 11th candidate, you would be returning back to machine Number 1. And on machine Number 1, you would now select -- again, you have already looked at all of the candidates again already. So on that machine, you are going to produce a second ballot. And that second ballot is going to have the 11th candidate selected.

And then you will continue to proceed in that manner until you have produced a record that -- a vote record that has every candidate in that race voted one time.

MR. CROSS: And if you have got -- if the other elections have fewer candidates -- right? So let's say you are at candidate 6 out of the 20 and all of the other races have fewer than 6 candidates, at that point forward, you would not have any candidates selected on those races for the test ballots?

MR. BARNES: That's correct.

MR. CROSS: So that would mean if we have got a race this year of, say, 20 or so candidates, you would have a pretty large number of test ballots coming out of machines that have no candidate selected for some of those races?

MR. BARNES: That would be correct.

MR. CROSS: Thank you.

THE COURT: Just state that again, what you were saying, Mr. Cross.

MR. CROSS: Because this year we've got a Senate race that has a large number of candidates -- it sounds like 20 or more -- and because once you get over -- say the next highest number of votes is -- I'm trying to think of the easiest way to say what I just said.

Once you get over the next highest number of -- say every other race had two -- only two selections. Right? Once you get to the race that has three or more candidates, you stop selecting any candidates in all of those other races. You don't go back and just select one that you have already selected.

So that means once you get to 3, 4, 5, 6, on up through 20-something candidates when you are testing it, all the other races on the ballot would have no selections on any of those test ballots for all of those machines. So you would be going machine to machine to machine.

THE COURT: You are only going by position number. I

see.

MR. CROSS: So with this particular year with a race with that many selections -- you are talking a pretty large number of BMDs that would have test ballots with only a single candidate selected, which then gets printed and tabulated. Those BMDs would not have test ballots for candidates for all but one race.

MR. RUSSO: I mean, there's always going to be elections where you only have maybe one person in a race. So, Mr. Barnes, that is what you would do, for example, if you had a county commission race also on the ballot and you've got one person in that race. Right. You would put that -- you could check that person off the first -- on the first test ballot. But going forward -- I mean, there is going to be other contested races, of course. You know, maybe you have a house race, a state house race with three candidates. So you have got to go through those three times. But the county commission race with only one candidate would only have -- be selected the first time through.

MR. BARNES: Correct. Correct. And if --

MR. RUSSO: We have had this happen in every election.

THE COURT: Well, I'm not sure that really helps because, of course, when you have only a single -- a single individual then they are in position one. So they are going to

be tested -- those races are all going to be counted as position one.

The problem here we have is position -- the fact that there might not be any others races that have Position 10 and so -- or Position 8. So that basically in the very race that sort of seemed to have -- on the ballot that had created a quirk, you are going to have the least amount of L&A testing -- that's all -- in terms of output.

MR. CROSS: Well, yeah. I'm not sure that is quite right, Your Honor. Let me back up.

They will test every candidate in that Senate race. So that particular race that has a large number of candidates -- right? -- that will get tested.

What it means is that for all of those ballots beyond, say, the first three or four candidates, depending on what else you have there, there will be no L&A testing for any of those other races.

THE COURT: Right.

MR. RUSSO: Well, they are tested the first time. I mean, I think we are saying the same thing.

MR. CROSS: No. No, they are not. What Mr. Barnes is saying is there is no ballot that will be printed at all from those BMDs that gets printed and scanned and tabulated that has any candidate selected from any race other than the Senate race once you get beyond the max number of candidates in

those other races.

And given a lot of those races are only going to have maybe 2 or 3 candidates but we have got a race with 20 or more, you are talking about maybe 50 to 20 machines each time that are not having a single candidate tested to get printed and scanned and tabulated.

MR. RUSSO: I understand what you are saying. But you would have had -- that person who is -- you know, if it is a race of three people, you would have had a test ballot that would have had that person -- the third ballot would have been, you know, in this example that you gave a race of three people.

Now, when you get to person four -- Mr. Barnes can explain it. And if I'm wrong, I'm wrong. Mr. -- I'll let Mr. Barnes explain it.

MR. CROSS: Because once you get to selection -- again, Mr. Barnes, I thought I -- let me just try my question again. I thought we had it straight.

Let's say the maximum number of candidates on a ballot was 4. That is the most you have in any race is 4, except for you have got the Senate race, let's say, that has 20 candidates.

Are you with me?

MR. BARNES: Yes.

MR. CROSS: Once you get to selection five to test that, meaning printing a ballot and scanning it, in the Senate

race, you are going to do that and that ballot is not going to have any other candidate selected for the test ballot; right?

MR. BARNES: On that ballot style. But when there are multiple ballot styles within the polling location, once you complete ballot style one, you then have to do the same thing for the next unique ballot style within that -- within that polling location. So there is opportunity for more ballots to be generated with more selections.

MR. CROSS: Right. But most -- particularly on election day -- putting aside early voting, on election day, most of your ballots -- most of your polls are going to have a single ballot style; right? Otherwise, you are talking about a polling site that has multiple precincts.

MR. BARNES: There is -- every precinct in the state is different. Some only have one ballot style. Some have many. It is a potpourri out there.

MR. CROSS: But with my example, you would have -- unless you are printing multiple ballot styles on that BMD, you are going to have selections -- you are going to have machines five through -- you are going to have 15 machines -- remaining 5 to 20, you are going to have 15 machines for which your test ballot has only a single selected candidate just in that Senate race; right?

MR. BARNES: The ballot that is printed for the test deck, yes. But every position would have been looked at on

that ballot during the examination.

MR. CROSS: On the screen?

MR. BARNES: Correct.

MR. CROSS: And looking at the screen does not tell you what actually gets tabulated; right?

MR. BARNES: The screen is the interaction and the intent of the voter. The ballot is what will be the official record.

MR. CROSS: Right. So --

THE COURT: And the next step is, of course, the scanner tabulator?

MR. BARNES: Correct.

THE COURT: And you can't really test that just from looking at the screen?

MR. BARNES: Again, that is why we produce the record from the machine so that the scanner can also be used to validate that what is coming from the system is what the scanner then tabulates.

THE COURT: I think that the -- I mean, I'm not sure that what is happening in the field is what you are describing. But, you know, I'm just -- based on what the evidence is and the way that Mr. Harvey described it but -- and why he thought everything else was too burdensome.

But that is -- you know, I understand what you are saying at this juncture. I mean, I'm looking at my -- at a

sample ballot here. And -- and basically when we get down to number -- where we were actually thinking of four candidates, we get down to the fifth one, only one of the major leaders here who is in that first top four is Doug Collins.

So all the testing that would relate to other -- identified at least by the polls leaders in this race are after Number 4. So testing of their -- any ballot, including them, would be -- it would be fewer. But that is if it is, in fact, the way it is indicated.

I'm just looking at Paragraph 6 of Mr. Harvey's affidavit and also testimony. And I can't really know at this point that what Mr. Barnes describes based on the testimony and the evidence presented is exactly what is happening.

But, Mr. Skoglund, did you get an opportunity to be present during any of the L&A testing? Remind me.

MR. SKOGLUND: No, Your Honor, I have not been present for any of it.

Can I offer a thought about this?

THE COURT: Yes.

MR. SKOGLUND: So I think that, as I testified before, you know, logic and accuracy testing depends on what questions you are asking. Right? And the quality of the question you ask depends on the quality of the test. So it really makes sense to think about what questions you are asking, what are you trying to find out.

And I think, you know, this is -- this is more logic and accuracy testing that some jurisdictions do. But I think that is not the standard. I think the question is: Does it meet Georgia statute, which I think is quite good and quite strong? I would go further, if it were me.

I think that the way I would do -- conduct a logic and accuracy test and the way I have seen other people do it is you create a spreadsheet essentially ahead of time with the test pattern for votes for what you plan to do. And in that, you try overvotes and undervotes and races where you vote for two and the audio ballot and trying it in Spanish language. And, you know, you try a variety of scenarios.

And then, you know, knowing that you have good coverage in that spreadsheet, then you go to the machine and ask each machine to accomplish that set of tests. That is closer to what I think the Georgia statute requires.

THE COURT: Well, I just would like to know what is actually going to be -- and whether everyone is going to be doing something different actually. That is my concern at this juncture but -- based on the evidence introduced.

But the other thing was simply because this was the -- the alleged tweak that involving this particular ballot one would really want to know it was -- all permutations of that.

It is hard for me to know without -- what I do know is what -- the issue that Mr. Cross elicited. And it might

behoove the State to consider whether to modify at least this in a way -- whatever the process is, if it is, in fact, like what Mr. Barnes describes as opposed to the inference that was given from the procedure as I identified and witnessed by others who were watching the L&A testing in the last election, it really behooves everyone to think about is there something you want to beef up under the circumstances since you have a software change particularly affecting that race.

I can't really say more at this juncture. I'm going to go back and look. But there's really some material differences between the way Mr. Barnes described it and the way it was otherwise described.

MR. MILLER: Your Honor, I don't have the transcript in front of me from the hearing, so I can't speak exactly of Mr. Harvey's testimony.

But as far as the declaration and as I recall the hearing, I think the concept was the concept that Mr. Barnes described of the difference between printed ballots versus the test on the screen. And so I don't think there is --

(Unintelligible cross-talk)

MR. MILLER: -- necessarily inconsistence there but different topics.

THE COURT: Yeah. I mean, there is no question that it was supposed to be getting at the difference as to whether there was a difference between the way it tabulated and the way

it printed and the ballot.

But it was -- but it was much more helter-skelter because -- as opposed to just testing one office per machine and sometimes more depending on how large the ballot was. So that -- I mean, that is exactly what -- not just through Mr. Harvey's testimony but through the affidavit of people who were witnessing it.

So, Mr. Harvey, are you -- is Mr. Harvey in charge of giving you instructions or -- I gather? Are his folks out in the field at all, or is it -- I'm not -- or is it your folks who are doing the L&A testing? I mean Mr. Barnes.

I mean, it is somebody from the county. But who is the technical adviser, if there is anyone?

MR. BARNES: Logic and accuracy testing is a county responsibility. So it is in the hands of the county.

THE COURT: And do they -- are they relying then on that 2000 -- January 2020 procedures manual in determining how to proceed?

MR. BARNES: To my understanding, yes, Your Honor.

THE COURT: And this is not something that you have given directions to anyone about in the field, I gather?

MR. BARNES: That would be correct.

THE COURT: And do you have any idea whatsoever why there was an impression that it was a database that is going to be distributed rather than software in the communication?

MR. BARNES: Your Honor, I do not know why they chose the word database for distribution. It was always that application install -- an application upgrade installation.

MR. MILLER: Your Honor, I believe we can speak to a little bit of clarity on that in that the form that you saw attached to the email that, I believe, Mr. Brown filed is a standard form that is used when databases are delivered to say, here is the schedule, here is where we're coming through.

And so that form didn't change because it was the same type of run. So it is the same type of thing that the counties are used to doing and that the investigators and liaisons sent out. And, you know, frankly, I think it may have been a bit of a misunderstanding amongst the county liaisons who were the direct contact as to what was being delivered but they knew something was being delivered on this schedule.

THE COURT: I would like to just take a short break so I can talk to Ms. Cole privately, and then -- then we'll resume.

MR. RUSSO: Your Honor, could we let Mr. Barnes go or --

THE COURT: Let him stay for just a minute. I won't keep him much more. Thank you.

(A brief break was taken at 11:00 A.M.)

THE COURT: Mr. Brown, Mr. Miller? Let me just say to counsel -- and I realize this is not Mr. Barnes' direct

responsibility. But he also described the process as he envisioned it at least and testified. So that has some value.

At the very least -- and I would say perhaps more than that -- the procedure that was identified on the January memo is susceptible to a very different interpretation or multiple interpretations.

And given the importance of the software -- the L&A testing, I can't tell you that you are mandated, but I think you would be really behooved -- it would strongly behoove the State in the interest of everyone involved here that there be clarification of what the process is.

You are using -- even though it has been identified as a de minimis change, even if it hadn't been a change, it would have been important for there to be -- in this first use statewide in a major election to have this strong L&A testing.

And even if it is construed the way Mr. Barnes says with the effect of it after you get to position four you are going to have fewer tests, you will still have a lot of tests. But, you know, it would have been -- it would be a better thing to have a different process for dealing with this wrinkle.

But even so, I don't think that -- from what the evidence was in the record that it is -- that the L&A testing is being pursued in the way that -- the more pristine manner described by Mr. Barnes. And maybe it is in some places, but in many places it is not.

So, you know, to the extent that, you know, it is still in process, which it definitely is -- it is just beginning -- I would really encourage the State to think about providing clearer directions, you know, thinking about having -- not just relying on a written one but having some sort of video conference to discuss it. And maybe you-all feel like it is not necessary and that is -- but I think the evidence might point to the contrary and --

MR. MILLER: Your Honor, I would want to say that, you know, the memorandum that Mr. Barnes drafted that was distributed by the elections director, that is not in a vacuum. They conduct monthly webinars. They send various instructions through Firefly. And those kind of things just haven't come into evidence in this case because it, frankly, wasn't at that point as much of a disputed issue.

We, frankly, thought we were talking about malware on ballot-marking devices. But suffice it to say, Your Honor, that there is a significant amount of additional kind of guidance and instructive material to the county superintendents throughout the election process through webinars and things of that nature.

THE COURT: Well --

MR. MILLER: And it touches on this and other issues. And, again, I could go into things that, frankly, are definitely not an issue in this case as to candidate

qualification challenges, things of that nature.

THE COURT: I think that this case deals with a variety of things that relate to the machine translating the vote cast by the citizen that walks into the booth or cast in a different way. So I'm just -- that is -- I'm just making these comments.

I encourage you because of the way the evidence came in and what it shows. I'm not saying -- I'm not in any way obviously in a position to say that you -- Mr. Miller, that the individual messages haven't gone out.

But the -- I still have the testimony in front of me. I have the January procedures, which are the official procedures from the Secretary of State about doing this -- preparing for an election that were in front of me. And then I have voters as well as others who were on the board -- on the boards' affidavits. So that is what I'm relying on in just mentioning it to you. But, you know --

MR. MILLER: I understand, Your Honor. I'm not trying to add additional evidence now.

THE COURT: I'm talking about the long run here. My interest is not -- you know, even though it is described as I'm interfering, my interest is in seeing that the voting system works and the voters' votes are counted and that there are no screwups on elections that end up having you back in court. That is -- and to deal with the case in front of me and to deal

with it in an honest and straightforward way.

And I wouldn't be having this conference otherwise so I can really understand what is going on. And --

MR. MILLER: We understand.

THE COURT: So this is a change. So that is what I'm dealing with.

I still would -- as soon as you do have the -- whatever the submission is from Pro V&V, I would like it to be submitted on the record so that we have it. And the same thing -- and what the submission is to the EAC.

And if there is any further clarification that is provided on L&A testing, I would like to be notified of that. Because right now I have -- I mean, this is exactly what I'm dealing with. I have to issue an order, and I don't want my order to be inaccurate in any respect factually.

You may contest the conclusions. But I don't want it to be inaccurate. And we have all worked really long enough to know that is a concern always.

All right. Now --

MR. MILLER: Yes, Your Honor. I apologize. And I do just to -- as we started off today, I do just want to reiterate that we are appreciative of that and your attention to this. And, frankly, the Secretary has the same goal of ensuring that the election can go forward in the most efficient and effective manner.

And, Your Honor, we are appreciative and will remain responsive to the Court's requests. But it is truly a -- you know, we are at crunch time. And our local election officials are trying to administer elections while they are performing inspections for the Coalition plaintiffs. Our State election officials are trying to help out. And in practical realities -- and I understand the Court did not intend -- and we did not intend to have a negative tone towards the Court.

THE COURT: All right. We'll look at -- when Ms. Welch gets her transcript out, I'll determine if there are any -- what portions of the video could be made available on the public docket.

I don't want to get myself in another problem with not having a hearing being in public that should be. And that's really again -- and there might be nothing here that is confidential.

But you are welcome to send me, just having participated in this, any of your position about this and about what portion should be in the public or if all of it can be in the public.

If you are going to do that, just simply so I can proceed on a timely basis, I would appreciate your letting me know -- let's see. It is 11:00 today. If you could let us know by 4:00.

MR. RUSSO: Your Honor, are we going to get a copy --

how do we go about doing that? Do we get a copy of the video?

I mean, I do think probably Dr. Coomer's testimony is something that may not need to be public. However, I just want to make sure we understand the process here. We review the video and send something to you or just --

THE COURT: Well, I think at this point I'm not sure we're going to be able to -- I have to find out from IT. If we have the video, we'll give it to you. And if not, you're going to have to just simply go by your recollection -- your joint recollection --

MR. RUSSO: Okay.

THE COURT: -- of counsel there.

MR. RUSSO: You say by 4:00 today?

THE COURT: By 4:00. But I'll let you -- we'll let you know right away whether we can get you a video.

MR. RUSSO: Okay. I didn't know how that -- I have never had a recording.

THE COURT: It is either yes or no that we can do it. All right.

MR. CROSS: Your Honor, could I ask just -- because it is something that may be breaking, we have heard a lot of new information today. Could we just have Dr. Halderman just briefly respond to a couple of points? Because it sounds like this is stuff you are considering for Your Honor's order.

THE COURT: All right. But I would like to release

Mr. Barnes so that he can go back to work, unless you have an objection.

MR. CROSS: No.

MR. BROWN: No objection.

THE COURT: All right. Mr. Barnes, you are -- you can go on with life.

MR. BARNES: Thank you, Your Honor.

THE COURT: All right. Thank you very much.

Go ahead.

MR. MILLER: Your Honor, before Dr. Halderman begins, because I don't want to interrupt, we just do want to state our objection on the record to the continued expansion of the evidence at issue.

THE COURT: Well, I think that to the extent that he has something useful that helps me understand what has been said, I think the plaintiffs have an opportunity to --

MR. RUSSO: It may be -- you know, to the extent that Dr. Coomer needs to listen to this -- and I don't know --

THE COURT: You can show -- you are welcome to try to reach Dr. Coomer. But it seemed like he had a conflict.

MR. RUSSO: I guess I could show him the video maybe.

THE COURT: Or you could get Ms. Welch --

MR. RUSSO: And he could respond to any --

THE COURT: You could see if you could get her to give you just his portion of the testimony.

MR. RUSSO: Okay. I just want to make sure we get to respond since there was a disputed issue earlier between the two.

THE COURT: Ms. Welch, are you able just to -- just produce Mr. Halderman's -- we don't know how long it is. But let's say it is 20 minutes. Are you able to do that -- turn that around fairly quickly?

COURT REPORTER: I can turn it all around very quickly, Judge. Whatever they ask of me, I do.

(There was a brief pause in the proceedings.)

THE COURT: All right. We'll get it to you one way or the other. Very good.

Can we unmute Dr. Halderman?

DR. HALDERMAN: Hello. Can you hear me, Your Honor?

THE COURT: Yes.

Mr. Cross, did you want to structure this and give him some questions?

MR. CROSS: Yeah. I mean, I think he's been listening.

Probably the easiest way is: Dr. Halderman, it sounds like there are a few points that you had to respond to. Go ahead.

DR. HALDERMAN: Yes, of course. And however I can be helpful to the Court in this manner.

First, just to respond to the point that Dr. Coomer

made about my suggestion in my most recent affidavit that procedural remedies could cure this problem, I think his response seems to indicate that the problem that we're attempting to or the State is attempting to fix here is a complex one, that it is possible to reproduce it but reproducing it reliably, he testified, requires operating with a simpler version of the ballot.

And that just gives me further concern about whether the software fix can be adequately tested given the time that is available.

Now, beyond that, I would like to reiterate the substance of the security concerns that I have. We have to be clear that even if the change to the source code is a small one, as Dominion says it is, the process of updating this software requires replacing completely the core of the Dominion software on every BMD.

We know that because the update instructions are to uninstall the APK, that is, the package that contains almost all of the Dominion software that runs on the ballot-marking device, and install a new APK, a new copy of all of that software.

So this is, frankly, quite alarming from a security perspective. Replacing the BMD software at this juncture so close to the election is an ideal opportunity for attackers who might want to infiltrate the machines.

If attackers have gained access to Dominion's systems, to Pro V&V's systems, to the CES systems, or to the county systems that are going to be creating and distributing this software change, that would be an opportunity for the attackers to subvert the software that runs on election day. And, frankly, none of the procedures I have heard described here today would be adequate to stop that.

So beyond the security questions, the change at this point seriously concerns me from an accuracy and correctness standpoint. As I said, the software change is fixing a problem that is complex to reproduce. It is difficult to test to ensure that the fix actually does correct that problem and that -- and it is virtually impossible at this last minute to thoroughly test that it doesn't create new problems.

So quite often last-minute changes to complex systems do create other unknown consequences. And while the previous version of the BMD software at least had been tested through use in elections, as Dr. Coomer testified millions of voters in aggregate, this new software has only existed for a matter of days.

I myself personally have spent more time testing the old version of the software than anyone has spent testing the new version of the software because it has only existed for such a short time.

Pro V&V hasn't even had an opportunity to write up

its findings. Those finding have not been reviewed by EAC, which has introduced this de minimis testing categorization for emergency fixes in small -- that are small in nature. But the State isn't even following that -- that special case process that has been put in place by EAC. It seems that that process itself is being circumvented. It just seems quite extreme in -- under these circumstances to forgo even that level of compliance.

I wanted to just briefly address the L&A procedures that we heard described. I think two key points about that are that the L&A testing we have heard about would be trivial for malware to detect and bypass. It has a very clear signature that the BMD can see, that ballots are being printed, that are being marked in the same position across every race.

It would be absolutely simple if you were programming malware for the BMDs to have it avoid cheating on ballots that are marked in the same position across each race.

So the security value of this L&A testing is minimal. And we have also heard -- and I think this point came out clearly for the first time today -- that the L&A testing isn't even checking to make sure that each BMD correctly produces a ballot for each -- for the entire set of candidates in every race.

You don't have to test necessarily every permutation of candidates in order to check that. But the least that I

would expect from an L&A procedure would be that it checks that each BMD can correctly mark a ballot for each candidate.

And as we have heard today, because of the length of the Senate race, many BMDs apparently will not even be tested to make sure that they can print a ballot that is marked for each candidate in the presidential race. And that concerns me because a particular BMD might have a corrupted somehow copy of the database -- of the programming that goes into it.

And the L&A procedures, as described, because they don't involve printing a ballot from each BMD that has been marked for every candidate, wouldn't be able to pick up that problem. You have to actually test that each candidate has been marked and can be tabulated correctly.

THE COURT: Wait a second.

DR. HALDERMAN: Apparently someone is sawing on the outside of my building, and I may have to quickly move to another room.

But I think I have addressed the points that I had in mind. But I'm very happy to answer any questions.

MR. CROSS: Dr. Halderman, just a couple of follow-up questions. And the Court may have questions or Mr. Russo.

In your experience looking at elections over the years, is there any election that comes to mind where a state was replacing the software with new software less than two weeks before the --

DR. HALDERMAN: No, nothing comes to mind. This is -- this is not a typical procedure to be going through. In an emergency, perhaps you would need to. But even then, it would be an extremely risky thing to be doing both from a correctness standpoint and from a security standpoint.

MR. CROSS: And just two final questions. Are there real world examples you have seen where a software change that even had been fully vetted and was intended to fix one discrete problem that that then had unintended consequences that were quite significant?

DR. HALDERMAN: Well, the most significant recent example, of course, is the 737 MAX aircraft where after most of the testing had been completed Boeing introduced what they believed was a relatively small design change to the control system that they didn't believe needed to be rigorously tested because it was the equivalent of de minimis.

But that unfortunately reportedly had fatal consequences and has been tied to crashes that have killed several hundred people. But I think that is an illustration. I think it is a good parallel because both the Georgia election system and the aircraft are examples of complex software systems.

Georgia's election system is millions of lines of source code that are in the Dominion products. And for that reason, small, even seemingly trivial changes can have

consequences that are difficult to understand.

It is just -- it is why we normally in the voting system testing and certification process demand such extended testing for accuracy. That kind of testing can't necessarily rule out security problems. But it does a lot to help ensure that votes are going to be counted correctly in the absence of an attacker.

And it is those processes that are being bypassed here and substituted with apparently less than a week of -- of very rapid-fire testing of some sort. Nothing like the testing that goes into a voting system in the course of a normal software change.

MR. CROSS: Last question, Dr. Halderman. You mentioned that the LAT, the logic and accuracy testing --

(There was a brief pause in the proceedings.)

MR. CROSS: Dr. Halderman, you said that there is a clear signature of testing under this L&A process. For example, the candidates are selected in the same position.

DR. HALDERMAN: Yes.

THE COURT: Does anyone have somebody speaking in the background?

(There was a brief pause in the proceedings.)

MR. CROSS: It seems like it got quieter. Is this better?

Okay. Let me try it again.

Dr. Halderman, the question was: You said that there is a clear signature for the machine to see that it is being tested during the logic and accuracy testing. One example, of course, is all the candidates are in the same position; right? They are all selected in Position 3.

Just to show the Court this is not a hypothetical concern, that the malware can trick the machine during testing, is there a real world example of where that has happened?

DR. HALDERMAN: Of where malware would -- of malware detecting such a thing?

MR. CROSS: Yes. Testing and then --

DR. HALDERMAN: Detecting testing. Well, of course, the prominent example of that is the BMW -- excuse me -- the Volkswagen emissions testing scandal, Dieselgate scandal, where Volkswagen programmed its emission systems to detect -- they were going through EPA testing and emit less pollutants under those circumstances.

So the parallel here is detect that the ballot has been marked in the same position across all races and in that case don't cheat; otherwise, cheat with some probability. That would be -- for malware running on a BMD, that would be absolutely a simple thing to program.

MR. CROSS: Thank you, Your Honor.

THE COURT: Let me just make sure I understand from your perspective what this meant in terms of the testing

that -- in terms of the printing of ballots. Any time -- any ballots -- let's say that there were -- because we were using the example previously of four, that there would not be ballots printed with -- that would reflect any other ballot choices as you -- as they -- for any of the -- any of the times where people had cast ballots for candidates five and onward.

DR. HALDERMAN: Yes, Your Honor. My understanding of the testimony we heard today is that one BMD would be used to print a ballot marked in the first position across every race, another the second position, another the third position, et cetera and that races that had fewer than that number of positions the race would just be left blank on the BMD that was being tested.

So each BMD produces one printout that is marked in one equivalent position across every race. And that, of course, has the problem that for a given BMD most of the possible positions that could be marked are not going to be exercised all the way through being printed and being tabulated.

So if a particular BMD has a database that is somehow corrupted and programmed differently from the other BMDs under testing, the problem would not be discovered.

THE COURT: All right. Anything else, Counsel?

MR. CROSS: Not for us, Your Honor. This is David Cross. If they want to ask questions, they are welcome to.

MR. RUSSO: Your Honor, I don't think we have any questions.

THE COURT: All right. Well, thank you-all very much.

MR. CROSS: Your Honor, I'm sorry. There was one final thing that we wanted to clear up if we could. Mr. Brown sent an email in this morning. I don't know if you saw it.

THE COURT: No, I did not.

MR. CROSS: We're just trying to confirm -- Mr. Tyson sent in an email indicating that there was a message that went out from Mr. Harvey clarifying that there were no new databases coming out as opposed to a software change. He indicated that message went to the counties on Tuesday. The copies that we have -- we have multiple copies from the counties -- indicated it went yesterday around the same time of Mr. Tyson's email.

Vincent or Carey, do you know when that actually went out to the counties?

MR. RUSSO: I mean, I believe that it is -- so we looked at it earlier -- what Bruce sent. Buzz is a webface. It is a web portal. So I think Mr. Harvey posted it on Buzz in accordance with what Mr. Tyson represented. And the email went out the following day due to however Buzz, the program, populates the email that automatically goes out.

MR. CROSS: Okay. Thank you.

That is all, Your Honor. Thank you.

THE COURT: All right. Thank you very much. And we'll be -- we'll be in touch. I mean, I'm trying to get an order out this week. So I appreciate everyone scurrying to get this in front of me.

MR. CROSS: Thank you, Your Honor.

MR. RUSSO: Thank you, Your Honor.

(The proceedings were thereby concluded at 11:32 A.M.)

C E R T I F I C A T E

UNITED STATES OF AMERICA

NORTHERN DISTRICT OF GEORGIA

I, SHANNON R. WELCH, RMR, CRR, Official Court Reporter of the United States District Court, for the Northern District of Georgia, Atlanta Division, do hereby certify that the foregoing 76 pages constitute a true transcript of proceedings had before the said Court, held in the City of Atlanta, Georgia, in the matter therein stated.

In testimony whereof, I hereunto set my hand on this, the 1st day of October, 2020.

Shannon R. Welch

SHANNON R. WELCH, RMR, CRR
OFFICIAL COURT REPORTER
UNITED STATES DISTRICT COURT

DECLERATION OF DR. NAVID KESHAVARZ-NIA

I, Navid Keshavarz-Nia, declare as follows:

1. I am 59 years old and have been a resident of Temecula, California for one year. Previously, I resided in the Washington DC metropolitan area for nearly forty years. I have personal knowledge of the contents of this Declaration and if called as a witness, I could and would testify competently as to their truth.
2. I have a Bachelor's degree in Electrical and Computer Engineering and a Master's degree in Electronics and Computer Engineering from George Mason University, a Ph.D. degree in Management of Engineering and Technology from CalSouthern University and a Doctoral (Ed.D) degree in Education from George Washington University. I have advanced training from the Defense Intelligence Agency (DIA), Central Intelligence Agency (CIA), National Security Agency (NSA), DHS office of Intelligence & Analysis (I&A) and Massachusetts Institute of Technology (MIT).
3. I am employed by a large defense contractor as a chief cyber security engineer and a subject-matter expert in cyber security. During my career, I have conducted security assessment, data analysis and security counterintelligence, and forensics investigations on hundreds of systems. My experience spans 35 years performing technical assessment, mathematical modeling, cyber-attack pattern analysis, and security counterintelligence linked to FIS operators, including China, Iran, North Korea, and Russia. I have worked as a consultant and subject-matter expert supporting the Department of Defense, FBI and US Intelligence Community (USIC) agencies such as the DIA, CIA, NSA, NGA, and the DHS I&A supporting counterintelligence, including supporting law enforcement investigations.
4. The USIC has developed the Hammer and Scorecard tools, which were released by Wiki Leaks and independently confirmed by Lt. Gen Thomas McInerney (USAF, retired), Kirk Wiebe, former NSA official and Dennis Montgomery, former CIA analyst). The Hammer and Scorecard capabilities are tradecrafts used by US intelligence analysts to conduct MITM attacks on foreign voting systems, including the

Dominion Voting System (DVS) Democracy Suite and Systems and Software (ES&S) voting machines without leaving an electronic fingerprint. As such, these tools are used by nefarious operators to influence voting systems by covertly accessing DVS and altering the results in real-time and without leaving an electronic fingerprint. The DVS Democracy Suite Election Management System (EMS) consists of a set of applications that perform pre-voting and post-voting activities.

5. I have conducted data collection and forensic analysis using a combination of signals intelligence (SIGINT), human intelligence (HUMINT) and open source intelligence (OSINT) data associated with Chinese and other Foreign Intelligence Service (FIS) operators targeting US critical infrastructures. In that capacity, I have also conducted ethical hacking to support USIC missions.

6. I have performed forensic analysis of electronic voting systems, including the DVS Democracy Suite, ES&S (acquired by DVS), Scytl/SOE Software, and the Smartmatic systems used in hundreds of precincts in key battleground states. I have previously discovered major exploitable vulnerabilities in DVS and ES&S that permit a nefarious operator to perform sensitive functions via its built-in covert backdoor. The backdoor enables an operator to access to perform system updates and testing via the Internet without detection. However, it can also be used to conduct illicit activities such as shifting votes, deleting votes, or adding votes in real-time (Source: DVS Democracy Suite EMS Manual, version 5.11-CO::7, P.43). These events can take place through the Internet and without leaving a trace.

7. During my career, I have studied network communication reports that show DVS data being transferred to Internet Protocol (IP) addresses registered to Scytl in Barcelona, Spain. The results showed that Scytl maintained its SOE Software servers in a Barcelona data center for disaster recovery and backup purposes. In 2020, the SOE Software data center was moved to Frankfurt Germany where I believe 2020 election data was transferred.

8. Dominion Voting Systems (DVS) Corporation was founded in 2003 in Toronto, Ontario, Canada, by John Poulos and James Hoover. The company develops proprietary software and sells electronic voting

hardware and software, including voting machines and tabulators, throughout the United States and other parts of the world. DVS reportedly had a strategic relationship with Venezuela's Bitza Corporation, which was 28% owned by the former President Chavez. Intelligence reports indicate that the DVS/Bitza software was co-developed in Venezuela to alter vote counts to ensure President Chavez (and later, President Maduro) were guaranteed to win an election. The combined DVS/Bitza software was used in numerous countries such as Bolivia and Philippines to forge election results to favor a specific candidate. Subsequently, DVS and its international partners, including Diebold/ES&S (later acquired by DVS), Scytl, SOE Software/eClarity and Smartmatic to establish a global monopoly.

9. Reports show that DVS is comprised of several companies which obfuscate its true organizational and ownership structures. The DVS companies include: 1) Dominion Voting Systems International Corporation, a Barbados corporation; 2) Dominion Voting Systems, Inc., a Delaware corporation; and 3) Dominion Voting Systems Corporation, a Canadian corporation. Similarly, Smartmatic is comprised of: 1) Smartmatic International Corporation, a Barbados corporation; 2) Smartmatic USA Corporation, a Delaware corporation; 3) Smartmatic International Holding B.V, a Netherlands corporation; and 4) Smartmatic TIM Corporation, a Philippines corporation. Based on my counterintelligence experience in USIC, I conclude that corporate structures were partially designed to obfuscate their complex relationships, especially with Venezuela, China and Cuba; and impede discovery by investigators.

10. According to NT Times, in April 2018, J. Alex Halderman from University of Michigan computer scientist demonstrated in a video how simple it is to rig a DVS machine. In the video, Dr. Halderman demonstrates how easy it is to rig the DVS machine. The name of the video is "I Hacked an Election. So Can the Russians." A caption next to the title read "It's time America's leaders got serious about voting security." (Source: https://www.c-span.org/video/?463480-4/washington-journal-j-alex-halderman-discusses-election-security)

11. Despite DVS's constant denial about the flaws of its systems, the company's ImageCast Precinct optical scanner system was totally hacked in August 2019. This occurred during the largest and most notable hacker convention, called DEFCON Voting Machine Hacking Village in Nevada. The DVS ImageCast Precinct is an integrated hybrid voting equipment by combining an optical paper ballot and ballot marking device to allow accessibility for the visually impaired. The system runs the Busybox Linux 1.7.4 operating system, which has known medium to high level exploitable vulnerabilities to allow remote attackers to compromise the VDS. (J. Moss, H. Hurtsi, M. Blaze et al., Voting Village Report, DEFCON Village Report in association with and Georgetown University Law Studies; Online Source: https://media.defcon.org/DEF%20CON%2027/voting-village-report-defcon27.pdf). The report indicated that "many of the specific vulnerabilities reported over a decade earlier (in the California and Ohio studies, for example) are still present in these systems today (A. Padilla, Consolidated report by California Secretary of State, Top-to-Bottom Review summary and detailed report, Page 4 (Online Source: https://www.sos.ca.gov/elections/ovsta/frequently-requested-information/top-bottom-review)
12. In 2019, a computer laptop and several USB memory cards containing the cryptographic key to access DVS systems were stolen in Philadelphia. The company disputes the risks posed by lost USB memory cards containing the cryptographic key. However, according to the election security expert Eddie Perez of the nonpartisan OSET Institute states "it is very common that a USB memory card has a wealth of information that is related not only to the configuration of the election and its ballot — and the behavior of the voting device — but also internal system data used to validate the election." I have previously analyzed the contents of the DVS and other voting system cryptographic keys. I believe that USB memory cards were used to facilitate administrative access to the backdoor to disrupt polling operations and impact ballot counting across MI, GA, PA, AZ and WI.
13. In 2018, NY Times conducted an investigation and concluded that DVS machines can be easily hacked. Subsequently, security experts conducted comprehensive security testing on DVS in August 2019 and

discovered innumerable exploitable vulnerabilities that do not require extensive technical skill to breach. The DEFCON report identified major exploitable security flaws in DVS that were shared with the vendor. However, there is ample indication that these problems were not resolved. Moreover, DVS maintains the position that its voting machines are fully secure. They continue to avoid transparency or make their software codes to be analyzed by independent security investigators. In turn, December 2019, Senators Elizabeth Warren, Ron Wyden and Amy Klobuchar, along with Democratic Representative Mark Pocan raised major concerns regarding security vulnerabilities in DVS machines.

14. In my expert opinion, the combination of DVS, Scytl/SOE Software/eClarity and Smartmatic are vulnerable to data manipulation by unauthorized means. My judgment is based on conducting more than a dozen experiments combined with analyzing the 2020 Election data sets. Additionally, a number of investigators have examined DVS and reported their security findings (J. Schwartz, Scientific American Journal, 2018; DEFCON 2019; L. Norden et. al, America's Voting Machines at Risk, Brennan Center for Justice, NYU Law, 2014) confirming that electronic voting machines, including DVS have glaring security weaknesses that have remained unresolved.

15. I have not been granted access to examine any of the systems used in the 2020 Election. However, I have conducted detailed analysis of the NY Times data sets and have discovered significant anomalies are caused by fraudulent manipulation of the results. In my expert judgment, the evidence is widespread and throughout all battleground states I have studied. I conclude the following:

    a. The vote count distribution in PA, WI, MI, AZ, NV, and GA are not based on normal system operation. Instead, they are caused by fraudulent electronic manipulation of the targeted voting machines.

    b. On approximately 2:30 AM EST, TV broadcasts reported that PA, WI, AZ, NV and GA have decided to cease vote counting operations and will continue the following day. The unanimous decision to intentionally stop counting by all 5 battleground states is highly unusual, possibly

unprecedented and demonstrates prior coordination by election officials in battleground state. There would be no legitimate reason battleground states need to pre-coordinate election activities and stop on-going adjudication processes. However, is equally puzzling that the vote counting did not stop, as reported. In fact, it continued behind closed doors in early hours of November 4, 2020. This activity is highly unusually and demonstrates collusion to achieve desired results without being monitored by watchers.

c. When analyzing the NT Times data for the 2020 election, I conclude that the software algorithm manipulated votes counts forging between 1-2% of the precinct results to favor Vice President Biden. The software performed data alteration in real-time in order to maintain close parity among the candidates and without raising red flags. The specific software algorithm was developed by Smartmatic and implemented in DVS machines to facilitate backdoor access by a nefarious operator to manipulate live data, as desired.

d. The DVS Democracy Suite's ImageCast Central optical scanner failed to correctly verify and validate absentee ballots, as described in its own literature. There is reported evidence that the optical scanner accepted and adjudicated ballots that did not have signatures or other key features that is required for ballot validation and verification. This indicates that the DVS system configuration was modified to accept invalid ballots when they should have been rejected.

e. After the DVS ImageCast scanner validates a ballot, by design, it is required to tabulate and store the results in a cast vote record along with a human-readable image of the ballot that has been scanned. The image, called AuditMark provides the user with scanned results that is verifiable. However, media reports indicate that not only did the ImageCast fail to properly verify absentee ballots; it also failed to maintain records of the AutitMark that would be necessary to conduct an audit. The only way to alter this protocol is to alter the system configuration and prevent the ImageCast scanner from rejecting illegal ballots; and reprogram AuditMark to store ballot image

that could be verified. This is evidence of fraud perpetrated to prevent investigators to discover the number of invalid votes that were cast.

f. The cryptographic key store on DVS thumb drive (reported stolen in Philadelphia) was used alter vote counts prior to up chain reporting. Since DVS uses the same cryptographic key for all its voting systems in all battleground states, the key allowed a remote operator to conduct massive attacks on all battleground state data set without being detected.

g. Beginning on approximately 4:30 AM EST on November 4, 2020, the vote counts favored Vice President Biden by nearly 80% in many jurisdictions. The data distribution is statistically congruent, even when considering a larger number of absentee ballots were collected for Vice President Biden.

h. The data variance favoring Vice President continues to accelerate after 4:30 AM EST on November 4, 2020 and continues until it momentum through November 9, 2020. This abnormality in variance is evident by the unusually steep slope for Vice President Biden in all battleground states on November 4, 2020. A sudden rise in slope is not normal and demonstrates data manipulation by artificial means. For example in PA, President Trump's lead of more than 700,000 count advantage was reduced to less than 300,000 in a few short hours, which does not occur in the real world without an external influence. I conclude that manually feeding more than 400,000 mostly absentee ballots cannot be accomplished in a short time frame (i.e., 2-3 hours) without illegal vote count alteration. In another case for Edison County, MI, Vice President Biden received more than 100% of the votes at 5:59 PM EST on November 4, 2020 and again he received 99.61% of the votes at 2:23 PM EST on November 5, 2020. These distributions are cause for concern and indicate fraud.

i. DVS has acknowledged that Chinese made parts are used in its voting machines. However, the company is unwilling to share details on its supply chains, foreign ownership, or its relationship

with China, Venezuela and Cuba. In particular, I have seen USIC intelligence reports showing China's espionage activities in the United States and efforts to infiltrate elections. Since these countries are our enemies, I conclude that FIS and other operators were involved to influence the outcome of the 2020 election.

j. A Man-in-the-Middle (MITM) cyber attack was carried out by covert operators using sophisticated tools, such as Hammer and Scorecard. The MITM attack occurred in two ways. Initially, remote operatives used USB memory cards containing cryptographic keys and access system backdoors to alter votes in battleground states. Subsequently, the results were forwarded to Scytl/SOE Software servers located in Frankfurt, Germany (previously, Barcelona, Spain). The MITM attack was structured to ensure sufficient data alteration had occurred prior to forwarding the tallied results to the Scytl/eClarity Software Electronic Night Reporting (ENR) system. The reason election data are forwarded overseas is to avoid detection and monitoring by the USIC to obfuscate the MITM.

k. In my expert opinion, the DVS Democracy Suite, Scytl/SOE Software/eClarity and Smartmatic have not produced auditable results in the 2020 election. It is evident that ballots were not properly validated, system records were not kept, and the system experience considerable instability even several days prior to November 4, 2020 that require DVS to implement software changes at the last minute. In addition, the disparity in data distribution after 4:30 AM on November 4, 2020 indicates significant systemic anomalies that were widespread among all battleground states. The evidence is both extensive and persuasive and indicates large-scale fraud by remote operators.

16. I conclude that a combination of lost cryptographic key contained on stolen USB memory cards, serious exploitable system and software vulnerabilities and operating system backdoor in DVS, Scytl, SOE Software/eClarity and Smartmatic created the perfect environment to commit widespread fraud in all

states where these systems are installed. My analysis of the 2020 Election from NY Times data shows statistical anomalies across the battleground state votes. These failures are widespread and systemic - and sufficient to invalidate the vote counts.

17. I conclude with high confidence that the election 2020 data were altered in all battleground states resulting in a hundreds of thousands of votes that were cast for President Trump to be transferred to Vice President Biden. These alterations were the result of systemic and widespread exploitable vulnerabilities in DVS, Scytl/SOE Software and Smartmatic systems that enabled operators to achieve the desired results. In my view, the evidence is overwhelming and incontrovertible.

Pursuant to 28 U.S.S. 1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge.

EXECUTED ON: November 25, 2020

By: _____
Navid Keshavarz-Nia, Ph.D., Ed.D.