Office of the Arizona Secretary of State
Report on the Partisan Review of the 2020 General Election in Maricopa County
August 19, 2021
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The information contained within, where not indicated by a footnote, is the product of the Office of the Arizona Secretary of State and expert observers who were granted access to the Coliseum through a court-ordered settlement, which was agreed to by the Arizona Senate, Cyber Ninjas, and Cyber Ninjas' subcontractors. The primary observers, who were not paid or otherwise compensated for their time, travel, or any other expenses by the Secretary, or any agent thereof, were Ryan Macias, Jennifer Morrell, and Elizabeth Howard. Certified election officers on staff with the Secretary of State’s Office also participated as observers in tandem with these three experts. Arizona Secretary of State Information Security Officer Ken Matta also participated as an observer, and his observations are included in this report.¹

¹ See Appendix A.
Executive Summary

The 2020 General Election was unlike any election previously seen in the United States. Despite setbacks posed by a global pandemic, the unprecedented domestic and foreign spread of mis- and disinformation, and historic voter turnout, election officials across the nation rose to the occasion and administered a safe, secure, and accurate election. Historically, established election best practices have provided confidence and instilled faith that election officials were acting with integrity and fairness.

In Arizona, several pre- and post-election tests are undertaken in order to ensure the integrity of the election. These include the required logic and accuracy tests of election equipment both before and after the election, as well as the post-election hand count audits, which were completed with no evidence of discrepancies or widespread fraud. Additionally, Maricopa County election officials completed a separate forensic audit, which further confirmed that there was no systemic fraud. In fact, Arizona’s results were canvassed, certified, litigated, and audited with no evidence of systemic fraud or interference.

Despite the overwhelming evidence of a secure election and a complete lack of evidence to support claims of systemic fraud, there are those at the national, state, and local levels who dismiss the validity of these tests and refuse to accept the outcome of the 2020 presidential election. Instead, they offer outlandish, unsubstantiated theories of fraud, perpetuating disinformation that continues to simultaneously undermine the results of a free and fair election and erode public confidence in the democratic process.

Embracing these conspiracy theories, Arizona Senate President Karen Fann pursued further review of the election in Maricopa County. Despite frequent references to this review as an audit, the exercise undertaken by the Arizona Senate’s Florida-based contractor, Cyber Ninjas, fails to meet industry standards for any credible audit, much less for an election audit. The Senate’s contractors demonstrated a lack of understanding of election processes and procedures both at a state and county level. This exercise is more accurately described as a partisan review of the 2020 General Election ballots in Maricopa County, the results of which are invalid and unreliable for a number of reasons, which are outlined in this report.

Problems plagued this exercise from the start, stemming from the opaqueness of the contractor’s processes and procedures, as well as from glaring security issues which
were reported in the media.\textsuperscript{2} This prompted the Secretary of State’s Office to take legal action,\textsuperscript{3} which resulted in a settlement agreement that provided ongoing access to the media and to Secretary of State observers. This report is based on the observations of experts who noted security lapses, issues surrounding the chain of custody of both ballots and tabulation equipment, and evidentiary integrity problems throughout the entire exercise. The overarching areas of concern include:

\textbf{Lack of Security and Chain of Custody Procedures. For Example:}

- Observers noted that there was no security presence preventing entrance into the venue or access to the areas where ballots were being stored on the first day of the review.
- Throughout the ballot review, ballot counters were seen with both black and blue pens. In a credible election audit, black and blue pens are prohibited because this ink can be read by ballot tabulators and used to alter ballots. As a result, there is no way to confirm if the original ballots that were being reviewed were altered or destroyed.
- Any participant using a computer could access critical systems housing tally data and ballot images because each computer had a single login, shared passwords, and no multifactor authentication.
- Observers noted that ongoing chain of custody interruptions for both the data and the equipment, including when voting system software and ballot image data was sent to a location in Montana, compromised the data integrity.

\textbf{Lack of Transparency. For Example:}

- Media and outside observers were not allowed to watch the proceedings initially; it was only as a result of litigation that they were allowed to observe. However, no observers were allowed to watch the review of the voting systems. Voting system data is reported to have then been sent to a company in Montana with no indication of how that data was secured or what was being done with it by the subcontractor.


Observers noted serious concerns with the aggregation of tally sheets involving training, software, and ballot identification. For example, there are three sets of tallies recorded for every batch of ballots, and the sets of tallies are not required to match. Keeping three sets of tallies creates an opportunity to alter the results of the counting.

Lack of Consistent, Documented Quality Control Practices, Policies, and Procedures. For Example:

- Unlike a reliable election audit, policies, processes, and procedures were not clearly defined at the outset of the review. When, after a court order, some documentation was made available, observers noted that regulatory processes were rarely followed. Observers reported these discrepancies and were often informed that the policy, process, or procedure had been modified.
- There was no test plan or test procedure for the review of the voting systems, as is standard in a credible audit.
- The Senate’s contractors changed procedures while the review was in process, sometimes in the middle of shifts, without updating documentation or training for those involved.
- Paper examination participants were encouraged to flag ballots as suspicious. Many of the reasons ballots were marked as suspicious were determined to be unfounded by observers knowledgeable in election equipment and ballot technology.
- Ballots were imaged using an unnamed software that observers found unreliable.
- Participants consistently made errors in the data collection.

There are numerous examples of failures that all but guarantee inaccurate results, which would also be impossible to replicate. Any one of these issues would deem an audit completely unreliable, but the combination of these failures renders this review meritless.

The 2020 election was secure and accurate, and it is well past the time to accept the results and move forward.

**Section 1: The 2020 Election was Secure and Accurate**

On October 7, 2020, early ballots were mailed to voters, marking the start of the 2020 General Election in Maricopa County. The election concluded on November 30, 2020,
when the Secretary of State certified the results of the November 3, 2020 election. The breakdown of votes cast in Maricopa County is as follows:⁴

<table>
<thead>
<tr>
<th>Elector Group</th>
<th>Counting Group</th>
<th>Ballots</th>
<th>Voters</th>
<th>Registered Voters</th>
<th>Turnout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>EARLY VOTE</td>
<td>1,915,467</td>
<td>1,915,467</td>
<td></td>
<td>73.81%</td>
</tr>
<tr>
<td></td>
<td>ELECTION DAY</td>
<td>167,878</td>
<td>167,878</td>
<td></td>
<td>6.47%</td>
</tr>
<tr>
<td></td>
<td>PROVISIONAL</td>
<td>6,198</td>
<td>6,198</td>
<td></td>
<td>0.24%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2,095,563</td>
<td>2,095,563</td>
<td>2,595,272</td>
<td>80.51%</td>
</tr>
</tbody>
</table>

According to the County’s final official results, the Biden/Harris ticket received 1,040,774 votes (49.81%), the Trump/Pence ticket received 995,665 votes (47.65%), and the Jorgensen/Cohen ticket received 31,705 votes (1.52%).⁵

Multiple checks, reviews, and audits of the election confirmed the security and integrity of the process, as well as the accuracy of the results.

Pre-Election Logic and Accuracy Testing

In accordance with Arizona election law, the Secretary of State’s Office conducted a Logic and Accuracy (L&A) test on Maricopa County’s election machines prior to the election. This process is established in Arizona Revised Statutes (A.R.S.) § 16-499 and occurs before every election. During the 2020 election cycle, the L&A test took place on October 6, 2020,⁶ and was performed by the Secretary of State’s staff. It was overseen by qualified election staff of different political parties.⁷ Notice of the event was provided in a county-wide newspaper, online, via a media advisory, and was open to be observed by the public, press, political parties, and candidates via online observation links. The chairs of all three major political parties in the county—Democratic, Republican, and Libertarian—were invited to attend in September via direct communications with staff and a calendar invite.⁸

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⁵ Id.
⁷ Maricopa County, supra note 5.
⁸ Slugocki, S. [@Slugocki]. (2020, October 6). One of my legal responsibilities as County Chair is to conduct the accuracy tests of the voting machines and certify [Tweet]. Twitter. https://twitter.com/Slugocki/status/1313647249684004864; Wingett Sanchez, Y. (2020, November 12).
The L&A test showed that the machines worked, accurately counting ballots and attributing votes to the correct candidates in the election management system, and that each candidate and ballot measure received the accurate number of votes—all without error. Accordingly, on October 6, 2020, the Secretary of State certified that the voting equipment was errorless and ready for use in the election.

Post-Election Reviews

In the event of a discrepancy between the vote totals, election officials proceed under clear audit escalation procedures established in state law. Election officials will compare the hand count margin for each race to the designated margin established by the Vote Count Verification Commission (VCVC), which is composed of statisticians, election officials, and other elections experts, and by law, not more than three members may be of the same political party. Prior to each statewide election, the VCVC establishes the variance rate (the number of differences discovered between the hand count vote totals and the machine count vote totals), which triggers an expanded hand count, and, potentially, a full hand count of all ballots cast. If any hand-counted race results in a calculated margin that is equal to or greater than the designated margin for the precinct hand count, a second precinct hand count of that race and of those same ballots must be performed.

Maricopa County Post-Election Hand Count Audit

Shortly after the election, from November 4 to November 9, 2020, the Maricopa County Elections Department conducted a hand count of ballots from 2% of the Election Day vote centers and 5,000 early ballots, as required by Arizona law. See A.R.S. § 16-602(B).

Statute directs political party chairs (or their designees) to select which ballots will be counted by hand after an election. Once unofficial vote totals are made public, officials from each party are required to meet and select at random, without the use of a computer, five races from the election that will be subjected to the recount. In the same manner, those officials are also required to select at least 2% of precincts in the


Maricopa County, supra note 5.

Id.


A.R.S. § 16-602(B)(1-2).

A.R.S. § 16-602(B)(1)

A.R.S. § 16-602(B)(2)
county, or two precincts, whichever is greater, from which ballots will be hand recounted. Additionally, those officials also select at least one batch from each machine used for tabulating early ballots, and, in the same random manner, designate 1%, or five thousand ballots of those ballots, whichever is fewer, for hand recount.

The hand count began on November 4, 2020, when the Maricopa County Chairs of the Republican, Democratic, and Libertarian parties met to randomly select the races, precincts, and batches of early voting ballots that would be recounted by hand, after the participants took an oath to uphold the constitutions of the United States and Arizona. The order of the draw was done by lots, and the Republican Party went first, followed by the Libertarian Party, and finally the Democratic Party. The party representatives then selected five races across four precincts and 26 batches of early voting ballots for hand counting.

The races selected included President, Arizona Corporation Commission, Proposition 208, U.S. Representative, and State Senator. The precincts selected included Trinity Bible Church, ASU Polytechnic, Betania Presbyterian Church, and Turf Paradise, and they combined for 2,917 ballots. The 26 early voting batches contained 5,165 ballots.

The actual hand count of these ballots was conducted by 26 three-member boards, with not more than two members of each board from the same political party. The audit boards are composed of people appointed by the Republican, Democratic and Libertarian party chairs.

Upon completion of the hand recount, no discrepancies were noted between the machine tabulated results and the actual count. This confirmed that the machines had accurately counted the ballots.

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15 A.R.S. § 16-602(B)(1)
16 In the 2020 election, batches ranged from 192-200 ballots.
17 A.R.S. § 16-602(F)(1).
18 Maricopa County, supra note 10, at 1.
19 Maricopa County Recorder’s Office. (@RecordersOffice). (2020, November 7). Thank you to the appointed volunteers from all 3 political parties in @maricopacounty who spent their Saturday participating [Tweet]. Twitter. https://twitter.com/RecordersOffice/status/1325235298234593280?s=20
20 Maricopa County, supra note 10, at 1.
21 Id.
22 Id. at 1-2, 4.
23 Id. at 5.
24 Id. at 1.
25 Maricopa County, supra note 5.
26 Maricopa County, supra note 10, at 1.
Maricopa Post-Election Logic and Accuracy Testing

Local election officials must also conduct a post-election L&A test of tabulation equipment after the official count has been completed but before the county canvass. L&A testing “is intended to confirm that votes are attributed to the correct candidates and ballot measures in the election management system (EMS) and that each candidate and ballot measure receives the accurate number of votes.”

Maricopa County officials completed their post-election L&A testing of the voting equipment on November 18, 2020, with members of the Republican, Democratic, and Libertarian parties, as well as the Arizona Attorney General’s Office in attendance. This test was open to the public and a press advisory was sent beforehand. As required, Maricopa officials used the same test ballots as were used during the pre-election L&A testing. This test generated the same results as the pre-election L&A test: no discrepancies were found.

Additional Post-Election Audits in Maricopa County

On January 27, 2021, the Maricopa County Board of Supervisors unanimously voted to commission a “forensic audit of ballot tabulation equipment used in the 2020 election.” This audit was “comprised of three separate audits”: 1) voting system procurement audit (conducted by a Certified Public Accounting Firm), 2) compliance forensic audit (performed by a Voting System Testing Laboratory (VSTL) accredited by the U.S. Election Assistance Commission (EAC), and 3) field audit (performed by a VSTL accredited by the EAC). The field audit and compliance audit were focused on the...
software, systems, and elections equipment, and began on February 2, 2021, and were completed over the following two weeks. They found no evidence of vote-switching, internet connectivity, tabulation software modifications, malicious software, or hardware installation, and these results were published on February 23, 2021.\textsuperscript{34}

Maricopa County officials concluded: “The combination of these findings, along with the pre- and post-election logic and accuracy tests performed by election officials, the post-election hand count performed by the political parties, and the many security protocols implemented by the Elections Department, confirm that Maricopa County’s Elections Department’s configuration and setup of the voting equipment and election management system provided an accurate counting of ballots and reporting of results.”\textsuperscript{35}

Section 2: Arizona Senate Republicans conduct Secretive and Disorganized Review

Despite Maricopa County Election Officials’ compliance with Arizona’s established statutory regime for reviewing election results, State Senate President Karen Fann and the Senate Judiciary Committee sought an additional review of the election in Maricopa County. While they did not question the accuracy of the votes cast on these ballots for their Republican colleagues in the state legislature, they took the unprecedented step of issuing a subpoena for Maricopa County’s 2020 election materials to launch a partisan review of the results for U.S. President and U.S. Senator—two statewide races won by Democratic candidates.

On December 15, 2020, President Fann and then-Chair of the Judiciary Committee Senator Eddie Farnsworth subpoenaed Maricopa County’s nearly 2.1 million ballots and election machinery in order to conduct what they called a “full forensic audit.”\textsuperscript{36} On


("SLI Compliance found there to be no internet connectivity occurring within the specific time period (July 6, 2020 through November 20, 2020) on any of the examined components."); “No instance of malicious software was found on any of the devices.”); Pro V&V. (2021, February 23). Field Audit Report: Dominion Voting Systems Democracy Suite (D-Suite) 5.5-B Voting System Maricopa Post-Election Field Audit. https://www.maricopa.gov/DocumentCenter/View/66844/Post-Audit-Report.

("Pro V&V determined that the network it evaluated is a “Closed Network” and does not have access to the internet.”; “No discrepancies [discovered by a malware/virus scanning software] were noted at any time”; “[A]ll [test] votes were tallied and adjudicated resulting in an accurate ballot count.”)

\textsuperscript{35} Jarrett & Valenzuela, supra note 32.

\textsuperscript{36} See Maricopa County et al. v. Fann et al., Compl. Ex. 1 (subpoena), Maricopa Cty. Sup. Ct., No. CV2020-016840 (Dec. 18, 2020). Senator Farnsworth was later replaced with Senator Warren Petersen.
December 18, 2020, the Maricopa County Board of Supervisors filed a complaint in Maricopa County Superior Court, asking the court to quash the subpoenas and declare them unlawful.37

While this challenge was pending, on January 12, 2021, President Fann and Senator Petersen served updated subpoenas on the Maricopa County Board of Supervisors; Stephen Richer, the Maricopa County Recorder; and John Allen, the Maricopa County Treasurer.38 A full list of the requested materials can be found in the subpoenas.

The County and Senators litigated the validity of the subpoenas, and on February 25, 2021, Judge Timothy Thomason ruled that the subpoenas were valid.39 He found the Senate’s stated reasoning—to determine whether changes should be made to the state election code—valid and within its powers, though he also noted concerns about voters’ privacy and ballot security, concluding that the Senators were “obligated to maintain the confidentiality” of the subpoenaed ballot information.40

On March 31, 2021, President Fann announced that she had hired a Florida-based cybersecurity company called Cyber Ninjas to conduct what it called a “comprehensive, full forensic audit of the 2020 election in Maricopa County.”41 It remains unclear how Fann chose Cyber Ninjas, as the company has no documented election experience and did not submit a formal bid.42 While at least one other vendor submitted a bid to conduct a forensic audit for $8 million, Cyber Ninjas agreed to charge the Senate $150,000. The Senate’s contractors announced in July 2021 that supporters had raised $5.7 million in connection with the Senate’s ballot review.43 This followed an earlier report that the

37 Id.
40 Id.
costs of the exercise had topped $9 million\textsuperscript{44}, and a judge indicating that the Arizona Senate cannot keep information regarding the funding sources private.\textsuperscript{45}

Cyber Ninjas proceeded to subcontract with smaller firms, which were also lacking significant elections experience and were not accredited by the U.S. Election Assistance Commission: Wake Technology Services, Inc., CyrFir, and Digital Discovery.\textsuperscript{46} Only Wake Technology Services, Inc. had conducted a post-election audit, which had involved fewer than 8,000 ballots (compared to the 2.1 million in Maricopa). The Senate’s contractors subcontracted with Wake to run the review’s hand count. However, when Wake’s contract ended on May 14, 2021, the company chose not to continue and left with the hand count review unfinished.\textsuperscript{47} This disruption led to a new company, StratTech Solutions, an Arizona internet technology company with no election auditing experience, replacing Wake.\textsuperscript{48}

The Statement of Work, agreed to by the State Senate and Cyber Ninjas, detailed Cyber Ninjas’ planned course of work, including four phases: “Registration and Votes Cast Phase”; “Vote Count and Tally Phase”; “Electronic Voting System Phase”; and “Reported Results Phase.”\textsuperscript{49} As described, the “Registration and Votes Cast Phase” was meant to include phone calls and physical “canvassing” of Maricopa County voters to question them about undefined “anomalies.” However, on May 5, 2021, the U.S. Department of Justice sent a letter to President Fann, warning her that the procedures being used for the “audit” may violate federal law, including laws which prohibit voter intimidation and laws which require election officials to safeguard and preserve federal election records.\textsuperscript{50} On May 7, 2021, President Fann sent a letter in response to the Department of Justice, explaining that the Senate would “indefinitely defer” the “voter


\textsuperscript{48} Id.


canvassing” component of the process. Senate Liaison Ken Bennett quickly contradicted Fann, stating the team “will still do ‘spot checks’ of some addresses, such as places where a large number of votes were reportedly cast.”

**Lack and Transparency and Access**

In contrast to election audits conducted by election officials in compliance with state law that are open to the public and the press, the State Senate and their contractors have consistently fought to prevent or limit access by the public or press to information about the review, including written procedures, who the counters and staff members are, and who is funding this exercise. Citing the proprietary interests, they prevented independent nonpartisan experts and press from observing the process at the Coliseum. Initially, only One American News Network, a television network that helped to organize and fund the review, was granted access.

In a March 3, 2021 letter to President Fann and Arizona Senator Warren Peterson, the Arizona Secretary of State expressed her concern with the Senate’s plans to review ballots. Alongside other suggestions and requests, she requested that the Senate “[p]ermit the Secretary of State’s Office, the Governor’s Office, the Attorney General’s Office, Maricopa County officials, and political party designees to observe every step of any audit and any handling, inspection, or counting of ballots.” The Senate failed to respond.

On April 20, 2021, the Maricopa County Elections Department announced that it would transfer ballots and election equipment to the Veterans Memorial Coliseum in Phoenix.

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51 Fann, K. (2021, May 7). Fann Response to DOJ. 
52 Duda, J. [@JeremyDuda]. (2021, May 12). Though @FannKfann told DOJ that the audit indefinitely suspended plans to knock on voters’ doors to confirm voter [Tweet]. Twitter. 
https://twitter.com/ jeremyduda/status/1392629603785527300?s=20
53 MacDonald-Evoy, J. (2021, April 23). Senate won’t say who is funding the election audit or allow media access. Arizona Mirror. 
https://www.azmirror.com/2021/04/23/senate-wont-say-who-is-funding-the-election-audit-or-allow-media-access/
57 Id. at 3.
("the Coliseum"), the venue selected for the exercise. The next day, on April 21, the Secretary of State’s Elections Director, Sambo Dul, emailed Fann and former Secretary of State Ken Bennett, the Senate’s “audit liaison,” to request permission to designate independent experts to observe the audit alongside national nonpartisan nonprofit organizations. Dul also requested that the audit be open to press observers. Bennett expressed openness to the idea by telephone, but neither Bennett nor Fann followed through.

At the same time, the Senate’s contractors sought to keep press out of the Coliseum and to keep its policies and procedures for conducting the process a secret. The only publicly available information was its Statement of Work.

In a letter to Fann and Bennett dated April 22, 2021, multiple Arizona news organizations voiced similar concerns, describing the press’s failed efforts to gain access to the Coliseum and explaining why the refusal to permit press observers violated the First Amendment.

That same day, the Arizona Democratic Party and a member of the Maricopa Board of Supervisors sued in Arizona Superior Court to stop the ballot review, citing violations of Arizona election law and risks to voter privacy and ballot security.

The court subsequently ordered the Senate’s contractors to file all policies and procedures relevant to the exercise by April 25, 2021. Cyber Ninjas and the Senate defendants immediately appealed the order with the Arizona Supreme Court and were denied. The contractors also requested that its policies and procedures be sealed and that a hearing on the matter be closed to the public, claiming legislative privilege as well.

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61 MacDonald-Evoy, supra note 52.


as trade secret protection.\textsuperscript{66} Arizona Supreme Court Justice Clint Bolick denied that motion.\textsuperscript{67}

On April 26, 2021, the First Amendment Coalition of Arizona filed a motion in the Superior Court to intervene in the lawsuit for the purpose of opposing these secrecy requests, which was granted.\textsuperscript{68} The Secretary of State’s Office moved to intervene on April 27, \textsuperscript{69} requesting that the court order the defendants to “allow independent observers, including independent experts designated by the Secretary, members of political parties, and members of the press, to effectively observe the audit.”\textsuperscript{70} The court granted the Secretary’s motion over the defendants’ objections,\textsuperscript{71} and following a hearing and negotiations,\textsuperscript{72} all parties agreed that the Secretary’s independent expert observers could observe the proceedings.\textsuperscript{73}

The parties later reached a settlement on additional issues\textsuperscript{74}, and while the review was allowed to continue, the Senate’s contractors were required to provide greater transparency into their procedures and permit the press and qualified observers throughout the review.\textsuperscript{75}

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\textsuperscript{67} Arizona Democratic Party et al. v. Fann et al., Order Denying Special Action, supra note 62, at 2.
\textsuperscript{69} Arizona Democratic Party et al. v. Fann et al., Mot. to Intervene by Ariz. Sec. of State Katie Hobbs, Ex. A (proposed Compl.), supra note 58.
\textsuperscript{70} Id.
\textsuperscript{75} Id.
Section 3: Expert Election Observers Document Senate Reviews Failures

“The legitimacy of an election—the peaceful transference of power based on the will of the people—necessitates diligence in assuring that the correct outcome was announced and certified.”

Pursuant to Arizona law, election administration in Arizona incorporates many aspects of performance management, security, quality control, and pre-election testing and robust post-election auditing protocols that can identify issues that impact the legitimacy of an election. These audits provided further evidence of the integrity of Maricopa County’s elections and the accuracy of the certified election outcome.

“Professional auditing is a method of verifying, through evidence gathered by inquiry, observation and testing, the activities and results of a process.” Furthermore, “it is the method by which third parties and stakeholders—both internal and external to the process—can be assured that the process was performed in accordance with the established procedures and will increase acceptance of the process outcomes because of the independent validation of the established procedures.”

The purported “audit” conducted by the Senate’s contractors did not meet this definition. Moreover, it failed to satisfy the basic standards for elections auditing. Because of these failures, any findings or report issued by Cyber Ninjas, or the state senate, based on the information collected using these faulty and inconsistently-applied procedures and processes, should not be considered trustworthy or accurate.

Designated Election Observers

Following the litigation, the Secretary of State’s Office consistently sent qualified, non-partisan election experts to observe the review. Based on their observations inside the Coliseum, the expert observers documented and quickly shared concerns, which allowed the SOS to report issues and to ensure that the public received timely information. The following section outlines the most significant concerns noted by the expert observers.

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77 See e.g. ARS § 16-602 (prescribing post-election hand-count audits).
79 Id.
80 A timeline of the observers’ review is included at Appendix X.
Overarching Concerns
Lack of Compliance with Federal Law

Federal law requires election officials to safeguard and protect election materials, including ballots, for 22 months after an election. "Election [materials must] be retained either physically by election officials themselves, or under their direct administrative supervision. This is because the document retention requirements of this federal law place the retention and safekeeping duties squarely on the shoulders of election officers." At all times, "election officers [must retain] ultimate management authority over the retention and security of those election records, including the right to physically access [these records]."

The Senate forced Maricopa County election officials to hand over voting machines and the approximately 2.1 million ballots cast in the November 2020 General Election. Based on observer accounts and understanding, the Senate and their agents, including the contractors, retained complete management authority over these materials upon Maricopa County election officials’ transfer of these materials, beginning on April 21, 2021, into their custody, as required pursuant to court order.

Upon receipt of these materials, the Senate, and its agents, including the contractors, failed to comply with the custodial duties to protect and maintain federal election materials.

Transparency

Throughout this exercise, there have been concerns about transparency, despite the contractors describing it as the "most transparent in American history." Processes have changed throughout, without clear communication to the press or observers, and confusion on the floor was commonplace. The contractors were seemingly developing and changing procedures as they moved through the process. True transparency, a hallmark of a credible audit, was entirely lacking in this exercise. Although the contractors called much attention to the livestream of their efforts, in reality, the

83 Id. at 90.
cameras did not cover all parts of the exercise, as the contractors purported they would. Processes, procedures, and standards remained obscured from observers and often from participants.

For example, during observers' conversation with a StratTech employee and Cyber Ninjas attorney Bryan Blehm regarding the infrastructure, security, and transparency concerns, Blehm told observers directly that this exercise was not a certification of the election or its results and added that the contractors could determine the level of transparency to provide.

Observers were also informed that Cyber Ninjas CEO Doug Logan and Bryan Blehm both instructed participants not to talk if/when official observers were near them, and that code words were used by participants to warn others that the Secretary of State observers were in the area.

With concerns about the lack of transparency around the aggregation process mounting, observers asked for demonstrations. When observers requested copies of the procedures, they were informed that the procedures were in "draft form" and not subject to disclosure—although these procedures had been printed and distributed to participants as a working guide for performing the aggregation duties. When observers directed this request to Senate Liaison Ken Bennett, he replied, "I have been asking for the same thing," illustrating that the process was unclear to both the observers and to Bennett himself. Observers noted this as an indication that it was, in fact, the contractors in control of the operation—not the Arizona Senate.

Security guards blocked observers from tours of the operation given to delegates from other states. The observers added that the contractors would speak in a manner that would prevent the observers from hearing what was being said on the tours. Observers were told that this was a COVID-19 protocol and the observers could not stand within 6 feet of the delegates. However, this policy was only selectively enforced, as all of the delegates were huddled together, the contractors were within 6 feet of the delegates, and the non-Secretary of State observers were allowed to be within 6 feet of the process.

Security

Cybersecurity Concerns

Both physical and cybersecurity concerns plagued the entire exercise. Basic tenets of cybersecurity dictate that users do not use shared accounts, do not share passwords, and do not write down passwords. These basic standards are implemented for several reasons, including for the protection of data integrity, which is of critical importance.
Violations of these cybersecurity foundational principles provide opportunities for computers to be accessed by unauthorized personnel, including bad actors, who may intentionally, or unintentionally, alter data, such as vote tallies.

During the first few weeks of this exercise, observers noted an alarming failure to comply with basic cybersecurity standards that protect data integrity. Data was collected and initially stored locally on the computers at each of the following stations: 1) paper examination tables, where participants took pictures of the ballots and 2) aggregation stations, for compiling the tally sheets completed by counters.

The Senate contractors set up stations for different parts of the counting process. This is problematic for two reasons: 1) any bad actors with access to the computers, or to the passwords for those computers, could change and manipulate data in the spreadsheets without anyone else being able to track it; and 2) the data could be lost without consistent backups. With the data being stored locally, there were no redundant copies of the information to ensure that any lost or altered data could be recovered.

For example, the observers were informed that the spreadsheets being used to store the tally data were stored locally on the computers. The data was only backed up to the server once daily, and, as part of the backup process, the server created a hash of the file for an integrity check. However, because this only happened once a day, the hash could be altered several times without detection. Further compounding the situation was the lack of logs created on the files, except a general log of which Windows account accessed the file, along with a date stamp.

The observers recognized this as a significant security concern. Each day, multiple people had access to each computer. With two shifts, at least two people were typically entering data on each computer. Additionally, with a single Windows login on each computer and a shared password that dozens of people have, any worker could log into a computer. Observers alerted personnel about this security concern. They described the following example:

Data Entry Shift 1 personnel enters data into Spreadsheet A, B, and C during the shift. Then, Data Entry Shift 2 personnel opens the same Spreadsheet A, B, and C, and modifies the tallies, then continues on with Spreadsheet D, E, and F, as s/he was tasked.

The observers inquired about how changes to the data could be detected using this process, and they were informed that the computers have cameras on them. Observers had previously been informed that those cameras were not monitored in real time, but could be reviewed if an incident occurred.
In another cybersecurity concern, observers discovered a device connected to the server that looked like a wireless router with the name “Netgear” printed on it. Observers were able to confirm that the device was a wireless router and that it was physically connected to an ethernet port for a switch to the servers capturing the ballot counting station video recording footage. Observers were told that the WiFi function of the router had been disabled.

However, this device can be configured as an access point, allowing anyone with another WiFi-enabled device to attach to the audit network from some distance, even in areas off-camera. Observers were assured that the device would be removed from the floor, but it remained connected until May 14, 2021, when the exercise was forced to pause while pre-scheduled events were conducted at the review venue space in the Coliseum.

Observers noted that multiple Wake TSI subcontractors, and other participants, had usernames and passwords written on a purple sheet of paper which they carried in their pockets. This was another significant security vulnerability which indicated a lack of understanding or adherence to best practices for network and data security. Observers reported more than six staff members carrying the list of passwords, participants holding password sheets facing outward so that they could easily be seen, and several participants handing the password sheets to other participants.

In June, observers noticed the manufacturer boxes for the “Ankylin WiFi Microscope” portable cameras used on the paper examination stations indicated they were WiFi capable. The security team scanned each of the paper examination stations with a radio frequency reader. For nearly 15 minutes, each time that the security team placed the radio frequency reader near the microscope cameras, the reader detected a steady stream of transmission. The observers noted that the computers showed that there was no internet connection, but until the June 17 discovery, the observers were unaware that the microscope cameras had built-in WiFi that connects to Apple and Android products via an app. Having WiFi-enabled microscope cameras that transmit data to Apple and Android products created a vulnerability, which could have allowed a bad actor using an unauthorized and undetected device to access the ballot images captured by the cameras.

Physical Security Concerns

Security concerns went beyond hardware and software to include physical security matters. For example, on May 14, 2021, the day the contractors had to pause operations and move equipment from the Coliseum, observers noted much confusion among participants moving equipment, including the server, onto a trailer for storage while the Coliseum was used for high school graduations. Contractors decided to lock
the equipment trailer, but not use a tamper-evidence seal because the data being stored was “not evidentiary.” Both Logan and Blehm agreed that tamper-evident seals would be “overkill.”

At this time, the driver of the truck and trailer walked around to the back and put in the combination to unlock the trailer. Access to the content in the trailer was supposed to be limited, yet even the driver had the combination to the lock. This security vulnerability was witnessed by an observer and an Arizona Ranger on site for security purposes. The driver later stated that the lock was not his, but belonged to his boss, and that the combination was “3030.” Shared locks and combinations are a major security vulnerability. Shortly thereafter, Doug Logan decided that sealing the trailer would be appropriate, but still did not make an effort to get the seals and put them on the trailer. Instead, the Arizona Ranger left the site, got two seals, and returned to seal the trailer.

Internal Security

The contractor’s overall lack of election administration comprehension resulted in several other security issues. In Arizona, voters who qualify under the Uniform and Overseas Citizens Absentee Voting Act (UOCAVA), including military members serving our country, may return their completed ballots electronically. Observers noticed that the contractors treated these ballots with less care, and overheard comments made by the contractors indicating that they believed these were not legitimate nor official ballots.

This dismissive treatment of these ballots again indicated a lack of understanding of election processes, as these were valid ballots voted by active members of the military. In one instance, observers reported seeing Bennett and several other contractors rifling through boxes of UOCAVA ballots. In two separate instances, the UOCAVA ballots were poured out of containers. In the first instance, the ballots were not handled with care, resulting in the UOCAVA ballots being unceremoniously dumped across a table.

The second time, Bennett, and several other participants toppled a box of UOCAVA ballots, spilling them across the Coliseum floor. When returning the ballots to the box, they failed to check the number of ballots returned to the box to ensure that no ballots had been lost or misplaced.

Additionally, some of their own security protocols were blatantly ignored—access to the different cages was supposed to be limited to certain individuals. Observers reported, however, that while initially only the table managers or runners could take custody of the ballot boxes from the secure cages, at some point, this security measure was disregarded entirely. Eventually, all participants were allowed to take custody of the boxes of ballots and remove or return them to the secure cages.
The Senate Cage held all of the data that was sensitive, such as personally identifying information. This cage was originally only accessible by Bennett. During Phase 2, access was also granted to Randy Pullen, the former Chair of the Arizona Republican Party, who the Senate suddenly identified as “Audit Co-Chair” when the review resumed, on May 24, 2021.

On a separate occasion, the observers saw Bennett access boxes of “spoiled” ballots from the Senate Cage and noticed that when Bennett unlocked the cage, he set the combination lock on the floor outside the cage. Observers clearly saw the readily visible code on the lock, which was set to “6404.” Observers confirmed that the code showing was correct because Bennett picked the lock up, placed it back together, and then turned the combination of numbers to relock the lock. The poor security practices that continued to be an issue with the contractors alarmingly included lapses in protocol to protect voters’ personal identifiable information.

**Inconsistently Applied Access and Security Restrictions**

The Secretary of State observers’ access was often subject to change. On April 30, 2021, the head of security told two Secretary of State observers that “per the Secretary’s Office,” the observers were no longer authorized to observe. After an approximately thirty-minute delay, the observers were told that the Secretary had not revoked their designation, but, in order to access the Coliseum, they needed a formal letter from the Secretary’s Office. Upon admittance, Cyber Ninjas representatives instructed the observers that the rules had changed, and observers were no longer permitted to have technology (i.e., computers or phones) on the floor; however, they could bring a yellow notepad and red pen on the floor. Observers noted many instances when the security restrictions were blatantly disregarded by the contractors. For example, observers were told that no computers were allowed on the floor, yet they noted several computers on the floor, including at paper examination stations and at the aggregation stations. Also, observers were told no personnel could have phones on the floor. However, the contractors were not prohibited from using their cell phones on the floor.

**Inconsistently Applied Policies and Procedures**

In the instances where policies and procedures existed, the contractors regularly failed to comply with them. Observers were told that photography was prohibited. When observers informed Blehm that a contractor was violating this prohibition, Blehm approached the representative, who immediately put the phone away. When Blehm left, the contractor immediately retrieved the phone and again began taking photos.
Observers asked Blehm about the incident, who said that the employee had been instructed not to take photos but he took them anyway. Another Cyber Ninjas representative asked Blehm about the incident, at which point Blehm ran to the observers to inform them that he instructed the representative who took the photos to delete them. In a similar incident, Bennett was inside the cage taking photos of the last regular box of ballots being taken out onto the counting floor to be counted, and observers noticed that reporters were taking photos of Bennett on the counting floor using his phone to take pictures.

Chain of Custody Concerns

The term “chain of custody” is not unique to elections. In a court of law, it refers to evidence and the sequence of gaining custody of that evidence along with its control, transfer, examination, and final disposition when admitted into court. Proving that an item has been properly handled through an unbroken chain of custody is a required component of any credible audit. It assures a court of law that the evidence is authentic and was never unaccounted for. The chain of custody during an audit should provide the same assurances that ballots are authentic and accounted for as ballots are:

- Transported
- Reviewed
- Moved between stations, and
- Stored

Chain of custody logs document a ballot’s journey through the audit process. They provide evidence to relieve any uncertainty that ballots have been tampered with by indicating when and who took possession of them each time they are physically moved.85

Chain of custody issues were observed throughout the process. For example, observers noted that some boxes containing personally identifiable information were removed from the Senate Cage, which was supposed to have the most robust security features, into the cage with all other ballots with comparatively open access. The following day, more boxes were moved from the Senate Cage. Chain of custody forms were not included on these boxes. Observers also noted multiple occasions when folders of tally sheets and corresponding chain of custody sheets were left unattended at quality control stations—the area and computers designated for quality control processes to take place—as the data was re-entered into spreadsheets for the “Phase 1 Retrospective Quality Control.”

The number of ballots being processed at a station was not tracked at all, making it impossible to ensure that no ballots had been added or lost during handling.\textsuperscript{86}

\textbf{Other Security Concerns}

Many of the concerns the observers noted stemmed from the fact that the contractors and participants seemed to have little knowledge of election laws or best practices. For example, Deputy Senate Liaison John Brakey publicly stated that he was receiving copies of all the ballot images and expected to post them all publicly. This action would be a violation of the settlement agreement\textsuperscript{87} and of Arizona law\textsuperscript{88}.

\textbf{Lack of and Inappropriate Communication}

Cyber Ninjas’ representatives consistently refused to provide information requested by observers and/or provided inaccurate information in response to questions about the procedures, processes or planned work schedule. Throughout the process, observers found that for the most part, their presence was not welcome in the Coliseum. Ongoing communication issues made it clear that the intent of the contractors is not to provide clarity regarding their actions, but instead to obfuscate processes and procedures.

Additionally, the Senate’s contractors cultivated and contributed to an environment in which the Secretary’s observers were treated unprofessionally. The following are examples of the observers’ interactions with floor staff and volunteers:

On multiple occasions, the Senate’s contractors, Bennett, or Deputy Senate Liaison John Brakey asked the observers for assistance. Observers were regularly shocked by the Senate’s contractors’ demonstrated lack of understanding about elections and Maricopa County’s processes. Furthermore, on multiple occasions, observers were asked to provide the contractors with copies of their notes and information on the errors in the process, so that they could fix them immediately, rather than having to change procedures after learning about the concerns from the Secretary’s correspondence with the attorneys.

The contractors, attorneys, and Senate Liaison continuously provided inconsistent information that regularly failed to comport with the instructions provided to observers or with the processes and procedures provided to the participants performing the review.

\textsuperscript{86} Morrell, J. (2021, May 21). I watched the GOP’s Arizona election audit. it was worse than you think. The Washington Post. https://www.washingtonpost.com/outlook/2021/05/19/gop-arizona-election-audit.

\textsuperscript{87} Settlement Agreement, \textit{supra} note 73.

\textsuperscript{88} A.R.S. § 16-1018
While the Senate’s contractors and Bennett frequently told observers and media that the working participants were mostly volunteers, the observers noted that sign-in sheets, filled front and back, for paid staff were provided daily. In contrast, when observers asked if operations would continue on Memorial Day, they were initially informed that they would, because most workers were paid independent contractors. In fact, a contractor told an observer they were actively trying to keep volunteers from knowing that others were being paid to do the same job.

Observers were often mocked, sometimes blatantly; Secretary of State Observers were called “pinkos” for the pink shirts which contractors required them to wear and which were specifically assigned to these observers (“pinkos” is a pejorative term from the 1920s for people that were sympathetic to communism).

Pullen told one observer that the shirt which he was required to wear on the floor made him “look like a transgender.”

However, some participants expressed gratitude to the observers. One participant told an observer: “I’ve been wanting to tell you I am thankful that you are here.” Another stated, “thank you for the great work you are doing.”

Additionally, at one point, a Senate contractor advised the Secretary’s observers to get into the business of consulting for forensic audits because this exercise would create business for years to come.

89 Photograph: Courtney Pedroza/Getty Images
Ballot Counting Process

Effective and trustworthy hand tally procedures are typically written prior to the launch of an audit, and used for training purposes. They remain consistent throughout the process, and help ensure an accurate count of votes cast for individual candidates.

These procedures require each ballot to be individually reviewed by a team of two or more officials. This is often a slow, methodical process marked by regular pauses in counting, often after five or 10 ballots, to verify accuracy. Election officials are trained and provided with instructions on how to count ballots with unclear marks, and typically receive a state guidebook with pictograms. Standard hand count tally procedures include clear escalation procedures for any ballot that the team of officials cannot agree how to count. This procedure ensures that ballots without clear marks receive additional scrutiny and are accurately counted.

The Senate’s contractors’ tally process failed to include an escalation procedure, and was more similar to an opinion poll—only soliciting opinions of how the ballots should be counted—than it was to effective ballot hand count procedures used by officials across the country. The procedures did not require the people counting to agree on how to count individual ballots. In fact, the procedures do not even require the counters to agree on the aggregate totals for ballots in a batch. If opinions differ on the aggregate totals (within an error rate that varied by day and/or table), then there was no attempt to ensure that individual ballots are counted accurately.

The Senate’s contractors refused to provide written procedures prior to the start of the hand count. When a court subsequently compelled them to produce written procedures, meta data indicated that these procedures, “Counting Floor Policies,” (the “Policies”) were written days after the start of the hand count on April 28, 2021. After the procedures were written, the counting table staff were observed routinely failing to follow, or saying that they were unaware of, the applicable written procedure(s).

Moreover, the procedures and policies changed multiple times before and after they were put in writing, despite the lack of a formal procedure change process or notification requirements. When observers noticed a process change, for example, the change in the number of ballots per batch from 100 to 50, and asked the Senate’s contractors to explain the change, they provided various rationale for the change, but did not provide a copy of the revised procedures or insight into the the process used to identify, consider

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90 Arizona Election Procedures Manual Chapter 11, Section IX
and adopt these changes. Clear procedures that are consistently applied are critical to obtaining reliable vote tallies.

**Hand Tally Process**

The ballot-counting process conducted at the Coliseum consists of two main parts: 1) a hand tally of voter selections for two selected races (President and U.S. Senate); and 2) the aggregation of votes recorded on the hand tally forms.

The **hand tally procedures were not designed to result in an accurate count.**

Round tables, outfitted with a large rotating tray on which two ballot display easels were mounted, were designated as “counting tables.” Each table was staffed with three counters and one or two table leads. Table leads handled the ballots and prepared them to be tallied by counters by placing the ballots on the rotating tray and spinning it around the table.

Each counter was provided with an individual tally sheet for each “batch” of ballots. Counters were instructed to review marks on the ballot for two races: President and U.S. Senate. To complete the tally sheet, they were to put a hash mark in the appropriate column (e.g., Trump, Biden, or Jorgensen; Kelly or McSally). There was also a single column for overvotes, undervotes, and write-in votes in both races—standard industry practice calls for each of these ballot marks to be tracked separately, not jointly. Each row of the tally sheet allowed for the results from five ballots to be logged, which allowed for the entry of 100 ballots on each tally sheet.

The observers reported many concerns regarding the tally sheets, such as:

- The Senate’s contractors informed observers that all tally forms will be maintained. If errors occurred, the sheets would be voided, but none would be destroyed or discarded. However, observers did see tally sheets being torn in half and discarded.
- Some table managers instructed the counters not to tally the number of ballots on the tally sheet, saying that the “Ballots” column was optional and filling it in would slow the process.
- Observers also noted that when conducting a recount, some counters used scratch paper to write down the tallies for the recount instead of using the tally sheets. This was a violation of policy and does not fit the concept of treating the tally sheet as “legal documents.”
- Observers noticed that manila envelopes were placed on many of the counting stations. Blehm told observers they were added as an underlayer to the tally sheet because some of the tables had staples or other items that made their
surface difficult to write on. However, observers documented multiple instances of scratch paper being used for recounts.

- Observers saw multiple instances of table managers failing to get consensus on the tallies among the counters. If there were two out of three matches, then the result of the two was considered to be “good enough.”

**Hand Tally Error Rate**

While the written policies require batches of 100 ballots, in practice, there were a variety of circumstances that resulted in batches of under 100 ballots. For example, when the total number of ballots in a box was not divisible by 100, the last batch counted in that box would typically have fewer than 100 ballots, and when, according to the Senate’s contractors, table leads were given discretion to decrease batch sizes to 50. Counters were not permitted to touch or handle the ballots, nor were they permitted to discuss any questions about the ballots or marks thereon.

After marking tally sheets for the last ballot in the batch, counters were instructed to sum the hash marks and enter aggregate totals in each column. Table leads were responsible for reviewing the tally sheets completed by each counter. This review was limited to comparing the aggregated vote totals and did not include a review of whether the counters agreed on how to count individual ballots. Although the counters reviewed the same ballots, the procedures did not require the counters to agree on how to count individual ballots. Moreover, the procedures did not require the counters to agree on the aggregate vote totals for candidates for each batch.

If, at the end of the batch, the aggregate totals of two of the three counters matched, and the aggregate totals of the third counter were within two votes of the matching aggregate totals, then the batch was considered complete and the table moved to the next batch.

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91 While this is the documented procedure, it is a concern when the table manager is aware that the number of ballots that an individual counted is different from the number that the other two individuals on that table counted (e.g., if one counter had the number of total ballots equaling 100, but the third counted 99 or 101 ballots). During the process of re-entering the tallies from Phase 1 into the spreadsheets, there were multiple instances where this lack of consistency was evident. One observer witnessed, in Yellow Module 2, one counter state, “I give up, I already have 80,” when the other two and the leader said they were only on ballot number 79. The counter said, “Oh well, we only need two out of three,” so the table manager allowed them to continue. At the conclusion of the batch, the counter acknowledged being off by one still, and said “why bother” fixing it if they match.

92 In fact, there was no process for comparing how individual ballots were counted by the three table counters, and the tally sheets were not designed to enable this comparison. Because of this, it would likely not be possible to obtain a complete count of ballot interpretation discrepancies between table counters.
If the tally sheets did not meet this standard, it was the responsibility of the table lead to determine which row or rows (of five ballots) resulted in the discrepancy. Written procedures then called for the table lead to have all three counters review the relevant ballots again. If the aggregate totals were not within the permissible error rate after 1-3 reviews, the table lead would have the table recount the entire batch.

As there were no standards in place for addressing any discrepancies, recording the tally often came down to the opinion of the table lead.

The fluctuating batch size was a significant concern because it created an unacceptably high potential for error, or error rate. The authorization to create an error rate for the hand count procedures was established in Section 5.2.2 of the Cyber Ninjas’ Statement of Work. This error rate was incorporated into the Counting Floor Policies. However, the relevant written policies were poorly drafted and resulted in a much greater error rate than was authorized in the Statement of Work.

Policy No. 8 requires that “the ballot counting teams must be accurate to within 0.03%.” However, the explanatory text describes an error rate (of approximately) 3%—not .03%. Specifically, the procedures call for ballots to be counted in batches of 100, and allow for vote count total discrepancies among counters of up to, but not including, three votes. In practice, the table counters consistently complied with the error rate as expressed in a total number of ballots (up to, but not including, a discrepancy of three). However, they failed to consistently use batch sizes of 100 (e.g., according to Blehm, Table leads were provided with discretion to determine batch size, and could use batch sizes of 50.) Of course, when the number of ballots in a batch

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93 Cyber Ninjas, supra note 48. (“5.2.2 Accurate Counting will be done in groups with three individuals independently counting each batch of ballots, and an individual supervising the table. All counts will be marked on a sheet of paper as they are tallied. If, at the end of the hand count, the discrepancies between counting personnel aggregate to a number that is greater than the margin separating the first and second place candidates for any audited office, the ballots with discrepant total from the Contractor’s counting personnel will be re-reviewed until the aggregate discrepancies within the hand count are less than the margin separating the first and second place candidates.”)


95 Id. at 6. (“If two of three counters totals agree but the third counter is off 1 or 2 votes in any one race, the tally sheets are sent to aggregation. If two of three counters’ totals agree but the third counter is off by 3 votes in any one race, the ballots must be recounted.”) But see Election Assistance Commission. (2005). Voluntary Voting System Guidelines Volume II, National Certification Testing Guidelines. https://www.eac.gov/sites/default/files/eac_assets/1/28/VVSG.1.0_VOL_2.508compliant.FINAL.pdf. (“For each processing function, the system shall achieve a target error rate of no more than one in 10,000,000 ballot positions, with a maximum acceptable error rate in the test process of one in 500,000 ballot positions.”)

96 The process allowed table managers to decide if the table tally 100 ballots on a tally sheet or to stop after the 50th ballot to subtotal and check for errors. For example, on May 10, 2021, a person loading the ballots onto the carousel of Blue Module 4 spun the 51st ballot around and the counters asked her to stop so that they could subtotal. Her response was “I don't usually subtotal at 50,” but that is what the counters
size decreases, but the number of ballots used to determine if there is an impermissible discrepancy remains the same, the effective error rate increases. For example, when batch sizes of 50 ballots were used, the effective error rate was double the error rate of when batch sizes of 100 were used.

Moreover, as the hand tally process does not require agreement on how individual ballots are counted (only the aggregate totals), the estimated maximum number of potential ballot tally errors does not include potential tally errors on individual ballots. This means that each hand tally participant is using their own “standard” for how votes are to be counted, with no clear, consistent, and repeatable instructions in place. This is in stark contrast to the federally required standard for states to establish regulations on what counts as a vote and what does not. This process failure is fatal to the entire endeavor and no count resulting from this process should be relied upon for any purpose, other than as an example of procedures that should not be used.

Ongoing Process Revisions and Changes

Effective and trustworthy hand tally procedures are ideally written and used for training prior to the start of an audit. They remain consistent throughout the entire process. The Senate’s contractors’ process failed to comply with both of these standards. First, the hand tally began before written procedures were shared and were only made available after litigation. More troubling, implementation of the procedures as written was inconsistent, and changes were made to the procedures regularly and in the middle of ongoing processes. Many of the modifications to the procedures came after the Secretary of State or observers held a press briefing or released notes identifying all of the errors being observed or identified by staff. The hand tally process changes impacted the quality and accuracy of the vote totals that were generated by the contractors through this process. An overview of some of the major changes is provided below.

Initial Hand Tally Procedures

At the launch of the exercise, individual ballots were scanned and digital images were displayed on a computer screen, which was visible by all three table counters at each round table. Counters were instructed to first compare the paper ballot on the turntable to the digital image on the screen to confirm that it was the correct digital image, then to review the marks as they appeared on the digital image for vote-tallying purposes.

were used to doing, so the comment caused confusion. Other table leads said that they would not stop and subtotal at 50 ballots; rather, they would just count batches of 50 to make it easier on the counters.

97 52 USC § 21081(a)(6) (“Each State shall adopt uniform and nondiscriminatory standards that define what constitutes a vote and what will be counted as a vote for each category of voting system used in the State.”)
Observers noted that the hardware and software used were not federally or state-certified, nor had it undergone testing by an accredited laboratory.

After this process had been in use for approximately one week, the contractors revised the process (by striking the procedures related to scanning the paper ballots) and told observers that the process was inefficient and confusing. A Senate observer later told Secretary of State observers that the ballot scanning process had been abandoned because the contractors performed a software update which resulted in the loss of all of the ballot images.99

**Revised Hand Tally Procedures**

After ballot scanning ceased, the hand tally procedures relied solely upon review of individual paper ballots using a turntable, on which hundreds of ballots were spun past table counters who struggled to mark, on a tally sheet, each voter’s selection for the presidential and Senate races. Each round table was staffed with three counters and one or two table leads. Table leads handled the ballots and prepared them to be tallied

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98 Thomas Hawthorne/The Republic
99 Based on the information provided, it seemed that the data was being stored locally within the software application, and the update wiped out all previous information. While this theory could not be confirmed, Blehm confirmed that there were some reasons why all ballots that were previously scanned would need to be rescanned. However, the boxes and batches of ballots that had been tallied using this method would not be recounted using the new procedures that all other ballots would be tallied under. This was the first of several instances identified throughout this report where a portion of the population of ballots being recounted was recounted using different practices. Tranches of ballots were counted differently from all other ballots because multiple changes to process were implemented and not replicated on the ballots that had been previously counted.
by counters, which included placing the ballots on the turntable and spinning it. Each counter typically had only a few seconds, or less, to record what they saw.\textsuperscript{100} Occasionally, a counter would look up, realize that they had missed a ballot, and then grab the wheel to stop it.\textsuperscript{101} Speed does not necessarily pose a problem if the audit has a process for catching and correcting mistakes. This exercise, however, lacks that hand tally process.

Due to the previously mentioned accepted error rate, the batch was considered complete if two of the three counters’ tallies matched, and the third was off by no more than two ballots. According to the Policies, the table counters were to recount the batch only if there were vote tally discrepancies when comparing their tally sheets of three or more votes. While some table leads complied with this policy and instructed the table counters to recount when there were too many errors, other table managers just instructed the counters to “fix” their “math mistakes” (requiring individual table counters to double- and triple-check their math).\textsuperscript{102}

![Image of a counting area with people standing and sitting around tables with ballots and counting materials.]

\textbf{Voter Intent}

The staff performing the counting were not provided with a copy of the Arizona state laws or procedures\textsuperscript{104} that govern voter intent rules. Each member of the counting crew were told to look at the ballot and determine for whom they believed the voter intended

\footnotesize{\textsuperscript{100} Morrell, \textit{supra} note 85.  
\textsuperscript{101} \textit{Id}.  
\textsuperscript{102} \textit{Id}.  
\textsuperscript{103} Matt York/AP  
\textsuperscript{104} Arizona Procedures Manual Chapter 11, Section IX  
to vote. Process and procedures state that counters are not allowed to speak with the
table managers or other staff when they are unsure of the situation; they must
determine what they perceive the voter’s intent to be without any instructions,
conversations, or procedures.

Throughout the counting process, the majority of issues raised by the counters had to
do with how to interpret marginal marks (e.g., when an oval is not completely filled-in),
overvotes, write-ins, and undervotes. Also, because the Senate’s contractors consider
overvotes, undervotes, and write-ins as equivalent (i.e., these are combined on the tally
sheet), there is no accuracy around this process and no ability to resolve discrepancies.

**Duplicated Ballots**

Many states, including Arizona, have election officials “duplicate” certain ballots that
cannot be read by a voting machine. For example, they may be torn, damaged, or
stained, military and overseas ballots submitted electronically, provisional ballots in
which the voter voted out of precinct, braille ballots, etc. In these instances, ballots
are generally duplicated by bipartisan teams that verify that the duplicate ballot
matches the respective candidates and contests from the original ballot the voter used.
Then, the original ballot and its duplicate ballot are marked with a unique and
respectively candidates and contests from the original ballot the voter used.

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are generally duplicated by bipartisan teams that verify that the duplicate ballot
matches the respective candidates and contests from the original ballot the voter used.

Ordinarily, in an audit that requires a manual review of ballots, if the duplicated ballot is
selected for the audit, the original will also be retrieved to ensure that voter markings
were transferred correctly. In a recount, only the duplicated ballot will be rescanned or
recounted. There are no known situations where any election official would count both
the original ballot and the duplicated ballot. The only purpose for consulting the original
ballot is to ensure that the voter markings were accurately transferred.

The Senate’s contractors determined a process for tallying these ballots, after observers
noticed damaged ballots spinning on a rotating tray, and inquired about it. The process,
reportedly, was to tally the originals, but the tallies would not be included in aggregation.
Soon after, observers were informed that the process had been modified. The new
procedure was to count, tally, and aggregate the results of the original ballots, which

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105 ARS § 16-621(A)
106 Id.
107 Arizona Election Procedures Manual, Chapter 10 Section II ("Each Ballot Duplication Board shall be
comprised of at least two members who are registered voters not of the same political party").
108 Id. ("Place all original ballots in an envelope or container labeled ‘ballots that have been duplicated’...It
is never permitted to enhance or alter a voter’s original ballot markings to render the ballot readable.
Instead, the ballot should be duplicated.")
Maricopa County does not use for tabulation, instead of the duplicates, which Maricopa County does use for tabulation.

Observers also heard participants being instructed not to aggregate duplicate ballots and to handle other provisional ballots as regular ballots. Later, observers were told that tallies from the provisional ballots would be entered into a separate spreadsheet. It was unclear if Cyber Ninjas intended to include any of these in the aggregation process. The lack of clarity from the start about how to handle provisional ballots was quite concerning, especially as the policy appeared to change frequently.

Alarmingly, observers heard Senate Liaison Ken Bennett say that he “doesn’t know why provisionals would be duplicated. I have never seen a provisional [ballot] that needs to be duplicated.” As Bennett was the former chief election official in Arizona and the person providing election expertise consulting on the process, this remark was cause for concern among observers. There are as many potential reasons for a valid provisional ballot to be duplicated as there are for regular ballots to be duplicated.

An additional process related to the original and duplicated ballots was implemented in June. Observers noticed two teams of data entry participants at a paper examination station with military and overseas ballots and damaged ballots. The observers noted that the ballots were not being photographed, as had been done previously. Instead, the information was being entered into a spreadsheet. The Senate’s contractors explained that this new process entailed documenting the indicia number, the vote for President, and the perceived rationale for why the ballot needed to be duplicated. Also, duplicated ballots would be entered along with the indicia number and the vote for president, and compared to the information entered from the original ballot. Although some of the tallying was done on camera, observers noted that the data-entry process was not, creating an opportunity to alter the data.

**Ballot Box Storage**

There was no consistency in how the Senate’s contractors labeled and stored the boxes of ballots. In the “Completed Cage,” some boxes were labeled as “Counted, Complete” while other boxes were labeled as “Counted, Examined, Complete.” Blehm said that “Complete” meant that the quality control process had been finished. This was obviously inaccurate because quality control had not yet begun. When the observers called this to his attention, he responded with, “keep coming back and you’ll see it start.”

The matter of which cage a box of ballots was stored in was also inconsistent. Blehm had described to the observers that a box of ballots will not go into the “Completed Cage” until all counting and paper examination had been completed and that no other
examinations were needed. Later, the “Hand Audit Batch 19 of 52” box had been moved from the “Completed Cage” to the “In Process Cage.” When an observer asked Bennett about this, he stated that once a box was in the “Completed Cage,” it should not be removed. He did not have an explanation for this.

Aggregation

Aggregation is the process of compiling the individual tallies into the final results. The process should be clear, with established procedures that ensure checks and balances, and quality control processes. Data entry is a very tedious task that is ripe for errors.

There were no publicly-available procedures for the aggregation process. The observers consistently requested information about how the three separate tally sheets for every single batch would come together into a single set of results, but this was never provided. When the observers were authorized to bring a monocular so that they could see the data entry being conducted at the aggregation stations, participants routinely obfuscated the view, preventing meaningful observation of the data-entry and problem-resolution procedures. The Senate’s contractors refused to provide observers with access to or detailed information about the aggregation process, databases, or spreadsheets (including macros).

Observers witnessed the Senate’s contractors rushing to develop instructions, spreadsheets, and Access database(s), while changing multiple portions of the process. Operational consistency is critical for aggregated data to be considered reliable. The Senate’s contractors failed to provide consistent processes or ensure that their entire team was aware of process changes occurring.

Aggregation Data Entry

Standard best practice for tallying data for election audits requires two-person bipartisan teams to enter the data. This provides an opportunity to detect errors in data entry. Aggregation was the most opaque portion of the exercise conducted at the Coliseum.

The most consistent aspect of the counting process was that all three tally sheets for each batch were entered into spreadsheets. Data entry was performed by multiple participants. The tally sheets were brought from the counting tables to the aggregation station by a runner, who would “check in” the tally sheets. During the check-in process, tally sheets were reviewed and placed into color-coded boxes. Participants doing data entry would retrieve the spreadsheets from these boxes and enter the information into a
spreadsheet. When the data entry was complete, the tally sheets were stored in boxes. However, this process was modified multiple times, creating complexity, confusion, and duplication of efforts.

Observers also realized that each of the data entry personnel were required to write on the tally sheets using a red pen, presumably to identify themselves as the reviewer. This was an immediate concern, since red pens were also used by the counting tables to designate an error or change. For instance, if a counting member made a tally mistake, they would cross it out and correct the error in red ink. Since each data entry personnel member is required to write on the tally sheets, a person could strike through the tally at the aggregation station and update the totals. This would be indistinguishable from the marks of the counter, creating another opportunity to manipulate the totals without detection.

Beginning on May 12, 2021, a group of staff began scanning tally control sheets and tally sheets onto a thumb drive. Prior to this, the tally sheets were only kept in a hard copy format. The explanation for this new process was twofold: 1) to make it easier to search for a specific tally sheet in case it needed to be reviewed, and 2) as an integrity check (i.e., so that the sheet could not be manipulated later, as previously described). The lack of clarity in the chain of custody for the tally sheets being scanned and the use of red pens were both major flaws in this process.

These flaws would make any manipulation of the tally sheets prior to scanning virtually undetectable and could produce manipulated evidence electronically. The observers also noticed that after scanning was completed, it had to be replicated after the pause in operations that occurred on May 14. Furthermore, once the new aggregation system was developed, the tally sheets had to be rescanned for a third time so that the tally sheet could be linked to the data that had been entered into the spreadsheet.

**Process Used**

During Phase 1, Blehm and Bennett told observers multiple times that a CPA firm would conduct the data aggregation. Observers were also told that aggregation had not started and that there were no procedures for aggregation because it was being outsourced. This is not a standard practice. However, when observers attempted to confirm this information, subcontractors from Wake TSI and from StratTech indicated that it was inaccurate.

Further, Kern explained that there were two databases and that each had the same data that ran through separate software. This allowed the Senate’s contractors to compare the data in the two databases to compare the outcomes. Observers were
informed that “dozens of pages” of policies and procedures were written on the aggregation process and that procedures had to be modified to match StratTech’s system configuration. Observers requested a demonstration of the software. Instead, observers received a description of a process that did not match.

Observers were then told that there was only one software program and one database. The day before operations were paused, observers overheard someone asking if the aggregation software would even be used.

When Phase 2 began, after the hiatus, the observers noted no movement on the quality control or the aggregation processes. They did, however, notice that a new person was leading the aggregation process. And in early June, two more people began working on the master aggregation computer daily.

Additionally, in early June, observers noticed a crowd gathering around the master aggregation computer over what seemed to be a massive tallying error. Observers overheard one of the people in the crowd say that “it [would] take the rest of the audit” to correct the errors. After noticing that the observers were documenting the situation, the group moved to an area on the floor where observers were prohibited.

**Quality Control**

During Phase 1, observers were told that “if [the quality control] hasn’t started yet, it will start soon.” The observer indicated that the process had not yet started, and the following week, the observer was informed that the quality control process would begin during Phase 2.

In late May, observers noticed that a new spreadsheet had been developed for data entry staff. Observers saw that one member of the staff was having significant issues with the new spreadsheet. He was attempting to drag the data from the matching cells, instead of re-entering the information. However, instead of dragging (i.e, copying) the information, he would move the information to the next cell. This was creating a red “#REF” error in the row in cells beside the data which he moved.

This was the first time observers saw this error. Observers asked about it and learned that Cyber Ninjas employees had applied an electronic quality check on the data, and believed that was sufficient.

This red #REF cell indicated that further review was needed. Observers also noted that the checks were looking for items such as, “do the total number of votes add up to the total number of ballots?”
This process did not check for transposed numbers, a common occurrence during a hand tally, if the tallies from the three counters matched, or if they were counting the same ballot. This was a drastically insufficient quality control check.

During the second week of June, observers saw a new set of printed instructions entitled “Phase 1 Retrospective Quality Control.” This was more than three weeks after the initiation of Phase 2, and more than a month after the observers had been told that the quality control stations and computers were set up. The observers were not allowed to obtain a copy of the “Phase 1 Retrospective Quality Control” procedures because the document was a draft, yet it was on each of the quality control stations and the data entry personnel were using it to rekey the data. Even though the document was titled “Quality Control”, the observers witnessed data entry personnel rekeying all of the tally sheets into the spreadsheet that was introduced on May 24.

There were no additional checks. Observers indicated that it seemed to be referred to as Quality Control because the participants were using the revised spreadsheet that included the feature that flagged mismatched numbers. Observers witnessed data entry staff putting all of the data from the Red Modules into the new spreadsheet. Observers were not able to ascertain what happened to the original spreadsheets. They were told that any errors that occurred at a counting station would be “corrected” in the spreadsheet.

In mid-June, observers noted a new process being referred to as "quality control." This process has three phases: QCC, QCT, and QCTR. Observers believed that these initials stood for Quality Control Count, Quality Control Tally, and Quality Control Tally Retrospective. Observers additionally noted that:

- The QCC or Quality Control Count process appeared to be an attempt to count the number of ballots in a given batch and in an entire box, and to compare it to the number of ballots that Maricopa County recorded on the batch sheet.
- The QCT, or Quality Control Tally, process required participants to complete the counting process again. This was done by spinning the ballots on the turntable again to get a new tally of the entire box of ballots.
- The Quality Control Tally Retrospective process was added on June 19, 2021. Observers were unable to ascertain what the process entailed.

Overall, there was no information available about how tally differences would be reconciled, recorded, or which of the tallies would be considered correct. This provides another opportunity for the results of the tally to be altered. Observers noted that quality control processes lacked integrity and further renders the results unreliable.
Physical Examination

There may be instances in which a physical audit of the equipment will be reviewed in an election. As described earlier, Maricopa County brought in two independent firms to conduct forensic examinations of the equipment used in the election in order to check for any hardware or software on the machines that should not have been there. The forensic audits that were conducted found that the machines had not been tampered with. Nevertheless, the Senate Review called for examination of the machines, and also called for a physical examination of the ballots themselves. The paper examination process, also known as “paper forensic examination,” is an exercise that originated from debunked conspiracy theories about counterfeit ballots being introduced into the election.

Paper Examination

It quickly became evident that the Senate’s contractors did not have the necessary expertise in ballot production, ballot printing, or in the processes for handling ballots that would have rendered their findings credible. Observers noted that while processes changed regularly, coinciding with the prevalence of new conspiracy theories or conjectures, these two steps remained constant:

Step 1: Take two photos of the entire ballot; the first photo is of the back of the ballot and the second photo is of the front of the ballot. This was done using a Canon 5k camera connected to a PC running the EOS software.

Step 2: Take a third photo using a microscope camera of particular areas of the ballot. These cameras were connected to the same computer, which was running an unnamed software.

A separate process, dismantled before a judge ordered the contractors to allow Secretary of State observers into the Coliseum, included putting ballots into a dark box and inspecting them under UV light, presumably for the purpose of. This process was developed in response to a conspiracy theory that counterfeit ballots from China would contain bamboo fibers.\textsuperscript{109}

Observers were provided a software demonstration and the items being captured. The following items were what was described:

The areas on the ballot which the microscope cameras captured included:

- Calibration mark in upper right (circle with +)
- Timing mark at the top right (black square)
- Bottom left area of blank paper—to see ‘fibers’ and ‘security feature’ of the paper
- Vote selection for president (filled-in oval)—except when an overvote or undervote was present. For an overvote, they choose a selection, since the intent was to determine whether the oval was filled with “ink or toner”

According to the procedures manual posted at each table, paper examiners were to look for the following ballot features:

<table>
<thead>
<tr>
<th>Key for Flagging Anomalies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Folded or Unfolded</td>
</tr>
<tr>
<td>Missing Security Feature</td>
</tr>
<tr>
<td>Presidential Selection Mark</td>
</tr>
<tr>
<td>Weight and Texture</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

The paper examination manager described that there was a software update with a new user interface on May 8, 2021, stating that “a lot has changed.” The user interface then had the following buttons:

- Folded
- Human
- Finish Ballot
- Error

The paper examination manager told observers that this feature was added to the software so that the paper examination could automatically send the files to the correct folder on the server. He added that this was implemented because of human error and confusion stemming from the use of an “error folder” and manually moving the photos. After observers inquired further, he added that sending the images to the server was
also a new process. One copy of every photo went to the server and a second to an SD card. This was also a new process.

When each new box was started, a new SD card was inserted into the paper examination computer to capture all of the photos. Observers were told that this was done so that Maricopa County officials could receive a copy of all the photos taken. The SD card would be stored in the box with the ballots in a manila envelope, contradicting the previous claims to return the boxes of ballots back to the county “exactly as they were received.” Observers noted that the county should not accept the SD cards, and should refrain from introducing them into the election infrastructure.

From a cybersecurity perspective, unknown devices from questionable sources pose a significant threat to the network. From a practical standpoint, this action puts undue burden on the county, because it requires county officials to open every box and remove the electronics in order to ensure that the ballot boxes are returned in their original condition.

Initially, the paper examination manager told observers that they were capturing the data locally on a USB thumb drive, but were changing to SD cards because they were less expensive and did not require a USB-A port, leaving one open for additional uses. The observer acknowledged that each computer had a multi-USB hub and free USB ports, and inquired about what other uses would be needed for the USB port. The response was that there was no planned use; it just provided flexibility.

Observers noted that USBs were not previously seen in the paper examination computers. During the week of June 6, 2021, observers witnessed Cyber Ninjas employees copying photo images from the server onto SD cards for boxes that had been completed early in the process, and which had not previously contained an SD card. This contradicts the statement that the USB would be provided for the boxes that used it and that SD cards would only be provided moving forward.

These changes confused many of the paper examiners; observers noted that a person at paper examination table 9 stated that he was confused because the process changed from one day to the next. The paper examination manager replied, “that happens sometimes,” to which the paper examiner said, “every day, every day!”

Another paper examination manager, while describing the new software and process to paper examination table 12 personnel, stated that “[it] doesn’t mean it will be this way tomorrow, but it’s what we are doing today.” On multiple occasions, paper examination personnel complained about the microscopes falling out of place. The observers had heard the terms “fidgety” and “loose” to describe this ongoing issue.
Machine Examination

Observers were provided limited insight into the machine examination process. During their first day on site, observers asked Blehm for access to the machine examination. However, the following morning, the contractor returned a majority of the equipment to Maricopa County, stating that they had made a copy of the election management system server and central counting devices, so they no longer needed the hardware.

Observers further noted that the Senate’s contractors were unable to analyze the precinct level tabulators, because they could not determine how to access the data they wanted to review. Except when stored in the trailer during the hiatus, these devices remained on the pallet, untouched until moved again. As the contractors loaded the voting equipment onto a trailer in preparation for the move from the Coliseum to another storage facility, observers saw four physical hard drives. The contractors informed observers that the images of the data that had been extracted from the voting equipment was on those hard drives.

Shortly thereafter, Bennett confirmed that copies of voting system data had been sent to a lab in Montana. He did not specify what security measures were in place, or what the lab in Montana would do with the data, or how long the copies would be in Montana.

Observers asked Bennett about the reports which stated that Ben Cotton, founder of CyFIR, a subcontractor, had driven the files to Montana. Bennett confirmed that Cotton did take the files, but he did not know when. The observers reminded Bennett that the observers had witnessed the hard drives being stored, locked, and sealed in the trailer. In order for Cotton to physically access the data and drive it to Montana, one of three things had to happen:

1. Cotton received the hard drives from the trailer on May 23, 2021, after the equipment had been shipped back to the Coliseum from storage.
2. There was another copy of the data that was not locked and sealed in the trailer.
3. Someone accessed the trailer in the storage location, unlocked, and unsealed the trailer to obtain the hard drives.

Bennett told observers that he did not know how Cotton had obtained the data, but he made a statement that Cotton was present on May 18, 2021, during a closed question and answer session with Senators Fann and Peterson. The physical examination of the machines remains unclear, as are the Senate’s contractors plans for the paper ballot images.

On June 28, 2021, the Senate’s contractors and Cotton told observers that they would be moving the remaining voting machine equipment from the cage in which it was
currently located into a cage on the counting floor. This was to alleviate the need for extra security. During the move, at approximately 3:40 p.m., observers witnessed Bennett, Cotton, and other staff removing voting equipment from the aluminum rack and stacking the equipment on the table. While being moved, the rack had to be lifted over an approximately 2-inch ramp. They were not able to lift the rack over the ramp. The rack’s feet hit the ramp with such force that Rack 7 collapsed and broke into pieces. Voting system scanners fell on top of each other.

During the cleanup, the red, plastic, tamper-evident seals on multiple machines broke and fell onto the floor. The Senate’s contractors, Bennet, Cotton, and Pullen were quick to blame Maricopa County and the manufacturer of the rack. Cotton also told observers that no equipment had been harmed in the process, without having fully examined or tested it. Observers also saw Cotton using his cell phone in the cage on the floor to take photos of one piece of equipment, which the observers later noted had either a broken or severely scratched screen. Later, the observers noticed multiple pieces of equipment with damage.
Conclusion

All credible audits are characterized by controls, access, and transparency that allow for the processes and procedures to be replicated, if necessary. These standards are all the more important in a post-election audit, where the outcome affects our democracy. As this report has described, the review conducted by the Senate’s contractors has consistently lacked all three of these factors. Procedures have been modified and changed throughout, observer and media access has been inconsistent and limited, and the process has been opaque. This exercise has been a partisan political review of the 2020 General Election for President and U.S. Senator in Maricopa County. It was unnecessary and has undermined public confidence in accurate and secure elections that were conducted in 2020.

Maricopa County conducted both statutorily required, as well as voluntary pre- and post-election tests and audits. In an attempt to assure the public, the county also had not one, but two independent, accredited Voting Systems Test Labs conduct an audit of the ballots and equipment involved in the 2020 General Election. The election results also withstood legal scrutiny, when, in multiple lawsuits challenging the results of the election, judge after judge found that there was no credible evidence of wrong-doing or widespread fraud during the 2020 General Election.

Senators Fann and Peterson insisted on conducting this review despite the long-lasting damage their actions are having on these democratic institutions. Similar attempts to undermine the election results are spreading to other states and communities purely because some elected leaders refuse to accept the results of the election and tell their constituents the truth -- that the 2020 election cycle was secure.

It is clear that any “outcomes” or “conclusions” that are reported from the Senate’s review, by the Cyber Ninjas or any of their subcontractors or partners, are unreliable. As such, it is imperative that leaders across the state and country proclaim that the 2020 General Election was fair and accurate. The voters in Maricopa County turned out, despite ongoing challenges, and made their voices heard. The right to vote is a preeminent feature of American democracy and must be honored.
Timeline: Observers Notes

Phase 1

Phase 1 timeline events are documented in the following letters: Observations for the first half of the partisan review, before it was paused on May 14, are documented in the letters below. The Secretary of State's Office made several attempts to reach out to Senate President Karen Fann and Senate Liaison Ken Bennett to address the concerns that were raised by the office's observers. The list below also includes a letter from the Department of Justice, also addressed to Senator Fann, notifying her of issues of "potential non-compliance with federal laws enforced by the Department."¹¹⁰

March 3, 2021—The Secretary of State’s Office sent Senate President Karen Fann a letter addressing "audit" concerns.

April 1, 2021—This Secretary of State’s Office sent the Maricopa County Board of Supervisors a letter after the Senate's "audit" announcement.

May 5, 2021—This Secretary of State’s Office sent a letter to Senate Liaison Bennett regarding ongoing concerns with the "audit."

May 5, 2021—the Department of Justice sent a letter to Senate President Fann, notifying her of issues of "potential non-compliance with federal laws enforced by the Department."

May 11, 2021—Attorneys representing the Secretary of State’s Office sent a letter to the Senate’s attorneys, addressing violations of the settlement agreement.

May 13, 2021—The Senate's attorneys sent a response to the May 11, 2021 letter from the Secretary of State's Office, which addressed violations of the settlement agreement. The May 13 letter from the Senate’s attorneys failed to address those violations.

May 17, 2021—Attorneys representing the Secretary of State's Office raised ongoing issues with the audit.

May 20, 2021—The Secretary of State’s Office notified the Maricopa County Board of Supervisors about the future use of election equipment.

¹¹⁰ See Appendix D.
April 29, 2021

- Observers noted multiple discussions regarding problems and confusion about how to tally overvotes, even among some of the best counting teams, because procedures had changed at least three times since the process began. It seemed that teams were following procedures that had been in place previously but had been replaced.

April 30, 2021

- Observers heard a Wake TSI paper examination technician say that the poor ballot images being captured were a result of the stadium lighting. The lighting had been an ongoing issue and was the reason that technicians had to reconfigure tables and continuously refocus the cameras.

May 4, 2021

- Observers requested information about the processes that were in place for identifying data entry errors, because there was no second person reviewing the data as it was being entered. Cyber Ninjas attorney Bryan Blehm responded that the quality control process would be implemented soon, inferring that there were no such processes in place at that time.

May 7, 2021

- Observers reported that only the table managers or runners could retrieve boxes of ballots from the cages or return them to the cages, but at some point, additional personnel were handling the ballot boxes. This security measure was disregarded and anyone was allowed to check boxes in or out of the cages.

May 8, 2021

- Observers were shown as items were captured by the microscope cameras. The images included:
  - Calibration mark in upper right (circle with +)
  - Timing mark at the top right (black square)
  - Bottom left area of blank paper—to see ‘fibers’ and ‘security feature’ of the paper
  - Vote selection for President (filled-in oval) – except when overvoted or undervoted. For an overvote, they choose a selection, since the intent was to determine whether the oval was filled with “ink or toner”
- Observers heard a paper examination manager say that “a lot has changed with the new user interface” for the software update.
May 10, 2021

- Observers witnessed the Red Module 12 counting station rip filled-out tally sheets in half and throw them on the table. All written sheets were to be maintained throughout the process.
- Observers were told by Gene Kern from Wake TSI not to wear a mask that had the word “VOTE” printed on it because it was political in nature and equated it to wearing a “Trump” or “MAGA” mask. In reality, this restriction is limited to political clothing that includes express advocacy of a candidate or ballot measure within areas of voting locations. When observers explained this, they were told “this isn’t an election” and some participants were upset, so it should be removed.

May 11, 2021

- Observers spoke with Blehm and Kern about the quality control procedures, and were told that “if it hasn’t started yet, it will start soon.” Observers noted that it appeared that Blehm and Kern were unaware that quality control processes had not started. At that time, there were already approximately 275,000 votes entered, which equates to about 3,000 tally sheets entered into the spreadsheets. When the observers mentioned this, neither Bryan nor Gene responded. Blehm described the quality control process to observers as follows:
  - Quality control personnel will have “Read Only” access to the spreadsheets that were previously entered, along with the hard copy of the tally sheets.
  - They would compare the tally sheet to the spreadsheet.
  - If data was mismatched, they would “flag” the spreadsheet and send it back to the data entry staff.
  - The process would start over.

These processes were never implemented.
- Kern told observers that a single person was working on data aggregation, and was not available that day to demonstrate the aggregation process. She was not available throughout the completion of Phase 1, and Wake TSI did not participate in Phase 2. The observers assumed that since Jeannette was a single point of failure, when she did not return, the entire aggregation process had to be redeveloped.

May 12, 2021,

- Kern, Blehm, and David P. informed observers that the spreadsheets with the ballot tallies were being stored locally, directly on the computer, and that the computers are backed up to the server once a day. As part of the backup process, the server creates a hash of the file for an integrity check. However, no
logs are created on the files, except the general log of which Windows login account accessed the file, along with a date stamp.

- Observers noticed damaged ballots circulating at the counting stations. These ballots are typically duplicated so that they can run through a tabulator. The duplicated ballots are the ones that are counted, the damaged ballots are not (but they are retained. Observed noted concerns that the damaged ballots and the duplicated ballots were being counted, effectively double-counting those votes.
- A group of staff began scanning tally control sheets and tally sheets onto a thumb drive. Prior to this, the tally sheets were only kept in a hard copy format.

May 13, 2021

- Contractors began loading equipment into a trailer. They would need to pause operations temporarily because the Coliseum was being used for several high school graduation ceremonies. Observers watched the loading process and noted that there were four physical hard drives that the contractors said held images of the data extracted from the County’s voting equipment.
- Observers reported that data entry computers were now networked to the server and that spreadsheets were no longer being saved locally to the computer terminal.
- Observers noticed all computers were to be networked, including those at the physical Examination, Aggregation, and Pod Manager stations. They noticed that two pod manager stations and two new computers were still not connected to the server and that tally sheet scanning stations were left off the server. Observers were told that the computers would be added to the network when the contractors returned from the hiatus.
- Observers again saw damaged ballots circulating at the counting stations. The contractors assured observers that the data would not be double-counted, and instead would be tracked separately. However, observers saw a participant include the damaged ballot tally in with the data to be aggregated. Furthermore, observers noted that the file being used could be edited by another person and saved on the server, posing a data integrity issue.
- Observers noticed two StraTech employees plugging two 4-terabyte hard drives into each server. Observers were told that this was being done in order to make a final backup of the servers before they were moved for storage during the hiatus.

May 14, 2021

- Kern informed observers that the contractors had accidentally turned off the power to servers the night before, disrupting the backup process. Instead, Wake TSI would move the servers into a warehouse, set them up, and run the backups. Kern asserted that this course of action had always been the plan, contradicting the information that observers had received the day before.
Phase 2:

May 24, 2021

- The external security gate was left unattended and partially open, allowing observers to walk in. It was later noted that the check-in process had changed, but observers had not been notified of this.
- Bennett confirmed that copies of voting system data had been sent to a lab in Montana. He did not specify what security measures were in place, what the lab in Montana would do with the data, or for how long the lab would be in possession of the copies.
- For several days, beginning on May 24, 2021, observers noted that a copy of a Wake TSI procedure manual, marked "confidential," had been left out and was sometimes unattended at the check-in counter.
- Bennett brought a cell phone onto the counting floor. Previously, cell phones had not been permitted on the floor as a security measure.
- When the contractors returned to the Coliseum, observers noted that new halogen light sources (AmScope HL-150) had been brought in, but the other paper examination stations had battery-powered headlamps shining light at the ballot.
- Observers noted new people and processes in place at the check-in point added to general confusion. Bennett was unable to identify the new person or entity leading the process, contributing to general confusion.

May 25, 2021

- A black pen was brought onto the counting floor. Pens with black and blue ink, which can be read by tabulators, are prohibited from being near ballots to ensure that these pens cannot be used to alter the ballots.
- Observers heard a paper examination manager state that the new people were taking low-quality images, or not capturing full images of the ballot. Contractors told the observers that using a microscope takes a specific skill set and not everyone can do it properly, contradicting a previous statement, which was that new people could be added to the stations because they needed extra people.
- During paper examination training, observers heard a manager direct personnel to focus on the corner cut marks and on whether or not the ballot was printed in color (i.e., commercially) or in black and white (i.e., ballot on demand). This was a new set of instructions that the observers had not heard previously. The paper
examination manager said that the other focal area should be the calibration mark alignment. As described, this was due to the fact that the front-to-back calibration marks can “predict the printer that the ballot was printed on.” The manager further substantiated that each printer distinctly prints each ballot with the same calibration, making the calibration configuration a unique identifier, “like a fingerprint.”

- The observers were informed that in order to set up more paper examination stations, the Senate contractors needed to “sacrifice the fourth camera.”

May 26, 2021

- Observers confirmed that quality control practices to ensure that data was entered correctly were still not in place, rendering all of the data and findings unreliable.
- Observers noted the paper examination stations had only two people working, instead of three or four, as before.
- Observers noticed that a new spreadsheet had been developed for the staff that was keying-in tally data.
- During a training session, observers overheard a paper examination manager say that the security feature that they were flagging was the “yellow speckles” in the corner of the ballot. Contractors said that these yellow speckles were a security feature that the paper manufacturer embeds in the paper to determine its authenticity. Earlier in the process, Cyber Ninjas described the security feature as a “watermark.” Election officials made it clear that there are no watermarks on ballots, and the contractors began referring to it as yellow speckles instead. Inkjet printers spray speckles of all colors to prevent them from gumming up or drying out. Additionally, the paper manager described that the calibration mark alignment identifies which ballot on demand printer the ballot came from, doubling down on the “fingerprint.”
- Contractors instructed participants to “flag more [ballots], err on the side of anomaly,” which resulted in many ballots erroneously being identified as “suspicious.”
- Pullen told an observer that the shirt he was required to wear on the floor made him "look like a transgender" because of the color of his shirt.

May 27, 2021

- Observers noted that State Senator Wendy Rogers was on the counting floor and was provided by Cyber Ninjas with a black pen with which to take notes. Pens with black and blue ink, which can be read by tabulators, are prohibited from being near ballots to ensure they cannot be used to alter the ballots. She also was writing on the white note paper that was provided to her and carried her cell phone in her back pocket, both violations of Cyber Ninjas’ own security measures.
Bennett acknowledged that he was concerned with the lack of quality control. He told the observers that the traceability of the data from tally sheets to data entry and then to aggregation does not provide enough quality control and validation. When speaking with the observers, who informed him that the only quality checks were the new spreadsheet with formulas, Bennett said that “there should be a way to ensure the numbers were not transposed.”

Observers heard a paper examination manager say that the weight of the microscope cameras was making them slide down and not stay in focus. It was also stated that the paper examination station personnel were not catching this error, so the photos being taken were out of focus.

May 28, 2021

Observers witnessed a single counter and the table manager at Green Module 4 spinning and tallying ballots. The other two counters and the loader were on break. The observer quickly called this to the attention of the contractors. Blehm went straight to the observer and said, “We don’t fucking do that. I need to speak with the pod manager.” The table manager said that no one had ever told her that everyone had to be at the table when the one person who had made an error recounted to correct the error. This assumes that because the other two matched, the outlier was the mistake. The table manager reprimanded the participants when they returned, and said to the returning counters, “you are not marking anything.” This again assumes that the outlier was the mistake and was not proper quality control.

The paper examination manager told station Paper Examination Station 7 personnel that the photo “doesn’t have to be precise.” This came after the worker stated that the camera was not capturing the entire image.

May 29, 2021

Observers confirmed that organizers required them to wear pink or fuchsia shirts, and that they were being referred to as “pinkies” or “pinkos,” to either imply and/or assert that the observers were communists.

Observers noticed that participants in Red Module 5 had scratch paper to tally the recounts. Observers asked about this and the table manager told the counters to place the papers inside the manila envelope. That same evening, another table was using the manila envelopes as the scratch paper to mark down the tallies. Observers documented multiple instances of scratch paper being used for recounts.

Observers confirmed that participants were allowed to bring firearms into the Coliseum and on the counting floor "as long as they are concealed."

Observers saw that a box labeled “Hand Audit Batch 19 of 52” had been moved from the “Completed Cage” to the “In Process Cage.” Observers asked Bennett why this had been done, and he stated that once a box was in the “Completed
Cage," it should not be removed. He did provide an explanation for how or why this box was moved.

- Observers saw at least three people who were not residents of Maricopa County rifling through thousands of military and overseas ballots. Observers had been previously told that only Maricopa County residents would be allowed to handle any ballots.

**May 31, 2021.**

- Observers noticed a software update on Paper Examination Station 26. The observers overheard the paper examination personnel say that they were “the guinea pigs” for the new software and then discuss the new user interface. Paper Examination Stations 24, 25 and 26 were the only three to receive the update. The new software paused frequently. Initially, this was only experienced by Paper Examination Station 25, and the manager assumed that it was related to the computer, not the software. Shortly thereafter, Paper Examination Station 26 began experiencing the same issues. When the software paused, the paper examination computer would not capture one of the photos—it was only capturing the front or the back of the ballot, but not both. The new software required two photos from the Canon and one photo from the microscope camera before proceeding. In the instances that only one side of the ballot was being captured, the software would then connect one side of the ballot with one side from the next ballot (i.e., front of Ballot A with back of Ballot B). Observers learned that this new requirement was instituted because participants were missing photos. At the conclusion of the morning shift, one of the paper examination managers made the decision to not proceed using the new software. All stations would remain on the previous version.

- Cyber Ninjas implemented another software update on the paper examination “forensics” workstations. The software update created so many errors and problems during the first shift that they stated they were going to roll back to the old software during the afternoon shift.

**June 1, 2021**

- Observers noted inconsistencies in the application of the recount process that could lead to incorrect counts: for example, when table managers tell counters that they are “correct” without evidence. Observers noted that two participants at the Red Module 8 Counting Station were told their tallies were “right” and that the third person was wrong, so they needed to recount. Due to this fact, the table manager informed the two counters whose tallies matched that they did not need to review their choices, and that the recount was for the counter who was incorrect. After recounting the five ballots in question, the counter did not have any changes and reviewed the counter’s sheet, stating that he was in fact correct and needed to check the other two. The table manager then checked the other two and one of the individuals had made an error adding the subtotals together.
and matched the person who had been accused of being incorrect, meaning that the other person was the outlier.

- Observers attended the first night that included a third shift of ballot review. Observers noted there were only employees at four of the ballot counting tables and five of the paper examination tables. Observers also noted that two employees at different paper examination tables said that they needed someone to show them what to do. Observers heard the following from the two employees:
  - "I don't know anything, so if you want me to do anything you'll have to show me."
  - "I have never done this. Can someone show me how to take a photo, where do I click [on the computer]?

- Observers heard a table manager overseeing the paper evaluation station tell another employee that there would be a post-analysis process that would find any anomalies that they missed. Employees asked if it was Jovan's [Pulitzer] software and the table manager said, "possibly."

June 2, 2021

- Observers noticed a crowd gathering around the master aggregation computer due to a massive tallying error. Observers overheard one of the people in the crowd say that "it [would] take the rest of the audit" to correct. After noticing that the observers were documenting the situation, the group moved to an area on the floor where observers were prohibited. The following day, observers noted that the master aggregation computer had a new database. Observers were not able to glean a complete explanation for the errors to which the contractors had been referring, but were told that when tallies matched in two out of three reports, the matching numbers would be kept and the third number would be discarded.
- Observers were informed that Cyber Ninjas employees planned to patch damaged boxes by taping a manila folder in the area where the boxes were tearing apart. According to Blehm, this was the state in which they received the ballot boxes, and that Cyber Ninjas have video evidence of that.
- Bennett removed ballots from the "Senate Cage," which was the ballot storage cage that only Ken Bennett and Pullen were supposed to access.
- Observers noted that employees were attempting to determine if a ballot was marked by a "Human" (green button) or not "Human" (red button). A paper examination manager noticed that all ballots at one table were being incorrectly identified by the red button as having non-human marks. The employees working the paper examination station were unaware that they were supposed to change the button within the software. The paper examination manager fixed it in the software, although a few dozen ballots remained mislabeled.
- The contractors told participants at Paper Examination Station 26 that "we’re going to pilot something new on your station." A new low-resolution camera was added "just to see color" and the Cyber Ninjas employee told the paper examination station personnel, “don’t pay attention to it.” Approximately two and a half hours after piloting this new low-resolution camera, it was attached to each of the paper examination stations.
Within a ten-minute timeframe, observers witnessed Paper Examination Stations 24 and 25 inadvertently turn off the undermount light on the microscope cameras. The light was used to capture the calibration mark on the backs of ballots. Without the light, only the front calibration mark was visible, preventing the alignment from front-to-back from being photographed. This was an ongoing issue that the observers noticed, because the on/off switch was built into the platform that the ballots sat upon. When the paper examination personnel ran their hand across it, the light shut off.

Observers noted that all 28 paper examination tables were using the new software—after having to roll back to the old software due to the previous errors.

Observers noted that these microscopes were giving off very high radio frequencies when security team members scanned them, apparently suspecting a transmission occurred at one of the stations near Paper Evaluation Stations 15-18.

June 3, 2021

Logan permitted an observer to use a monocular while on the floor. When the monocular was used for the first time, an employee notified Blehm, who began shouting at the observer and directed security to remove the observer. Logan, who previously assured observers that the staff had been notified that the device was permitted, came to the floor, inspected the monocular to verify that it was not a camera, and again authorized its use. Approximately an hour after this incident, Blehm informed observers that the monocular was "scaring people" and a security person again inspected it to verify that it was not a camera.

Observers reported that the master aggregation computer contained a new Access database. Observers tried learning about the information, but all that they could observe was the following queries:

- Workstation/folder aggregation
- Count Summaries folders by day
- Summary President
- Summary Senate

Observers reported that large spreadsheets appeared to be used to aggregate the individual tally sheets, using a system that was run in the Command Prompt called aggrivator.exe, as observed. This indicates there were two separate databases, one that contained aggregated data, and the Access database. Based on this finding, observers believed that the aggregated spreadsheets were used to maintain updated results on an ongoing basis.

At approximately 6:30 p.m., software taking photos of the ballots got out of sync, producing distorted images. A manager had to correct this issue, but it occurred again at approximately 6:45 p.m. This was the same issue that had necessitated the prior software rollback. This issue occurred daily.

June 4, 2021

Observers noticed that employees were not following the published policies on suspicious ballot handling. This was a recurring issue. The policy states that
ballots will be separated from their batch and put in a specific folder for separate review. Instead, employees kept them in their original boxes. Ballots that had been flagged for additional review were being mixed in with other ballots.

- Observers noted the yellow pod and tables were removed to put in more paper examination stations. As of June 10, 2021, the new paper examination tables had not been set up or put into use. A Cyber Ninjas employee was excited that the cameras arrived on June 10, 2021, and told an observer, "now all we need is computers."

June 7, 2021

- Observers noted that participants were counting both original and duplicate ballots, and including each in the overall tally.
- Observers saw that boxes containing personal identifiable information were being moved from the more secure Senate Cage to a less secure cage that more people had access to.
- Only table managers (wearing black t-shirts) or runners (wearing purple t-shirts) were permitted to retrieve a ballot box for inspection. Observers noted that workers in any color t-shirt, working in any role on the floor, were both returning and bringing boxes of ballots for inspection. There were no authorization checks before ballots were moved around.
- Bennett allowed Cyber Ninjas to remove multiple ballot boxes from the "Senate Cage," a ballot storage area that only he and Randy Pullen could access. Blehm told the observers that Bennett was leaving for the night, and the ballots were removed from the more secure "Senate Cage" so that inspections could continue without him.

June 8, 2021

- Contractors moved the majority of the boxes in the Senate Cage to the less secure cage and the boxes were missing chain-of-custody forms. were also removed and placed in the cage with all other boxes of ballots.
- Observers reported frequent camera software crashes and that the paper examination manager needed to reconfigure the software often so that the images would show up on the computer monitor or the camera. The software was rebooted multiple times.
- Observers saw contractors printing instructions entitled "Phase 1 Retrospective Quality Control." This was more than three weeks after the initiation of Phase 2, and more than a month after the observers were told that the quality control stations and computers had been set up on May 7, 2021.
- Observers noted brand new Paper Examination procedures, presumably that coincided with the new software. Observers reported that the new procedures included an updated “What to Flag” section with only two items: 1) Feels Lighter/Heavier or Textured Differently than Ballot Paper and 2) Any Anomaly that Cannot be Captured by the Camera or Microscope.
- Observers saw a contractor approach a colleague on June 9, 2021, with a large stack of tally sheets from the “Phase 1 Retrospective Quality Control” process,
stating, “I got bad news for you, I need your purple pen.” The purple pen was used for correcting errors or signing off on errors that cannot be corrected.

- Observers noted a document called "Retrospective Phase 1 Quality Control," containing procedures on how employees would perform quality checks on the tally data entered into the spreadsheets during "Phase 1," from the first day of the review through May 14, 2021, when the review was stopped because the Coliseum was reserved for high school graduation ceremonies. Observers were told that the procedures, although being implemented, were still in draft form, so the contractors would not share the contents.

June 9, 2021

- Observers saw that the "draft" procedures were being used to input data into a spreadsheet. Observers noted that the procedures being followed were not standard quality control procedures. Employees were re-entering the data from the tally sheets that employees had used during the initial review. The new spreadsheet was set up to flag any mismatched numbers. Instead of validating the original data, mismatched numbers were altered to match. This alarmed observers because tally sheets are marked using red or green pens. Access to both red and green pens and to tally sheets was readily available, creating opportunities for tally sheets to be altered after the initial review. This made the "Retrospective Phase 1 Quality Control" process unreliable.
- Blehm told an observer, “you should clean up the way the county does business. We are finding a bunch of ways they screw up elections, so you should address those.” This was notable to the observer because this was within the scope of the contract that Cyber Ninjas had with the Senate.
- Observers reported another new process was implemented surrounding the original and duplicated ballots. The observers noticed two teams of data entry personnel members sitting at a paper examination station with military and overseas ballots and damaged ballots. The observers noticed that the ballots were not being photographed. Rather, the data entry personnel members were entering information into a spreadsheet. Cyber Ninjas explained that this new process entailed documenting the indicia number, the vote for President, and the perceived rationale for why the ballot needed to be duplicated.

June 10, 2021

- Observers noted another process change when two data entry participants were discussing the information being tracked. One participant listed, serial number, vote for President, reason for needing duplication and the other data entry person responded, “No, that changed later in the evening.”
- Contractors informed observers the process for tallying original and duplicated ballots had been modified. The new procedure was to count, tally, and aggregate the results of the original ballots instead of the duplicates.

June 12, 2021
Observers asked Bennett for a demonstration of the aggregation procedures, and he replied, “I have been asking for the same thing.”

Observers saw that Blue Module 4 and Blue Module 8 turned in all of the documentation without “Do Not Aggregate” written on the pages. The runner happened to catch both of these instances and told the table manager to write this phrase on the chain of custody sheet only; the tally sheets did not have this phrase written on them. Observers identified this as an ongoing issue. When they asked a table manager to explain the procedures, he said that the procedure was to make this notation only on the chain-of-custody sheet and not the tally sheets. Observers noted that this was incorrect, that contractors confirmed that both the tally and chain of custody sheets needed the designation on them. Furthermore, it would not make sense to not have “Do Not Aggregate” on the tally sheets, as that was the data that would be entered into aggregation.

Observers overheard a discussion regarding a box that contained a mixture of provisional and duplicated ballots. Participants were given the following instructions: “We will not aggregate the duplicates, but we will handle the other provisionals as regular ballots.” Since the provisionals would be handled as regular ballots, observers assumed this meant they would be counted, tallied, and aggregated. Contractors later told observers that the provisional ballots would be withheld from the regular aggregation and would be entered into a separate spreadsheet for provisional ballots only. There was no indication as to when or if the provisional ballot totals would be included in the aggregation.

June 14, 2021

Observers noted a new process being referred to as "quality control." This process had three phases: QCC, QCT, and QCTR. Observers believed that these initials stand for Quality Control Count, Quality Control Tally, and Quality Control Tally Retrospective. On June 19, 2021, Cyber Ninjas’ attorney Bryan Blehm confirmed that QCT stands for Quality Control Tally.

Observers additionally noted that:
- The QCC, or Quality Control Count, process appears to be an attempt to count the number of ballots in a given batch and in an entire box and compare it to the tally that Maricopa County recorded on the batch sheet.
- The QCT, or Quality Control Tally, process required participants to spin the ballots on the carousel again in order to get a new tally of the entire box of ballots.
- The QCTR, or Quality Control Tally Retrospective, process was added on June 19, 2021. Observers were unable to ascertain what the process entailed.

Overall, there was no information available about how tally differences would be reconciled or recorded, or which of the tallies would be considered correct. This provided another opportunity for the results of the tally to potentially be altered.
June 17, 2021

- Observers saw multiple boxes of “Ankylin WiFi Microscope” portable cameras with 1000x magnification, at 1080P resolution, and with photo/video capability. The observers verified that the model of microscope, in addition to having WiFi capable cameras, have an iOS and Android app the cameras can stream to. This means that the images could have been sent or intercepted by unknown devices.
- Bennett opened the "Senate Cage" to allow Cyber Ninjas to remove ballots from the "Senate Cage" and move the ballots to the other cages that people in any color t-shirt could access.
- Observers saw that Cyber Ninjas employees continued to use insecure cybersecurity practices. For example, a paper examination table manager gave a StratTech employee a list of shared passwords to log into the system as he was attempting to correct an issue with the software being used at Paper Examination Table 13. After the StratTech completed his work at the station, he put the paper with the passwords into his pocket and walked away.
- Observers saw many of the paper examination stations experiencing significant delays because the software that was being used was "paus[ing]" regularly.
- Paper Examination Table 13 was having so much trouble with the software that participants asked StratTech employees to fix the issue because participants were receiving an error message. The StratTech employees dismissed the message but were not able to correct the "pause" that continued to occur. Another StratTech employee rebooted the software four times without success, then rebooted the entire system. None of these attempts corrected the issue.

June 18, 2021

- Observers witnessed participants at a quality control tally table count 24 ballots. This conflicted with another count, which showed 25 ballots. In a credible audit, the batch would have been recounted. Instead, the table manager said she thought she found the 25th ballot stuck to another ballot and proceeded without recounting the batch.

June 19, 2021

- Observers saw Blehm drop data on the floor from a " Spoiled" ballot envelope, which was labeled "Reprinted–Jam–See Other Side." Blehm and Bennett continued to process several batches during the seven minutes that it took Bryan Blehm to notice the data on the floor. Observers were not able to confirm that the dropped data/ballot was returned to the correct envelope. Approximately, three minutes later, the observers brought it to the attention of Blehm and Bennett, who both said that the data was placed in the correct bag. Observers inquired further, because the data/ballot was dropped approximately 10 minutes earlier. Observers did not receive an answer.
• Observers watched Bennett get the remaining boxes of "Spoiled" ballots from the more secure Senate Cage, which contains sensitive information. The observers noticed that when Ken Bennett unlocked the cage, he set the lock on the floor outside the cage without resetting the access code. Observers noted the code on the lock, as it was clearly visible. When Ken Bennett turned the combination pad after replacing it on the cage and reconnecting it, observers were able to confirm that the code they saw was the correct access code. This is especially alarming because this was the area where the most sensitive information, including personal identifiable information, was stored.

• Observers noticed the contractors documenting information about the “Spoiled” ballots. In the initial batch, observers noted that an envelope entitled “Arrowhead Towne Center” contained an absentee affidavit envelope with personal identifiable information on it. The table manager took it and placed it in a plastic sandwich bag and set it on the table, alongside the personnel members reviewing the ballots. When Blehm walked by, the table manager handed him the sandwich bag with the envelope; he folded it in half in his hand and walked around as he waited for Co-chair Randy Pullen to open the Senate Cage, which was where they were storing boxes of data with personal identifiable information. Pullen opened the Senate Cage and Blehm set the sandwich bag in a box entitled “Arizona Veterans Memorial Coliseum.” While this may have been the correct box, the envelope was not placed in the correct batch within the box, so it was not associated with the “Arrowhead Towne Center.”

• Observers witnessed Bennett defacing Maricopa County’s original labels on the ballot boxes and the envelopes contained within. Bennett wrote directly on the ballot boxes and Cyber Ninjas covered the original label up with a piece of tape and wrote the same information on the tape, trying to cover up what he had written.

June 21, 2021

• Observers noted another new process called “QC-IFS”, in which the workers were retrieving SD cards (removable media) from hundreds of ballot boxes that were placed there when the boxes were first imaged in the paper examination process. The SD cards were taken to workstations and the data from the cards was copied to the audit servers, presumably to replace data that had been lost or was missing from the servers, as this data should already have been on the servers from the initial imaging process. The cards were then replaced back into their original boxes.

June 22, 2021

• Observers again noted a new process called “QC-PE”, which, unlike its name suggests, was not a quality control process but an entire re-imaging of at least 80 boxes of previously imaged ballots. SD cards of the images that were previously placed in the boxes during the first imaging process were all placed in a common bin and replaced with new cards created by the re-imaging process. There was no chain of custody process in place for the old cards.
Observers identified a process called “QC-IFS,” which appeared to be an effort to correct incorrect or missing data.

Observers noted boxes missing chain of custody forms, and some of the boxes contained personally identifiable information.

June 23, 2021

Observers noted another new process called "QC-PE," which entailed re-imaging previously imaged ballots at the paper examination stations, and 81 ballots were in queue boxes for this process. These boxes appeared to contain Election Day ballots that were completed during Phase 1 prior to the graduations. In late April or early May the ballots underwent the paper examination process.

June 24, 2021

Observers saw participants handling food and ballots at the same time.

June 25, 2021

Observers noted that activity continued to appear chaotic. Participants handling boxes were confused about where they and the boxes needed to go and where they were in the process. The participants attempted to color-code boxes with pieces of tape with corresponding color-coded signs in the cages. However, the integrity of the sorting system was not well maintained. For example, an observer saw a box with a label that read, "Counted, Examined, Complete," and another label on the side (of the same color tape) that only read "Counted."

Each box of ballots was supposed to have one SD card with the paper examination data on it. Observers saw a box with two SD cards taped inside of it, and that box was sent to the paper examination station three times. Some of the quality control procedures appeared to create new errors, requiring additional changes to the overall process.

June 26, 2021

Observers noted an additional step in the quality control process called “Rebatch QC” which, despite the name, was not a quality control process, but instead was a separate recount of ballots that had been reviewed earlier.

Aggregation tables were at capacity and participants were keeping two separate spreadsheets for the “Rebatch QC” tall and the “Retro PC” tally, creating fragmented data sets that could be easily manipulated.
- Observers saw participants using software intended to distinguish non-ballot images from ballot images, but the software was so flawed that it consistently misidentified the images, and the files had to be manually reviewed.

June 28, 2021

- The contractors and CyFir founder Ben Cotton told observers that Cyber Ninjas were moving the remaining voting machine equipment to a cage on the counting floor in order to reduce the need for security in both places.
- Observers saw Bennett, Cotton, and other participants drop a storage rack full of precinct tabulators while trying to move it over a two-inch ramp.
- Observers noted that multiple tamper-evident seals broke, and some fell off as participants were cleaning the tabulators from the floor. Cotton then told observers that he did not believe that the equipment had been damaged, although he had not tested the equipment.
- Observers also saw Cotton photographing one piece of equipment that had a broken or scratched screen. Observers saw several other pieces of damaged equipment.
- The observers saw multiple people working on a spreadsheet entitled “Aggregation Batch Issues,” with tabs named “Batches only found in Agg” and “Batches not found in Agg” (aggregation). It appears that they could not find portions of their data.

June 29, 2021

- Observers identified a new addition to the quality control process entitled “Purple Sheet QC.” A participant at the purple-sheet quality control station said that she could not “find a batch in either system.” The observers noted more confusion.
- Observers noted multiple people working on similar projects. Although they were working on the same project, some participants worked directly in the spreadsheets while others on hardcopies or on sticky notes. Observers overheard a participant say they will have issues with consistency because the “master sheet” was being updated but the paper copies were not.

July 1, 2021
• Observers reported that the contractors moved equipment and ballots from the Coliseum to a smaller building on the fairgrounds property.

July 6, 2021

• Observers noted that new counting machines, reportedly purchased by the Senate, had been set up in the new building.

July 7, 2021

• Observers reported that they were no longer allowed floor access to the process, and could not see most of the work being performed.
• Observers noted that the temperature in the room was 88 degrees Fahrenheit.

July 8, 2021

• Observers were again granted floor access.

July 12, 2021

• Observers saw staff changing the physical file system for tally sheets. Previously, the tally sheets were stored by unit/pod. They were now being reorganized by pallet/box. Data in the spreadsheets was also being updated to match the physical sheets.
• Observers reported that the data updates seemed to be creating consistency issues, and noted several sheets protruding from boxes that had the word “Guess?” written on them.
• The temperature in the building was over 89 degrees Fahrenheit.

July 16, 2021

• Observers reported that the Senate contractors were referring to this new counting process as “Phase 3—QC.”
• This counting process was occurring at the same time as Logan testified in a Senate hearing that all Cyber Ninjas had left to do was “some more aggregation.”

July 17, 2021

• Observers noted that the temperature in the building was 84 degrees Fahrenheit and humidity was 62%.
July 19, 2021

- Observers noted that the temperature in the building was 90 degrees Fahrenheit and humidity was 56%.

July 20, 2021

- Observers noted that the temperature in the building was 88 degrees Fahrenheit and humidity was 61%.

July 21, 2021

- Observers noted that the temperature in the building was 90 degrees Fahrenheit and humidity was 59%.

July 22, 2021

- Observers noted that the temperature in the building was 91 degrees Fahrenheit and humidity was 53%.

July 23, 2021

- Observers reported water leaking from the roof in five places, including in the ballot storage areas.
- Workers covered the ballot pallets with a plastic sheet.
- Observers noted that the temperature in the building was 77 degrees Fahrenheit and humidity was 81%.

July 24, 2021

- Observers noted that the temperature in the building was 77 degrees Fahrenheit and humidity was 84%.
- Observers reported that the original Maricopa County labels on three ballot boxes on pallet 42 were damaged or torn.

July 26, 2021

- Observers noted that the temperature in the building was 84 degrees Fahrenheit and humidity was 63%.
- Observers heard Logan say that he "[did] not know" if the data from the Senate ballot count would be used in the final Cyber Ninjas report.
July 27, 2021

- Observers reported that chain of custody forms were not attached to ballot boxes while being handled by multiple workers.
- Observers noted that some chain of custody forms were altered after work had been completed on the relevant boxes.
- Observers noted that the temperature in the building was 88 degrees Fahrenheit and humidity was 56%.

July 29, 2021

- Observers reported that ballots and voting equipment were returned to Maricopa County Officials.
Appendices

Appendix A: Observer Biographies

ELIZABETH HOWARD
Brennan Center

Prior to joining the Brennan Center, Howard served as deputy commissioner for the Virginia Department of Elections. During her tenure, she coordinated many election administration modernization projects, including the decertification of all paperless voting systems, implementation of the e-Motor Voter program, and adoption of online, paperless absentee ballot applications, for which the department received a 2017 Innovations in American Government Bright Ideas Award from the Ash Center for Democratic Governance and Innovation at the Harvard Kennedy School.

She previously worked as general counsel at Rock the Vote, a nonprofit organization dedicated to engaging young people in politics and as a senior associate at Sandler Reiff in Washington, DC, where she specialized in election law with a focus on voting rights, campaign finance, and post-election disputes. Howard earned her JD from the William & Mary Law School and received the Alumnus of the Year award from the William & Mary Election Law Society.

RYAN MACIAS
RSM Election Solutions LLC
For 15+ years, Macias has provided subject matter expertise in election technology, security, and administration to election officials across the U.S. and election management bodies abroad. Macias has advised thousands of election stakeholders on methods to build resilience in the election infrastructure. During the 2020 election cycle, Macias worked to ensure that accuracy, reliability, and security was enabled by supporting election infrastructure owners and operators in developing evidence-based elections.
In 2019, Macias founded RSM Election Solutions LLC, a consulting firm whose motto is **Resiliency** in the election infrastructure = **Securing** election technology + **Mitigating** risk to the democratic process. He is also a subject matter expert in infrastructure security developing strategies and products for state, local, tribal, and territorial (SLTT) governments and private sector partners to mitigate risk to critical infrastructure. From 2016-2019, Macias worked for the U.S. Election Assistance Commission (EAC), most recently as the Acting Director of the Voting Systems Testing and Certification Program. He also spent 10 years with the California Secretary of State, developing and implementing legislation, policies, and procedures on election technology and security.

**Ken Matta**  
**Office of the Arizona Secretary of State**  
Ken Matta serves as the Information Security Officer and election security lead for the Arizona Secretary of State’s Office. His election and IT experience began at the Secretary of State’s office in 2002, and includes system administration, network administration, information security, logic and accuracy testing, election security instruction, election incident preparedness, and developing statewide election security programs. He is especially passionate about providing necessary resources and assistance to our Arizona counties relating to election security and working as a liaison between the counties and the Secretary of State to help understand the election security needs at the county level. Matta is a state-certified election officer, currently sits as a member of the Arizona Enterprise Security Program Advisory Council and the Elections Assistance Commission Standards Board, and chairs the Arizona Vote Count Verification Committee.

**JENNIFER MORRELL**  
**Elections Group**  
Jennifer Morrell is a former local election official and recognized expert in election audits. She is a partner at The Elections Group, where she consults on election administration and auditing. Jennifer works as a consultant with the Democracy Fund, leading the Election Validation Project, which is aimed at increasing trust in elections through rigorous audits, standards, and testing. As the Deputy of Elections in Arapahoe County, Colorado, Morrell was instrumental in Colorado’s successful implementation of the first statewide risk-limiting audit (RLA). She has successfully overseen RLA pilot programs in several states and local jurisdictions and authored a series on election audits titled “Knowing It’s Right”. Morrell also serves as a subject matter expert for CISA. She was an election official for nine years (2009-2018) in Utah and Colorado, is an Election Center CERA graduate,
holds a Master of Arts in Management from Webster University, and is a veteran of the United States Air Force.
Appendix B: Cyber Ninjas Scope of Work

Statement of Work

This Statement of Work (the “Statement of Work”) is effective as of as of the 31 day of March, 2021 (the “Effective Date”), between Cyber Ninjas Inc., a Florida Corporation, (“Contractor”), and Arizona State Senate ("Client"), and is deemed to be incorporated into that certain Master Service Agreement dated March 31, 2021 (the “Master Agreement”) by and between Contractor and Client (collectively, this Statement of Work and the Master Agreement are referred to as the “Agreement”).

1 WHY CYBER NINJAS

Cyber Ninjas is a cyber security company with a focus on application security and ethical hacking. We perform work across the financial services and government sectors. Our expertise allows us to both understand complex technology systems, as well as understand how a malicious attacker could potentially abuse those systems to meet his or her own agenda. This allows us to effectively enumerate the ways a system could be exploited, and with our partners to fully review if that scenario did in fact occur. This is very different from the compliance focused way that election systems are typically evaluated.

Both our company and our partners have extensive experience working specifically with Dominion Voting Systems. In addition, our subcontractors and partners are adept at digital forensic acquisition, and on implementing ballot hand-counting procedures. Two of our team members authored a hand-count ballot process that has been utilized in audits in two states; and has further been perfected for transparency and consistency. This combination of skills, abilities, and experience is what uniquely qualifies our team for the outlined work.

2 OUR TEAM

Cyber Ninjas will serve as the central point-of-contact and organizer of all work conducted over the course of this agreement. However, there are different teams involved in each phase of the outlined work. Each of these teams have specialities and experience within the outlined areas of their coverage. This expertise is highlighted below.

2.1 Registration and Votes Cast Team
The Registration and Votes Cast Team has worked together with a number of individuals to perform non-partisan canvassing within Arizona related to the 2020 General election in order to statistically identify voter registrations that did not make sense, and then knock on doors to confirm if valid voters actually lived at the stated address. This brought forth a number of significant anomalies suggesting significant problems in the voter rolls.

They will be continuing this work as part of this effort to validate that individuals that show as having voted in the 2020 General election match those individuals who believe they have cast a vote.
2.2 Vote Count & Tally Team - Wake Technology Services
Members of the Wake Technology Services group have performed hand-count audits in Fulton County, PA and in New Mexico as part of the 2020 General Election cycle. In addition, team members have been involved in investigating election fraud issues, dating back to 1994. In that particular case in 1994, this team member worked closely with the FBI during the investigation.

As part of these audits in 2020, the Wake Technology Services team has developed an in-depth counting process that reduces opportunities for errors. This counting process has been expanded to make it more robust, and more transparent. As a result, they will be leading all ballot hand-counting processes.

2.3 Electronic Voting System Team – CyFIR, Digital Discovery & Cyber Ninjas, Analysts
Digital Forensic Acquisition will be performed either by CyFIR or Digital Forensics, and the analysis work will be performed by Cyber Ninjas, CyFIR and a number of additional analysts, the identities and qualifications of whom shall be made available to Client upon request.

CyFIR is a digital security and forensics company and a subcontractor on the contract for DHS’s Hunt and Incident Response Team (HIRT). As specialists for DHS, they are familiar with responding to nation-state cyber activity including Advanced Persistent Threats (APT).

3 GENERAL PROVISIONS

3.1 Introduction. The terms and conditions that are specific to this Statement of Work are set forth herein. Any terms and conditions that deviate from or conflict with the Master Agreement are set forth in the “Deviations from Terms of the Master Agreement” Schedule hereto. In the event of a conflict between the provisions of this Statement of Work and the Master Agreement, the provisions of Section 2.34 of the Master Agreement shall control such conflict.

3.2 Services. Contractor will provide to the Client the Services in accordance with the Master Agreement (including the Exhibits hereto) and this Statement of Work (including the Schedules hereto). The scope and composition of the Services and the responsibilities of the Parties with respect to the Services described in this Statement of Work are defined in the Master Agreement, this Statement of Work, and any Schedules attached hereto.

4 SCOPE & SERVICES DESCRIPTION
This Statement of Work outlines the proposed methodology and scope for a full and complete audit of 100% of the votes cast within the 2020 November General Election within Maricopa County, Arizona. This audit will attempt to validate every area of the voting process to ensure the integrity of the vote. This includes auditing the registration and votes cast, the vote counts and tallies, the electronic voting system, as well as auditing the reported results. The final report will attempt to outline all the facts found throughout the investigation and attempt to represent those facts in an unbiased and non-partisan way. The final report will not include factual statements unless the statements can be readily substantiated with evidence, and such substantiation is cited, described, or appended to the report as appropriate.

The following sub-sections provides additional details of what will be conducted at each stage of the audit.
4.1 Registration and Votes Cast Phase

During the Registration and Votes Cast Phase, it will be validated that Maricopa County properly registers who voted during an election, and that this system properly prevents duplicate voting. This will be performed on a minimum of three precincts.

Proposed scope of work:

- Review of Arizona’s SiteBook system for checking in and tracking voters;
- Complete audit of a minimum of 3 precincts, based on statistical anomalies and precinct size;
- Analysis of existing research and data validating the legitimacy of voter rolls; and/or
- Comparing results against known lists of invalid voters (e.g. deceased voters, non-citizens, etc.).

This phase may help detect:

- Problems that could result in voters being able to vote more than once;
- Voters that voted but do not show in the list of those who voted;
- Voters who likely did not vote but showed as having voted;
- Potential invalid voters who cast a vote in the 2020 general election; and/or
- Inconsistencies among vote tallies between the various phases.

This phase is NOT expected to detect:

- Individual ballots that are either wrong and/or invalid.

Anticipated artifacts for transparency and/or validation of results for the public:

- Final report outlining the discovered results; and/or
- Redacted spreadsheet of a list of those who voted in the target precincts.

4.2 Vote Count & Tally Phase

During the Vote Count & Tally Phase, the counts and tallies for votes and the voting machines will be validated. This will include a hand-tally and examination of every paper ballot.

Proposed scope of work:

- Physically inspecting and hand-counting of ballots in Maricopa County;
- Counting of the total number of provisional ballots;
- Capture of video footage of the hand-counting of ballots; and/or
- Scanning of ballots in Maricopa County
  - NOTE: Provisional ballots which still have signatures attached to them will be counted to be sure they match the expected numbers but will not be scanned nor will the contents be visible in video.

This phase may help detect:

- Counts that do not match the expected results;
- Ballots that are visually different and possibly fraudulent; and/or
- Inconsistencies among vote tallies between the various phases.

This phase is NOT expected to detect:

- Destroyed or otherwise missing ballots
Anticipated artifacts for transparency and/or validation of results for the public:

- Final report outlining the discovered results;
- Unedited camera footage of the counting of every ballot, provided that, absent express judicial approval, any such footage cannot be streamed, recorded or broadcast in such a manner that the candidate or ballot proposition selections on each ballot is visible or discernible; and/or
- Ballot images of every scanned ballot, provided that, absent express judicial approval, any such images cannot be released or published to any third party.

4.3 Electronic Voting System Phase

During the Electronic Voting System Phase the results from the electronic voting machines will be validated to confirm they were not tampered with. This will be done on all systems related to SiteBook with Maricopa data, as well as all Election Management System related machines besides the Ballot Marking Devices (BMD)‘s utilized for accessibility.

Proposed scope of work:

- Forensic Images of Arizona’s SiteBook System including the database server, as well as any client machines associated with Maricopa County;
- Forensic images captured of the Election Management System main server, adjudication machines, and other systems related to the Election Management System;
- Forensic images of all Compact Flash, USB drives, and related media;
- Inspection to identify usage of cellular modems, Wi-Fi cards, or other technologies that could be utilized to connect systems to the internet or wider-area-network;
- Review of the Tabulator Paper Tally print-outs;
- Reviewing the exports from the EMS for “Audit File”, “Audit Images” and “CVR”;
- Reviewing ballot images captured by the tabulators
- Reviewing forensic images for possible altering of results or other issues; and/or
- Reviewing of tabulator and other logs.

This phase may help detect:

- Problems where the tabulator incorrectly tabulated results;
- Problems where the tabulator rejected results;
- Issues where results may have been manipulated in the software;
- Issues with the improper adjudication of ballots; and/or
- Inconsistencies among vote tallies between the various phases.

Anticipated artifacts for transparency and/or validation of results for the public:

- Final report outlining the discovered results;
- Ballot images and AuditMark images showing how the tabulator interpreted the ballot for counting, provided that, absent express judicial approval, such images cannot be released or published to any third party;
- CVR Report as generated from the software; and/or
- Log Files from the Tabulators (Redacted if Dominion Desires).
4.4 Reported Results Phase

During the Reported Results Phase, results from all phases are compared against those expected results and those results which were publicly tallied as the official results to identify any inconsistencies.

Proposed scope of work:

- Results from various phases will be reviewed and tallied; and
- Results will be compared against the official, certified results.

This phase may help detect:

- Issues where result tallies were not properly transmitted to the official results; and/or
- Inconsistencies among vote tallies between the various phases.

Anticipated artifacts for transparency and/or validation of results for the public:

- Final report outlining the discovered results

5 Methodology

The following section outlines the proposed methodology utilized in the various phases of the audit. When appropriate, these sections may reference more detailed procedures. Such procedures are considered proprietary and the intellectual property of Cyber Ninjas, our subcontractors or our Partners and can be made available for review but are not explicitly part of this agreement.

5.1 Registration and Votes Cast Phase

During the “Registration and Votes Cast Phase”, Contractor may utilize precincts that have a high number of anomalies based on publicly available voting data and data from prior canvassing efforts to select a minimum of three precincts to conduct an audit of voting history related to all members of the voter rolls. A combination of phone calls and physical canvassing may be utilized to collect information of whether the individual voted in the election. No voters will be asked to identify any candidate(s) for whom s/he voted. This data will then be compared with data provided from Maricopa County Board of Elections.

5.2 Vote Count & Tally Phase

The goal of the “Vote Count & Tally Phase” is to attempt to, in a transparent and consistent manner, count all ballots to determine the accuracy of all federal races, and to identify any ballots that are suspicious and potentially counterfeit. Ballots will be counted in a manner designed to be accurate, all actions are transparent, and the chain of custody is maintained.

5.2.1 Counting Personnel

Non-partisan counters will be utilized that are drawn from a pool of primarily former law enforcement, veterans, and retired individuals. These individuals will undergo background checks and will be validated to not have worked for any political campaigns nor having worked for any vendor involved in the voting process. These individuals will also be prevented from bringing any objects other than clothing items worn on their persons into the counting area or taking any objects out of the counting area.
5.2.2 Accurate Counting
Counting will be done in groups with three individuals independently counting each batch of ballots, and an individual supervising the table. All counts will be marked on a sheet of paper as they are tallied. If, at the end of the hand count, the discrepancies between counting personnel aggregate to a number that is greater than the margin separating the first and second place candidates for any audited office, the ballots with discrepant total from the Contractor’s counting personnel will be re-reviewed until the aggregate discrepancies within the hand count are less than the margin separating the first and second place candidates.

5.2.3 Transparent Counting
All activity in the counting facility will be videotaped 24 hours a day, from the time that Maricopa County delivers ballots and other materials until the time that the hand count is complete and all materials have been returned to the custody of Maricopa County. Such videotaping shall include 24-hour video monitoring of all entrances and exits, as well as activity at the counting tables.

5.2.4 Chain of Custody
All movement with ballots, cutting of seals, application of seals, and similar actions will be appropriately documented and logged, as well as captured under video to be sure the custody of ballots is maintained at all times. Access to the counting area will be restricted to duly authorized and credentialed individuals who have passed a comprehensive background check, with mandatory security searches and ingress/egress logs whenever entering or exiting the counting area.

5.3 Electronic Voting System Phase
The proposed scope of the “Electronic Voting System Phase” is to confirm that the system accurately tallied and reported the votes as they were entered into the system and that remote access was not possible. All systems related to the voting will be forensically imaged, these machines will be booted up and checked for wireless signal usage, and the images will be reviewed to determine the accuracy of results and any indication of tampering.

5.3.1 Forensic Images
A digital forensics capture team will forensically capture all data on in-scope systems, utilizing industry best practices. This will create a digital copy of every single machine, Compact Flash Card, and USB drive in scope without altering the contents of the machines. Chain-of-custody documentation will be created to preserve these images in a manner sufficient to be utilized in a court-of-law.

5.3.2 Physical Analysis
The Election Management System equipment will be turned on and scanned with a wireless spectrum analysis tool to determine if the device is emitting any signals consistent with a known wireless frequency such as cellular, Bluetooth, WiFi or similar. Devices that show signs of emitting signals will be flagged and documented, and when possible without damaging the equipment; they will be physically inspected to determine the source of any detected signals.

5.3.3 Digital Analysis
The forensic images will be reviewed to validate reported totals from the tabulators, results stored within the Election Management System (EMS) Results Tally and Reporting software. These will be compared against the tabulator printouts; and the machine will be checked for physical or digital tampering and any known ways of remote access to the machines.
5.3.4 Opportunity for Observation
Before commencing the imaging or analysis steps described above (except for the Digital Analysis process), the Contractor will work with Maricopa County to provide at least five (5) days advance notice to any vendors of Maricopa County whose products will be the subject of imaging, inspection, or analysis. Such vendors will be permitted the opportunity to attend and observe the Contractor’s imaging or inspection of the vendors’ products. The vendor will not be allowed to be present for the analysis of the captured images. Such vendors are third party beneficiaries of this provision and will have standing to challenge and secure injunctive relief against any denial of their right to observe the inspection of their products.

5.4 Reported Results Phase
During the Reported Results phase, results from all phases are compared to find differences between tallies or other anomalies. These results are then compared against data at the Secretary of State and Maricopa Board of Elections layers. Any inconsistencies will be reported and highlighted.

6 RESPONSIBILITIES
The following section outlines the key responsibilities for the proper execution of the Agreement between the Contractor and the Client for all outlined work within the scope.

6.1 Registration and Votes Cast Phase
Contractor Responsibilities
- Provide the proper personnel to conduct the analysis of the data required to execute the scope of this phase.

Client Responsibilities
- Arrange for a database export of SiteBook to be provided to the Client which includes all fields normally found in a publicly requested copy of the voter rolls, in addition to any other non-sensitive fields related to the data such as modifications or other time-stamps, voter history, last user edited, IP address of edit; or anything similar.

6.2 Vote Count & Tally Phase
Contractor Responsibilities
- Provide the proper personnel and equipment to execute all aspects of the phase including scanning, counting, the setup of equipment for recording of the counting, and the supervision of activities.
- Ensure that all onsite personnel follow any in-place COVID requirements.

Client Responsibilities
- Provide security of the building during the course of the engagement. This includes having sufficient security to prevent access to the building 24/7 during the entire time, including ensuring that safe working conditions can exist during the entirety of the audit;
- Provide electricity and access to the facilities and tables necessary for up to 120 people at a time following any current COVID requirements. This is estimated to be about 7,200 square feet;
- Provide access to all paper ballots from the November 2020 General Election within Maricopa County. This includes early voting, election day ballots, provisional ballots, spoiled ballots, printed unused ballots and any other ballot categories that are part of the 2020 General Election. For all ballots this should include the original hard copies of the ballots that were electronically adjudicated ballots.
- Provide a mechanism to allow for the proper equipment to be brought into the facility where the counting will take place.
• Full chain of custody documentation for all ballots from the point they were cast to the point where we gain access to the ballots, to the extent such documentation is in Client’s possession.
• Purchase orders for all purchased ballots, or ballot paper, including counts of each, as well as delivery receipts of the quantity of ballots received, to the extent such documentation is in Client’s possession.
• Full counts from any ballots printed on demand, as well as the location for which they were printed, to the extent such documentation is in Client’s possession.
• Provide wired access to internet to be able to stream the counting video capture, provided that any such video footage must be streamed, recorded or broadcast in such a manner that the candidate or ballot proposition selections on each ballot shall not be visible or discernible.

6.3 Electronic Voting System Phase

Contractor Responsibilities

• Provide the proper personnel to execute all aspects of the phase including the capture of forensic digital images of all systems related to the Election Management System; and
• Ensure that all onsite personnel during the forensic capture follow any in-place COVID requirements.

Client Responsibilities

• Provide physical access to the EMS Server, Adjudication machines, ImageCast Central, ImageCast Precinct, ImageCast Ballot Marking Devices, SiteBook, NOVUS systems, and any other Election Management System equipment or systems utilized in the November 2020 General Election to the forensic capture team;
• Provide access to Compact Flash Cards, USB Drives, and any other media utilized in the November 2020 General Election for the forensic capture team to image;
• Provide electricity and sufficient access to the machines in scope in order to provide a team of up to 15 forensic capture individuals to work and boot up the systems;
• Provide any needed credentials for decrypting media, decrypting computer hard drives, the EMS machines, or other systems that may be required for a proper forensic capture of the machines;
• Provide the output of the “Audit File,” “Audit Images,” and CVR exports from the Dominion machines which includes all ballot images and AuditMark images of every ballot processed by the machines; and
  o NOTE: The above may be able to be captured from the forensic images; but Maricopa County assistance could be needed in identifying where the AuditMark files are located.
• Provide any needed technical assistance allowing all the above to be successfully captured.

6.4 Reported Results Phase

Contractor Responsibilities

• Provide the proper personnel to conduct the analysis of the data required to execute the scope of this phase.

Client Responsibilities

• Provide the official results per precinct for all counts associated with the November 2020 General Election.
7 DELIVERABLE MATERIALS

The primary deliverable for the Election Audit will be a report detailing all findings discovered during the assessment. The parties agree that the report is provided AS IS, without any promise for any expected results. Additional artifacts as collected during the work will also be provided, as outlined within the scoping details.

This final report will include:

- An executive summary outlining the overall results of the audit from the various phases;
- A methodology section outlining in detail the methodology and techniques utilized to capture and validate the results;
- Tables, charts, and other data representing the findings of the data;
- Appendices or attached files demonstrating all evidence utilized to come to the outlined conclusions (if applicable); and
- Recommendations on how to prevent any detected weaknesses from being a problem in future elections (if applicable).

In addition to the report, various anticipated artifacts for public consumption will be generated over the course of this work, as outlined under the “Scope of Work.” Client will determine in its sole and unlimited discretion whether, when, and how the Contractor should release those resources to the public. This will include all videos, ballot images, and other data.

8 COMPLETION CRITERIA

Contractor shall have fulfilled its obligations when any one of the following first occurs:

- Contractor accomplishes the Contractor activities described within this Statement of Work, including delivery to Client of the materials listed in the Section entitled “Deliverable Materials,” and Client accepts such activities and materials without unreasonable objections; or
- If Client does not object or does not respond to Contractor within seven (7) business days from the date that the deliverables have been delivered by Contractor to Client, such failure to respond shall be deemed acceptance by Client.
9 TERM / PROJECT SCHEDULE / LOCATION

The following table outlines the expected duration of the various proposed work outlined within the Agreement. Work will commence on a date mutually agreeable to both Contractor and Client according to a schedule which is outlined via email.

Each phase outlined below can be conducted simultaneously, with the exception of the Reported Results phase which must be completed at the end. Roughly an additional week of time at the conclusion of all phases is needed to complete and finalize reporting. Lead times before a phase can start as well as their duration can be found below. Faster lead times can potentially be accommodated on a case-by-case basis.

<table>
<thead>
<tr>
<th>Service Name</th>
<th>Required Notice / Lead Time</th>
<th>Est. Duration in Days</th>
<th>Additional Details / Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration and Votes Cast Phase</td>
<td>1 Week</td>
<td>20</td>
<td>This work will be done remotely.</td>
</tr>
</tbody>
</table>
| Vote Count & Tally Phase | 2-3 Weeks                   | 20*                   | The entire time will be onsite at the location designated by the Client.  
Access will be required 4 days before the start to setup the space.  
*Race recounts as outlined in 5.2.2 may require the timeline to be extended beyond the listed days. |
| Electronic Voting System Phase | 1-2 Weeks                  | 35                    | It is estimated that 15 will be onsite. The remainder of the time will be remote.  
Review of location setup is requested the week prior to ensure proper workspace. |
| Reported Results Phase   | Completion of Other Phases  | 5                     | This phase will be completed offsite.  
Final Report Delivered 1 Week After Completion                                                   |
10 FEES / TERMS OF PAYMENT

The following table outlines the costs associated with the proposed work. A third of the fees will be due at the execution of the contract. The remaining balance will be payable within 30 days from the completion of the audit.

<table>
<thead>
<tr>
<th>Selected</th>
<th>Name</th>
<th>Price Each</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maricopa County – Full Audit</td>
<td>$150,000</td>
<td>$150,000.00</td>
</tr>
<tr>
<td></td>
<td>Total:</td>
<td></td>
<td>$150,000.00</td>
</tr>
</tbody>
</table>

11 SIGNATURE & ACKNOWLEDGEMENT

THE PARTIES ACKNOWLEDGE THAT THEY HAVE READ THIS STATEMENT OF WORK, UNDERSTAND IT, AND AGREE TO BE BOUND BY ITS TERMS AND CONDITIONS. FURTHER, THE PARTIES AGREE THAT THE COMPLETE AND EXCLUSIVE STATEMENT OF THE AGREEMENT BETWEEN THE PARTIES RELATING TO THIS SUBJECT SHALL CONSIST OF 1) THIS STATEMENT OF WORK, 2) ITS SCHEDULES, AND 3) THE AGREEMENT (INCLUDING THE EXHIBITS THERETO), INCLUDING THOSE AMENDMENTS MADE EFFECTIVE BY THE PARTIES IN THE FUTURE. THIS STATEMENT OF THE AGREEMENT BETWEEN THE PARTIES SUPERSEDES ALL PROPOSALS OR OTHER PRIOR AGREEMENTS, ORAL OR WRITTEN, AND ALL OTHER COMMUNICATIONS BETWEEN THE PARTIES RELATING TO THE SUBJECT DESCRIBED HEREIN.

IN WITNESS WHEREOF, the parties hereto have caused this Statement of Work to be effective as of the day, month and year written above.

Accepted by:

Client: Arizona State Senate

By: ____________________________

Title:__________________________

Karen Fann, President

Accepted by:

Contractor: Cyber Ninjas, Inc.

By: ____________________________

Title:__________________________

Douglas Logan

CEO & Principal Consultant
Appendix C: Settlement Agreement

Settlement Agreement – Arizona Democratic Party, et al. v. Fann (CV2021-006646) - Page 1 of 5

SETTLEMENT AGREEMENT,

The parties to this Settlement Agreement ("Agreement") are the Arizona Democratic Party ("ADP"), Supervisor Steve Gallardo in his individual capacity ("Gallardo"), Secretary of State Katie Hobbs in her official capacity ("Secretary"), the First Amendment Coalition of Arizona, Inc. ("FACA"), Senate President Karen Fann in her official capacity ("Fann"), Senator Warren Petersen in his official capacity ("Petersen"), Ken Bennett ("Bennett"), and Cyber Ninjas, Inc. ("CN"). ADP, Gallardo, the Secretary, and FACA may be referred to collectively hereafter as "Plaintiffs." Fann, Petersen, and Bennett may be referred to collectively hereafter as the "Senate Defendants." Fann, Petersen, Bennett, and CN may be referred to collectively hereafter as " Defendants." The parties may be referred to separately hereafter as a "Party" or collectively as the "Parties."

Recitals

1. On April 22, 2021, ADP and Gallardo filed an action in Arizona Superior Court (Maricopa County) against Defendants related to the conduct of an audit of the 2020 General Election results in Maricopa County, CV2021-006646 ("Litigation").

2. On April 27, 2020, FACA and the Secretary were permitted to intervene in the Litigation.

3. The Parties, in consultation with their respective counsel and in order to avoid additional litigation, have agreed to settle all claims against each other that have been in the Litigation.

The Parties affirm the accuracy of the foregoing recitals, and agree as follows:

Terms of Agreement

1. Conduct of the Audit. In exchange for the release provided in this Agreement, the Defendants agree as follows:

a. Defendants have disclosed or will disclose the following policies or procedures for the audit, and CN warrants and represents that each of the following was in effect on or earlier than April 27, 2021 and will remain in place for the duration of the audit: all documents comprising "Exhibit D" originally lodged under seal with the Court on April 25, 2021, and all policies and procedures Defendants and their agents are using to conduct the audit. This includes training plans and documents to ensure that all workers understand and comply with all security procedures applicable to ballots and electronic voting systems, and forms utilized to conduct the audit, including chain of custody forms, tally sheets, and forms used to aggregate tallies.

b. CN and their agents will not compare signatures on early ballot envelopes with signatures from the voter registration file. The Senate Defendants warrant
and represent that they are not currently comparing signatures on early ballot envelopes with signatures from the voter registration file, and will notify Plaintiffs within 48 hours of any decision to undertake such signature comparison and afford Plaintiffs 48 hours to respond to resolve any concerns. If the parties cannot resolve the issue in a mutually agreeable manner, Plaintiffs may seek emergency injunctive and/or declaratory relief in court to seek compliance with the law.

c. Defendants and their agents will not have pens with blue or black ink anywhere ballots are handled and will take reasonable precautions to prevent the alteration, damage, or destruction of any ballot during the conduct of the audit.

d. Security assurances: (i) Defendants and their agents will continue to have and abide by policies to ensure that Maricopa County voting systems are secured in a manner that prevents unauthorized access or tampering, including maintaining a detailed log of who accesses the machines; (ii) Defendants and their agents will continue to have and abide by policies to ensure that ballots are secured in a manner that prevents unauthorized access, including maintaining a detailed log of who accesses the ballots; (iii) Defendants and their agents will continue to have and abide by policies to ensure that electronic data from and electronic or digital images of ballots are secured in a manner that protects them from physical and electronic access, including unauthorized copying or transfer; (iv) Defendants and their agents will continue to have and abide by policies to ensure that voter information from the voter registration database, including digital images of voter signatures, are secured in a manner that protects them from physical and electronic access, including unauthorized copying or transfer.

e. Defendants and their agents will have and abide by policies to prevent the publication of scanned images of ballots without first securing a court order authorizing such publication.

f. Defendants and their agents will have and abide by policies to ensure that no provisional ballot envelope that was not verified by the County Recorder (and was therefore previously unopened) is opened.

g. Defendants and their agents will allow the news media to observe and report on the audit without signing up to participate in or volunteer at the audit, and on reasonable terms, including allowing the news media to use note pads and red or green pens. The news media is free to take still and video photography, except of ballots where the ballot markings can be ascertained by the naked eye or a zoom lens.

h. Defendants and their agents will permit observers designated in advance by the Secretary, not to exceed three designees per shift, to observe and monitor the audit, including processing of ballots and election equipment hardware, without the designees signing up as volunteer observers for the audit. Such observation and monitoring shall be permitted on reasonable terms, and observers will be permitted to use non-white note pads and red or green pens, including on the counting floor.
2. **Dismissal of Claims in the Litigation.** The Parties agree that they will stipulate to the dismissal of the Litigation with prejudice and with all parties to bear their own fees and costs upon the execution of this Agreement.

3. **Release.** Each Plaintiff releases Defendants from legal liability for all claims that were advanced by that Plaintiff in the Litigation. This release does not include any claim that is not currently pending in the Litigation or any claim that may arise in the future.

4. **No Admission of Fault.** By entering into this Agreement, the Parties do not admit any fault or liability, or lack thereof, related to the allegations or defenses made by any Party in the Litigation. This Agreement is a compromise of disputed claims.

5. **Public Release of Agreement.** This Agreement is not confidential and may be released or discussed in public by any Party.

6. **Knowing and Voluntary Agreement.** Each Party enters into this Agreement as a matter of free will and has not been pressured or coerced in any way into signing this Agreement. Each Party expressly represents and warrants that the persons signing below are authorized to execute this Agreement on the Party’s behalf.

7. **Severability.** If any provision or part of any provision of this Agreement is held to be invalid or for any reason unenforceable by a court of competent jurisdiction, the remaining portions of this Agreement will remain in full force and effect to the maximum extent permitted by law.

8. **Modification/Waiver.** No modification, amendment or waiver of any of the provisions contained in this Agreement will be binding upon any Party hereto unless made in writing and signed by such party or by a duly authorized officer or agent of such Party.

9. **No Presumption Against Drafter.** This Agreement has been negotiated and prepared by all Parties and their respective counsel, and any rule of construction under which ambiguities are to be resolved against the drafter will not apply in interpreting this Agreement.

10. **Entire Agreement; Choice of Law.** This Agreement constitutes a single, integrated written contract expressing the entire agreement of the Parties concerning the subject matter of this Agreement. No other agreements or understandings of any kind concerning the subject matter of this Agreement, whether express or implied in law or fact, have been made by the Parties to this Agreement. This Agreement will be construed in accordance with, and be governed by, the laws of the State of Arizona.

11. **Enforcement.** If there is a question or concern about Defendants’ or their agents’ compliance with any part of this Agreement, Plaintiffs and Defendants will make a
good faith effort to resolve the issue by mutual agreement. Within 48 hours of identifying a potential breach of this Agreement, Plaintiffs shall notify Defendants of the issue and afford the Defendants 48 hours to respond. If the parties cannot resolve the issue in a mutually agreeable manner, Plaintiffs may seek emergency injunctive and/or declaratory relief in court to seek compliance with the law, in addition to raising a claim for breach of contract. Any action to enforce the terms of this Agreement must be brought in Maricopa County (Arizona) Superior Court, and the Parties unconditionally and irrevocably consent to that court's exercise of personal jurisdiction over them in any such action. By entering into this Agreement, the Defendants do not waive or limit any argument or defense, including but not limited to legislative immunity or privilege. Likewise, Plaintiffs do not waive or limit their arguments that any such defenses, including immunity or privilege, do not apply to the Senate Defendants or their agents. In any action to enforce this Agreement (or any dispute otherwise arising out of this Agreement), the Parties agree to bear their own fees and costs.

12. **Counterparts.** This Agreement may be signed in counterparts, each of which will constitute an original, but all of which together will constitute one and the same instrument. The counterparts may be executed and delivered by facsimile or other electronic signature by any of the Parties to any other Party and the receiving Party may rely on the receipt of such document delivered by facsimile or other electronic means as if the original had been received.

13. **Signatures and Effective Date.** The Parties have executed this Agreement on the dates appearing below. This Agreement will become effective immediately upon its execution by all Parties.

**ARIZONA DEMOCRATIC PARTY.**

By: Charles Fisher
Its: Executive Director

Date: 5/4/21

**SUP. STEVE GALLARDO**

By: Daniel C. Barr
Its: Attorney

**SECRETARY OF STATE KATIE HOBBES**

By: Sambo “Bo” Dul
Its: State Elections Director

**FIRST AMENDMENT COALITION OF ARIZONA, INC.**

Date

[Signature]
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Date  
5-4-2021

**SECRETARY OF STATE KATIE HOBBS**

By: Sambo "Bo" Dul  
Its: State Elections Director

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Its: Attorney
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Its: State Elections Director

**SUP. STEVE GALLARDO**

Date

**FIRST AMENDMENT COALITION OF ARIZONA, INC.**

By: Daniel C. Barr  
Its: Attorney
5/5/2021
Date

PRESIDENT KAREN FANN

5/5/2021
Date

SEN. WARREN PETERSEN

Date

CYBER NINJAS, INC.

Date

KEN BENNETT

By: Doug Logan
Its: CEO

Date

Date

PRESIDENT KAREN FANN

President Karen Fann

[Signature]

May 5, 2021

Date

CYBER NINJAS, INC.

By: Doug Logan
Its: CEO

Date

Date

SEN. WARREN PETERSEN

[Signature]

5/5/21

Date

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By: Doug Logan
Its: CEO

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SEN. WARREN PETERSEN

Date

CYBER NINJAS, INC.

Date

KEN BENNETT

By: Doug Logan
Its: CEO

Date

5/5/2021
Appendix D: Correspondence

March 3, 2021

VIA EMAIL ONLY

Senate President Karen Fann
Senator Warren Petersen
1700 W. Washington
Phoenix, AZ 85007
kfann@azleg.gov
wpetersen@azleg.gov

President Fann and Senator Petersen,

I write to express my ongoing concern about the legislative subpoenas issued to the Maricopa County Board of Supervisors for the production of election equipment and ballots from the 2020 General Election and the unspecified audits you intend to conduct. As you know, there is no credible evidence for any of the conspiracy theories that have abounded about the 2020 General Election, including those made by associates of Allied Systems Operations Group. Indeed, officials in Maricopa County, in particular, have gone above and beyond what is required by law to demonstrate the security and accuracy of the election they conducted. I again urge you not to waste taxpayer resources chasing false claims of fraud that will only further erode public confidence in our election processes and elected officials.

In any case, in light of Judge Thomason’s recent ruling clearing the way for you to receive Maricopa County’s ballots and election equipment, I implore you to treat your responsibility for the custody, security, and integrity of those items with the same level of vigilance that election officials across this State treat that responsibility. Indeed, Judge Thomason’s ruling makes clear that you are obligated to maintain the security and confidentiality of the materials turned over to you. If your goal is truly to rebuild public confidence in our democracy, it is imperative that you establish and abide by clear procedures and parameters for the security and confidentiality of the
ballots and election equipment while in your custody and ensure independence and transparency should you proceed with any further audit.

At minimum, before you assume custody of Maricopa County's ballots and election equipment, I urge you to:

- Develop and implement procedures to ensure a secure and documented chain of custody for the ballots and election equipment, including retention of thorough logs and sign-in sheets for persons accessing ballots and election equipment;¹

- Develop and implement procedures to ensure the physical security of the ballots² and physical, data, and cyber security of election equipment,³ so that they are not tampered with, stolen, or otherwise mishandled or compromised;

- Develop and implement procedures to ensure markings on ballots are not altered or added while in your custody, including, for example, restricting writing instruments to only red pens in the room where ballots are handled, inspected, or counted;

- Ensure that the handling, inspection, and counting of ballots is performed by bipartisan teams including at least two members of different political parties⁴ and only conducted under camera with a live video feed and that the video footage is retained for 24 months;⁵

- Develop and implement procedures to ensure that election equipment is not connected to the internet, that write blocker devices are used when connecting any media to election equipment, that any memory stick or device used to transfer data to or from election equipment are from reputable sources and are only used once and then disposed of, that no extraneous or malicious hardware or software are installed or connected to the election equipment; and that any third-party access to the source code for the election equipment is approved and observed by the system vendor;

- Develop and make available to election officials and the public the procedures and criteria, including as to qualifications and independence, you will use to select the firms and/or individuals who will be charged with conducting any further audits or otherwise handling the ballots and election equipment;

¹ See Elections Procedures Manual ch. 8, § V(B); ch. 4, § III; and statutory provisions cited therein.
² See Elections Procedures Manual ch. 8, § V(C) and statutory provisions cited therein.
⁵ See Elections Procedures Manual ch. 10, § 1(B) and statutory provisions cited therein. The video footage should be retained for 24 months.
Thank you for your attention to this important matter, and I hope to hear from you.

Sincerely,

Katie Hobbs
Arizona Secretary of State

cc:

Senate Minority Leader Rebecca Rios: rrios@azleg.gov
Senator Martin Quezada, Ranking Member, Judiciary: mquezada@azleg.gov

Maricopa County Board of Supervisors:
Jack Sellers, District 1, Chair: Jack.Sellers@maricopa.gov
Steve Chucri, District 2: Steve.Chucri@maricopa.gov
Bill Gates, District 3: Bill.Gates@maricopa.gov
Clint Hickman, District 4: Clint.Hickman@maricopa.gov
Steve Gallardo, District 5: Steve.Gallardo@maricopa.gov

Scott Jarrett, Director of Election Day and Emergency Voting,
Maricopa County Elections Department: sjarrett@risc.maricopa.gov
VIA EMAIL ONLY
Maricopa County Board of Supervisors
Chairman Jack Sellers, District 1
Jack.Sellers@maricopa.gov
Supervisor Steve Chucri, District 2
Steve.Chucri@maricopa.gov
Supervisor Bill Gates, District 3
Bill.Gates@maricopa.gov
Supervisor Clint Hickman, District 4
Clint.Hickman@maricopa.gov
Supervisor Steve Gallardo, District 5
Steve.Gallardo@maricopa.gov

RE: SENATE AUDIT

Supervisors,

As Arizona’s Chief Elections Officer, I’ve always understood that elections are about partnerships—partnerships between the State and Counties, partnerships between Boards of Supervisors and Recorders, and partnerships between election officials and voters. The mutual respect and trust that is developed through each of these partnerships is foundational to the integrity of our elections. It is in this spirit that I write today—as a partner—to express my concerns about recent events.

Yesterday, the State Senate announced that it selected a group of firms to perform an “audit” of Maricopa County’s 2020 General Election.¹ As you’ll recall, this is the second time that the Senate has made such an announcement. Following their first announcement, it was believed at the time that the Senate had chosen Allied Security Operations Group, a firm known to have close ties to the Trump campaign and to have previously claimed, without evidence,

that the 2020 election was rigged against the former President. Indeed, some of you rightfully expressed outrage that the Senate had hired a “known, and frequently debunked, conspiracy theorist” to help perform the audit. Senate President Fann later moved away from that firm, given its clear lack of independence.

Unfortunately, yesterday’s announcement made it clear that the Senate has no intention of conducting an independent audit or ensuring the ongoing security and confidentiality of Maricopa County’s ballots and voting equipment. As you know, the Senate has confirmed its hiring of Cyber Ninjas Inc. This firm’s CEO not only harbors conspiratorial beliefs about the 2020 election, but has shared conspiracies about Dominion election equipment, the exact equipment he has been hired to audit. Moreover, Jovan Hutton Pulitzer confirmed yesterday that he too would be involved in this audit. To be sure, Mr. Pulitzer is also a known, and frequently debunked, conspiracy theorist (to say nothing of “failed treasure hunter” or inventor of one of the “25 worst tech products of all time”). To compound the concerning nature of these revelations, the Statement of Work signed by the Senate indicates that these “auditors” plan to visit Maricopa County voters at their home to inquire about their registration and voting history. And if all that were not concerning enough, the Senate President’s press release states that the Senate “leadership will not be directly involved [in the audit], and members do not expect to comment on any of the processes of the audit until the report is issued.” In other words, the Senate intends to give free reign to Cyber Ninjas, Inc. and will abdicate any responsibility or engagement in the audit process to ensure the security and confidentiality of the ballots and voting equipment or the integrity of the process. In addition to being dangerous and irresponsible, this abdication appears contrary to Judge Thomason’s assumption that the Senate will ensure any third parties will handle the subpoenaed materials appropriately.

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4 Arizona State Senate, Supra Note 1.


7 Georgia Secretary of State Brad “FACT CHECK: GEORGIA SENATE MASQUERADES FAILED TREASURE HUNTER AS HACKER AND ELECTION SECURITY EXPERT.” Available at https://t.co/gvY75bH4c9 Georgia senate masquerades failed treasure hunter as hacker and election security expert.


As election officials, it's our duty to preserve and build the trust of our partners in elections: the voters. Even if some previously harbored hope that this audit would build voter confidence, it should be clear now that the Senate has chosen another path. They've prioritized conspiracy over confidence, partisanship over partnership. As such, this morning I asked Attorney General Brnovich's Office to advise me of any legal options the Secretary of State may have to protect the integrity of our system and our voters' confidence in it. But the County's options in this regard are undoubtedly clearer than my Office's. As you meet today, I ask that you carefully consider every option, and do what is necessary to protect our voters and our democracy.

Sincerely,

Katie Hobbs
Arizona Secretary of State

cc:

Stephen Richer, Maricopa County Recorder
sricher@rise.maricopa.gov

Scott Jarrett, Director of Election Day and Emergency Voting,
Maricopa County Elections Department
sjarrett@rise.maricopa.gov
Via Email

Ken Bennett
Senate Audit Liaison
info@arizonanaudit.com
kbennettaz@gmail.com

Mr. Bennett,

I write today to express my ongoing concerns regarding the Senate’s “audit” and to bring to your attention several specific concerns about activity that is occurring at the Coliseum. Had my Office been given prior access to “audit” procedures being used and to the current “audit” site, I may have been able to provide you with this information sooner. As you know, I originally wrote to President Fann on March 3rd, requesting observer access for my Office and outlining a number of minimum procedures necessary to protect ballots and election equipment. This letter also offered to connect President Fann with experts in post-election audits. I received no response to the letter, and it appears that many of the recommended procedures were ignored. My Office later discussed observer access with you, only to be denied. Despite the best efforts of the Senate and the Cyber Ninjas, litigation provided an opportunity for my Office to review the “audit” procedures and to send expert observers to the Coliseum. What we’ve found thus far has not been reassuring.

Concerns based on disclosed procedures

1. The procedures are vague and insufficient to ensure accuracy and consistency

In response to a court order, the Senate and Cyber Ninjas produced 199 pages of documents related to the “audit.” Unfortunately, the majority of pages were logs detailing the equipment and ballots that Maricopa County transferred to the Senate. The remaining pages fail to provide a sufficient level of detail to maintain accuracy and consistency among those performing a hand count of ballots, or otherwise leave out crucial information entirely.

For example, the hand count procedures total only 18 pages. And the procedures offer no specifications on the standards that will be used in determining voter intent. Voters don’t always mark their ballots cleanly or consistently. If a voter fills in two bubbles and circles one of the names,

2 Fifefield, Jen. (#JenAFife) Twitter. (April 23, 2021, 10:20 AM) ("I noticed the counters had blue pens. Supposed to only have red when you’re around ballots since ballots can read black and blue ink.") available at https://twitter.com/3cnAFife/status/1385646177994749993
how do you count that vote? When you have a counting operation of this scale, clear and consistent
guidelines for determining voter intent and confirming those determinations in these circumstances
is crucial. It’s for this reason that my Office issued a detailed voter intent guidance document to all
15 Counties ahead of the 2020 election. Consistency is important, including consistency among the
Counties. Elections workers employed by Counties received substantial training—including on the
issue of voter intent—ahead of the election. Unfortunately, the only evidence of training for audit
counters is a sparse Powerpoint presentation that offers little guidance beyond the procedures
documents.

2. The counting process incorporated the use of untested, uncertified systems

The audit procedures describe a counting process whereby each ballot is scanned and an image of
the ballot is displayed on a monitor above each counter’s seat. During the days in which this method
was used, prior to the screens being removed for uncertain reasons (and prior to my Office gaining
access to the Coliseum), it appeared in the livestream that counters were conducting their count
based the displayed images, as the carousel holding the paper ballots were being spun too fast to
allow counters to confirm that the projected image matched the paper ballot.

While Arizona law requires that voting systems, including components that capture ballot images,
must be tested by a federal Voting System Testing Laboratory (VSTL), including for accuracy,
reliability, and security, and certified by the federal Election Assistance Commission (EAC) and my
Office, the hardware and software supplied by Cyber Ninjas to capture and display the ballot
images in this counting process are untested and uncertified. This fact raises serious concerns
because it means the systems used have not been tested or certified to ensure, for example, that the
system is not preloaded with inaccurate ballot images or that the system’s software is not written to
manipulate specific images of scanned ballots. Testing and certification by federal and state
authorities is designed specifically to protect against such risks, including through a thorough
source code review to ensure these risks cannot occur.

3. The counting process departs from best practices for accurate hand tallying of ballots

The hand counting process being used is a significant departure from standard best practices
utilized by jurisdictions and experts across the county, including here in Arizona, and raise serious
doubt about the accuracy and reliability of any result of this process. Indeed, the hand counting of
ballots is already fraught with error, even in small quantities. The process being used in the
Coliseum, to count over 2.1 million ballots in an absurdly unrealistic timeframe, only exacerbates
the concerns.

The process being used involves creating at least three separate tallies for each batch of 100 ballots.
Each of the three counters may have reached different totals due to counting multiple different
ballots in different ways. The tally is accepted as long as at least two counters’ totals match, and the
third counter’s totals are not off by 3 or more of 100 ballots. This acceptable error rate is
significantly larger than the margin of victory in the presidential race. And although the aggregate
totals of at least two tally sheets must match, there is no guarantee that the counters counted all
100 ballots the same way nor is there a reliable process for ensuring consistency and resolving
discrepancies. For example, any discrepancy among the three counters could be resolved by a
trained and experienced adjudication board tasked with the resolution of ballots with unclear
marks. In fact, our observers witnessed much confusion around identifying the correct sub-batch of
ballots that need recounting when the acceptable error rate is exceeded.
The failure to resolve any counting discrepancies on a ballot-by-ballot basis will result in some sort of estimate or range, at best, of the results, rather than a single final tally, making the lack of clear, accurate, and transparent aggregation procedures, discussed below, even more concerning.

4. The procedures do not detail a clear process for aggregation

Perhaps most concerning, almost no detail is offered regarding aggregation. Even if one were to assume that the rest of the procedures were adequate to ensure an accurate counting process, those procedures are meaningless without a secure and transparent aggregation process. When asked by my Office about the process that will be used to aggregate the tens of thousands of individual tally sheets that will be generated, we received no real explanation other than that an accounting firm will handle it later. This is not transparency. Further, it appears that a single person enters the totals from the tally sheets into an electronic spreadsheet, leaving wide open the opportunity for error, inadvertent or otherwise. At minimum, a bipartisan team of at least two individuals should aggregate the tally sheets or otherwise confirm that data is entered accurately for aggregation.

5. The procedures fail to adequately protect and document chain of custody of ballots

The audit procedures, including Counting Floor Procedures, raise many questions regarding the adequacy of chain of custody control over ballots. Several sections suggest that ballot batches may be separated from boxes and individual ballots may be separated from their batches. If this is happening, it raises significant chain of custody concerns, and there’s no indication of how these separated batches and ballots are being tracked and logged. Nor is there any indication of what process exists, if any, for returning separated ballots to their original batch.

6. The “forensic audit” of ballots lacks any credibility or basis in actual election operations

A number of items detailed in the Counting Floor Procedures appear better suited for chasing conspiracy theories than as a part of a professional audit. For example, using UV lights to search for watermarks, measuring the thickness of ballots, searching for folds in ballots, and looking at ballots under a microscope are completely unnecessary steps if the goal of the audit is to validate the election results. Though conspiracy theorists are undoubtedly cheering on these types of inspections—and perhaps providing financial support because of their use—they do little other than further marginalize the professionalism and intent of this “audit.”

7. There were no procedures for hiring qualified, unbiased counters

As has been widely reported, former State Representative Anthony Kern has been among those hired to count ballots. Mr. Kern’s name is on the ballot, not only as a candidate for State Representative but as a Presidential Elector—the exact race for which he is counting. While these facts would be disqualifying in any professional recount or audit, unfortunately, there are additional reasons why Mr. Kern is not trustworthy to fulfill this role. He was a leader of the “Stop the Steal” movement in Arizona and was actually present at the attempted insurrection in Washington, DC on

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6 Wake TSI “Floor Counting Policies” 12(9)(B).
7 Wake TSI “Floor Counting Policies” 12(9)(C-E).
8 Wake TSI “Floor Counting Policies” 12(9).
January 6th. Moreover, he is also on the Brady List on account of his dishonesty during his time as a code enforcement officer.

Given what was known about Mr. Kern before this “audit,” and his inclusion regardless, one must wonder what procedures are truly being used to recruit and screen others involved in the counting of ballots. This is of particular concern as the operation attempts to quickly increase the size of its staff. Ordinarily, a true and reliable hand count would utilize bipartisan boards for this process to protect against human bias (such as that exhibited by Mr. Kern). Unfortunately, the procedures here do not require counting teams to be bipartisan.

Concerns based on observation

The observers sent by my Office have frequently encountered issues when trying to access the “audit.” They’ve also encountered changing rules regarding what they are and are not allowed to bring with them. Perhaps more troubling, I have heard reports that the observers associated with the audit are now instructed not to speak with the SOS observers, and that counters are instructed to not to talk when an SOS observer is near their table. While the Senate’s hiring decisions have been clear in its intentions to exclude actual experts from this process, efforts to prevent my observers from accessing information are inexcusable. Notably, Ryan Macias, a national expert in election equipment, was denied access to the area where Maricopa County’s machines were being “audited,” despite reports that Doug Logan of Cyber Ninjas has personally escorted others to view the process. The following day, a large portion of those machines were returned to the County. Despite all of this, we’ve quickly been able to identify a number of problems inside the Coliseum.

1. There is inadequate physical security of ballots

In addition to the significant security lapses documented at the start of the “audit,” it appears that boxes containing ballots were stored on the counting floor in fenced-off areas. This chain-link fencing, however, appears to be only about 8 feet tall, and there is no “ceiling” or top fencing to prevent an unauthorized person from climbing the exterior fencing to gain access to the ballots. The risk to the physical security of the ballots, and any remaining election equipment, is heightened now that the Crazy Times Carnival is operating alongside the Senate and Cyber Ninjas at the Coliseum, and you have stated ballots may remain stored at the Coliseum while various high school graduation ceremonies are conducted in the same facilities. I continue to urge you to take every available measure to ensure the security of the ballots and election equipment in your custody, especially given the prior security lapses and heightened security risks.

2. There was no livestreaming or observer access to the forensic processing of Maricopa County’s election equipment.

Though the “Modifications to Standard CyFTR Evidence Handling Procedures for AZ Audit” document, which was among the policies and procedures the court ordered Cyber Ninjas to make public, indicated that there would be “24/7 live video monitoring...on both the evidence storage area

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and the forensic imaging area,” which will be “live streamed to the internet for transparency,” there has been no live streaming of, and the observers were not permitted to observe in, any forensic imaging area or where the Maricopa County election equipment was otherwise handled. This is a violation of your own requirements and means that neither election officials, experts, nor the public had any transparency into how the election equipment was handled.

3. Computers at “forensic analysis” tables were left on and unattended

On multiple occasions, it has been noted that the computers used by the forensics teams have been left unlocked and unattended, sometimes with files still open. Failing to adequately secure these workstations when not in use could allow anyone on the floor to access them and alter dates, files, or programs. This is even more concerning given the open questions about hiring practices that have allowed those with clear political bias—and a desire to overturn the results of the 2020 election—to be present and participating on the floor. Even the most elementary security protocols and training would prevent this practice from occurring.

4. There is risk of commingling counted and uncounted ballots in a batch, leading to some ballots being double-counted and others not being counted at all

Table leads and table assistants appear to be applying different methods for keeping track of counted versus uncounted ballots in the stack of 100 ballots that is being counted. Some table leads and assistants are placing the stack of counted ballots right next to, and, in some cases, overlapping with, the stack of uncounted ballots, creating a significant risk of commingling the counted versus uncounted ballots and throwing off the count.

5. The constantly changing rules cause confusion and counting errors, and undermine the reliability of the results

There doesn’t appear to be any plan or consistency in the audit procedures and it appears the procedures have been changed multiple times since this exercise started. Your recent comments on the Mike Broomhead Show seem to confirm that procedures may change every day. Indeed, those counting teams that have been working at the Coliseum the longest may be encountering the most confusion because they have counted under several different iterations of procedures.

6. Frequent violations of the limited procedures that do exist, and a disregard for best practices or basic security

“Audit” workers appear to be violating the procedures and there is an inexplicable disregard for best security practices. A partial list of incidents observed includes ballots left unattended on tables, ballots being tallied using scrap paper rather than official tally sheets, errors being corrected in the same color pen, counters receiving training on the fly at counting tables, table leads correcting the tally sheets of counters, table assistants intermixing ballots from separate stacks, forensics team computers left unlocked and unattended, the use of cell phones on the counting

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13 April 30, 2021.
14 April 30, 2021.
15 April 30, 2021.
16 May 1, 2021.
17 May 1, 2021.
18 May 1, 2021.
19 April 30, May 1, 2021.
floor, tally sheets filled after a batch is completed, counting teams conferring on how to attribute a vote, table leads directing counting teams on how to attribute a vote, and loss of ballot images due to software issues.

*   *   *

Mr. Bennett, as a former Secretary of State, you know that our elections are governed by a complex framework of laws and procedures designed to ensure accuracy, security, and transparency. You also must therefore know that the procedures governing this audit ensure none of those things. I'm not sure what compelled you to oversee this audit, but I'd like to assume you took this role with the best of intentions. It is those intentions I appeal to now: either do it right, or don't do it at all.

Sincerely,

Katie Hobbs
Arizona Secretary of State

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20 May 1, 2021.
21 April 30, 2021.
22 April 30; May 1, 2021.
23 April 30, 2021.
24 May 1, 2021.
May 5, 2021

VIA EMAIL.

The Honorable Karen Fann  
President, Arizona State Senate  
1700 West Washington Street, Room 205  
Phoenix, AZ 85007

Dear Senator Fann:

I write regarding issues arising under federal statutes enforced by the United States Department of Justice that are related to the audit required by the Arizona State Senate for the November 2020 federal general election in Maricopa County. News reports indicate that the Senate subpoenaed ballots, elections systems, and election materials from Maricopa County and required that they be turned over to private contractors, led by a firm known as Cyber Ninjas.

The Department has reviewed available information, including news reports and complaints regarding the procedures being used for this audit. The information of which we are aware raises concerns regarding at least two issues of potential noncompliance with federal laws enforced by the Department.

The first issue relates to a number of reports suggesting that the ballots, elections systems, and election materials that are the subject of the Maricopa County audit are no longer under the ultimate control of state and local elections officials, are not being adequately safeguarded by contractors at an insecure facility, and are at risk of being lost, stolen, altered, compromised or destroyed.\footnote{See, e.g., https://www.azfamily.com/news/investigations/cbs_5_investigates/security-lapses-plague-arizona-senates-election-audit-at-state-fairgrounds/article_b49a0ee8-a3ed-11eb-8994-b6c291b86cc9.html; https://www.azcentral.com/story/news/local/arizona-senate-issues-subpoenas-demanding-access-to-2-million-plus-ballots-cast/article_472b7b-b604-5837-24b4-17e5c2b2dbb4.html; https://www.azcentral.com/story/news/local/arizona-senate-issues-subpoenas-demanding-access-to-2-million-plus-ballots-cast/article_472b7b-b604-5837-24b4-17e5c2b2dbb4.html.} Federal law creates a duty to safeguard and preserve federal election records. The Department is charged with enforcement of provisions of the Civil Rights Act of 1960, 52 U.S.C. §§ 20701-20706. This statute requires state and local election officials to maintain, for twenty-two months after the conduct of an election for federal office, “all records and papers” relating to any “act requisite to voting in such election...” \textit{Ibid.} at § 20701. The purpose of...
U.S.C. § 10307(b). Past experience with similar investigative efforts around the country has raised concerns that they can be directed at minority voters, which potentially can implicate the anti-intimidation prohibitions of the Voting Rights Act. Such investigative efforts can have a significant intimidating effect on qualified voters that can deter them from seeking to vote in the future.

We would appreciate your response to the concerns described herein, including advising us of the steps that the Arizona Senate will take to ensure that violations of federal law do not occur.

Sincerely,

Pamela S. Karlan
Principal Deputy Assistant Attorney General
Civil Rights Division
pamela.karlan@usdoj.gov

cc: Glenn McCormick, Acting United States Attorney for the District of Arizona
    Mark Brnovich, Arizona Attorney General
    Katie Hobbs, Arizona Secretary of State
    Stephen Richer, Maricopa County Recorder
May 11, 2021

VIA EMAIL

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Re: Notice pursuant to Settlement in ADP v. Fann, No. CV2021-006646

Dear Kory, Thomas, Dennis, Jack, and Jordan:

As you may be aware, on May 5, 2021, Secretary of State Katie Hobbs sent a letter (the “Letter”) to Senate Audit Liaison Ken Bennett detailing her concerns about the procedures and practices of the Senate’s review of the November 2020 General Election in Maricopa County. On May 7, 2021, Mr. Bennett sent a response to the Secretary’s letter. While Mr. Bennett was dismissive of the very many departures from standard election audit best practices that the Secretary highlighted—which, again, does not instill confidence in the integrity and reliability of this “audit”—I write today to reiterate serious and ongoing concerns regarding the adequacy of procedures for ballot security and to raise additional ballot security issues that have since arisen. And so there is no doubt, this letter is intended to provide notice under the parties’ Settlement in ADP v. Fann and demands immediate corrective action.

Failure to have and disclose policies for storage of ballots after May 14. The Secretary is deeply concerned about Defendants’ plan to move the ballots and other election equipment from their current location in the Coliseum after May 14, without returning them to Maricopa County. The Defendants do not seem to have and, if they do, they have not disclosed any policies or procedures related to the secure moving or secure storage of ballots at some other, unknown
location. If Defendants are going to retain the ballots and election equipment after May 14, they must move and retain them in a secure and documented manner, including using tamper-evident and numbered seals which Defendants do not appear to be using currently. Pursuant to sections 1(a) and 1(d) of the Settlement, please immediately provide any and all policies specifying how Defendants plan to do so. Please also notify us when and where the ballots and election equipment will be packed and moved so that the Secretary’s observers may observe pursuant to section 1(h) of the Settlement.

**Failure to have and abide by adequate security procedures for ballots.** In Section 1(d)(ii) of the Settlement, Defendants warranted that they will “have and abide by policies to ensure that ballots are secured in a manner that prevents unauthorized access, including maintain a detailed log of who accesses the ballots.” The Secretary has identified the following breaches of this agreement:

- The Counting Floor Procedures produced by Cyber Ninjas, such as Wake TSI “Floor Counting Policies” § 13(1)(C), suggest that both ballot batches and individual ballots will be separated from their ballot boxes. Cyber Ninjas’ procedures (e.g., Ex. D3) provide for Ballot Box Chain of Custody to be maintained but provide no information for logging access to ballot batches or individual ballots when they are separated from their box for some reason. (Letter at 3.)

- The Secretary’s letter noted that ballots had been left unattended on tables during the counting process. (Letter at 5.) Mr. Bennett’s letter did not address this issue. Please tell us what the Senate and its auditors will be doing to address this issue.

- The chain link fence surrounding ballot boxes is only 8 feet tall, and lacks a ceiling, meaning that an unauthorized person could climb over the wall and access the ballots. This concern is heightened by the fact that the Crazy Times Carnival was also operating in the Coliseum, and that some Defendants have suggested that ballots will remain stored there during high school graduation ceremonies. (Letter at 4.) While Mr. Bennett’s letter was dismissive of this issue, the Secretary’s concerns remain, particularly given the undisclosed plans for moving, storing, and securing the ballots after May 14, discussed above.

- The Counting Floor Policies document, at pages 3, 10, and 15, reference the use of numbered seals for ballot boxes, but the Secretary’s observers have noted that they have not seen the use of numbered seals on ballot boxes, and, when one of the Secretary’s observers asked Bryan Blehm last night whether ballot boxes would be resealed with tamper-evident or numbered seals, he indicated that they would not be.
May 11, 2021
Page 3

Pursuant to the Settlement, we await your response in the next 48 hours.

Sincerely,

Josh Bendor

cc: Roopali H Desai - rdesai@eblawyers.com
    Andy Gaona - agaona@eblawyers.com
    Jim Barton - jim@bartonmendezsoto.com
    Pamela Karlan - Pamela Karlan@usdoj.gov
    Glenn McCormick - Glenn McCormick@usdoj.gov
    Mary O’Grady – mogradv@omlaw.com
    Emma Cone-Roddy – eecone-roddy@omlaw.com
13 May 2021

**SENT VIA E-MAIL.**

Katie Hobbs, Arizona Secretary of State
c/o Josh Bendor, Legal Counsel
2929 North Central Avenue, 21st Floor
Phoenix, Arizona 85012
jebendor@omlaw.com

Re: Audit of 2020 General Election

Dear Mr. Bendor:

We are in receipt of your May 11 letter, which is yet another manifestation of your client’s unfortunate decision to treat the settlement agreement, and it protocols for good faith consultation, primarily as a vehicle for political posturing.

As we made clear before its execution, the settlement agreement requires Cyber Ninjas, Inc. (“Cyber Ninjas”) to promulgate, disclose, and enforce policies designed to ensure ballot security; the agreement does not confer on your client (or anyone else) a veto power over the particular parameters and provisions of those policies. As stated in the May 7 letter from Secretary Bennett, Cyber Ninjas undisputedly maintains a chain of custody protocol for ballots, which was produced to you some time ago; your client’s assertion that the documentation is insufficiently detailed is both incorrect and fails to delineate a violation of any settlement provision. Similarly, your client’s preferred fence height specifications—an issue that was also addressed in the May 7 correspondence—are untethered from both the settlement agreement and any source of law.

We have been unable to corroborate your purported concerns about ballots being left “unattended” on counting tables. This is primarily because your letter fails to provide any actionable information; without even an approximate indication of the time and location of the so-called “unattended” ballots, we are unable to identify any instance in which ballots remained on counting tables without at least one audit team member physically present within the designated ballot tabulation area. And without more specific information, it is impossible to ascertain whether and to what extent any corrective action (e.g., remedial training or reassignment of audit personnel) is necessary. Further, the counting tables are under 24/7, live-streamed video surveillance, so any mischief associated with allegedly “unattended” ballots should be very well documented and remediable if necessary.
With respect to the sealing of ballot boxes, the relevant provision of the Counting Floor Policies was premised on the assumption that Maricopa County would deliver the ballot batches secured by tamper-evident seals, which Senate auditors would re-apply after the completion of tabulation activities. In fact, it seems that neither the boxes nor the ballot bags they contain were consistently sealed by Maricopa County in the first instance. We do not interpret the policies you cited as requiring Cyber Ninjas to devise and apply a sealing regime to ballot boxes that had never been sealed in the first place.

As you noted, the audit will be briefly suspended later this month while the Veterans Memorial Coliseum hosts several graduation ceremonies. During this hiatus, ballots and tabulation equipment will remain on the State Fair Grounds and will be stored and secured pursuant to the policies and procedures attached hereto as Exhibit A.

Finally, we note that your most recent letter provides further evidence that, before the ink on the settlement agreement had dried, your client embarked on (and continues still) a campaign to undermine and destabilize it. Section 11 of the settlement agreement was intended to serve as a mechanism for constructive discussion, not partisan grandstanding, allegations unsupported by evidence, and the dictation of terms that your client and her co-plaintiffs were unable to secure through litigation. We therefore believe your letter is intended primarily to attract credulous coverage in the media, which is to say political rather than legal goals. Such conduct likely breaches the requirement of good faith consultation under Section 11 and the implied covenant of good faith and fair dealing, and any litigation ostensibly seeking to enforce the groundless demands set forth in your most recent letter may justify claims for abuse of process.

Very truly yours,

Jordan C. Wolff, Esq.

JCW
Exhibit A – Secured Transfer of Tabulation Machines

cc:  Kory Langhofer, Esq
     Thomas Basile, Esq
EXHIBIT A
General Rules/Requirements for Transfer and Storage of Election Ballots and Tabulation Machines

Audit Chain of Custody Requirements

All election ballots and tabulation machines will maintain in the constant Chain of Custody with the current Senate designees and Custodians of Records. For this reason, any movement of the secure trailers requires their notification and participation. During an emergency when said ballots and tabulation machines are under imminent threat, the secure trailers may be moved pursuant to the specific terms of this plan, but the Custodians of Records, Cyber Ninjas, and on-call videographers must be notified immediately.

Ballot and Equipment Designations

There have been designations given to the Ballots and Ballot equipment that are required to be protected 24/7. The designations include the following:

1. Uncounted Ballots
2. Ballots in Process
3. Completed Ballots
4. Tabulation Machines

The process of packaging, loading, transporting, and unloading will consist of the following procedures:

Packaging and Loading

1. Documented video and chain of custody evidence of packaging as required by the Senate and Maricopa County Elections Board will be maintained to ensure the custody of the ballots and tabulation machines remains consistent.
2. Designated ballots and tabulation machines to be packaged onto pallets accordingly.
3. Tabulation machines not palletized will remain on the carriers in which they were originally packaged/shipped by Maricopa County.
4. All pallets will be plastic shrink wrapped to ensure ballot boxes and/or tabulation machines do not fall or separate from their designated pallets.
5. Pallets and tabulation machines will be loaded onto trucks by designated number in the following manner:
   a. Each truck will be numbered and have a Ballot/Tabulation machine Manifest detailing the contents of said truck.
   b. After loading the designated ballots and or tabulation machines onto each truck, the trucks rear cargo door will be closed, locked, and sealed with the seal designated being written on the Manifest.
6. A copy of the Manifest will be maintained in each secured trailer and the original will be maintained by the Custodian of Records.

Transportation of Ballots and Tabulation Machines from Coliseum to Building B

1. Security and video escort of the ballots and tabulation machines from Coliseum to Building B across fairgrounds whilst a carnival is in progress.
2. After departing the east loading bays of the Coliseum traveling south, trucks and evidence trailers will enter the secure temporary storage area from the west entrance and place each secured evidence trailer in one row from south to north across the evidence storage area.
3. At no time during the transportation process will a secure trailer be opened nor have its seal broken unless there is a verified emergency, and the seal must be broken to protect the contents of the evidence trailer.
4. Emergency response to any threats that present itself during transportation.
5. Video recording of transportation processes for auditing, chain of custody, and evidence in the case of any
criminal and/or civil proceedings.

Housing of Ballots and Tabulation Machines at Secure Building B Location

1. After the trailers are placed in Building B, they will be monitored by 24/7 video and security surveillance and
on-site security personnel.
2. At no time during the storage process will a secure trailer be opened or have its seal broken unless in times of
a verified emergency and unloading the evidence trailer is required to protect the evidence.

Security Risk Management Building B Storage Facility/HSSE Facility Assessment

The fairgrounds agricultural building (Building B) has been identified as the temporary facility and is located adjacent
to McDowell Street and to the South of the current location and has been prepared by fairgrounds staff for use by the
Audit. A facility HSSE assessment was completed on 05/09/2021 which included the following:

Workplace and Environment (Power/Utilities/Facility Amenities included)
Physical Security
Law Enforcement and Security Guard Operations
Parking Controls
Security Systems and access control
Internal Security and Controls
Employee Controls
Emergency HSSE Procedures

As a result of the assessment the following mitigation requirements are planned for and will be put in place prior to
the move. The HSSE requirements for the building operations and the movement will be completed by 1500 hours on
Thursday 5/13/2021.

HSSE Requirements (Fire/Medical)

All building fire equipment and suppression systems have been tested to State regulations and are current. Medical
equipment on site includes AED and the audit will provide first aid kits to be used in emergencies by on site staff as
required.

OSHA regulatory reporting requirements are documented and will be done as required.

Security Sweep and K-9 Services

The building will be security swept and cleared by both security personnel and K-9 units prior to permanent occupation
of the building for the storage. Once completed, the building will be under 24/7 security control until the ballots, and
equipment is transported back to the Coliseum at the planned time for count restarting.

Perimeter Security

The perimeter security controls will consist of the following:

1. Perimeter chain link fence which will be installed on Wednesday 5/12/2021 by National Fencing.
2. Guard Management. This will be done by contract with the Senate for LES Services to provide LEO’s for 24/7
law enforcement guard services between the dates of the move and storage.
3. Physical locks and controls placed in key perimeter entrances to ensure security of entry into the building is
restricted to authorized persons only.
Secured Loading/Transfer/Storage of Tabulation Machines

The afternoon/evening of Thursday, 5/13/21 a 53’ trailer (with lift gate) will be placed into the South Hall of the Coliseum to transport all tabulation machines to Building B at the Arizona State Fairgrounds. That equipment will be loaded for transport under the supervision of the Custodian of Record. Once the trailer is loaded, locked, & sealed, we will discontinue two of the four live camera feeds from the tabulation machine audit area and relocate those cameras to the new onsite storage facility. That sealed trailer will remain inside the Coliseum until the next morning with the two remaining cameras focused on it.

Establishing Building B Live Feed

Friday morning, 5/14/21, we will activate the live cameras in the new onsite storage facility. Once the live feed has been confirmed, we will transfer the trailer containing the tabulation machines to that facility. All tabulation machines and/or ballots that are transferred from the coliseum to the new storage facility will have accompanying video of such transport to cover the gap in time between the two live camera feeds for each sealed trailer. When that trailer has been moved, and the immediate area no longer contains sensitive data and/or equipment, we will turn off the remaining live feed cameras in that area of the Coliseum.

Secured Loading/Transfer/Storage of Ballots

Pallet Moving & Storage Process
The ballots are currently stored in 4 separate ballot corrals.
- Corral A - Full shrink-wrapped pallets that have not been opened and not been counted
- Corral B - Completed boxes that have been counted and processed through paper examination
- Corral C - The holding corrals with boxes that have been counted but not processed through paper examination, boxes that have been partially counted and partially examined by PE
- Corral D - Senate holding corrals with ballots that potentially contain PII or duplicates

The ballot boxes will be palletized in their designated corrals and each box will be identified and recorded prior to being loaded on the pallet. Full pallets will be shrink wrapped and labeled with the pallet ID.

For each pallet, a complete manifest will be created. The manifest will include a list of all boxes on the pallet. For each box on the pallet, we will record the following information:
1. Pallet Number
2. Box ID
3. Origin Pallet
4. Ballot Type
5. Date on Box Label
6. Origin Corral (A, B, C, D)

<table>
<thead>
<tr>
<th>Pallet Number:</th>
<th>Total Boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Packed By:

<table>
<thead>
<tr>
<th>Pallet #</th>
<th>Box ID</th>
<th>Origin Pallet</th>
<th>Ballot Type</th>
<th>Date</th>
<th>Origin Corral</th>
<th>Process Designation</th>
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</tbody>
</table>
Corral A - Full shrink-wrapped, uncounted pallets will be loaded first – 27 pallets
Corral D - All boxes in the Senate holding corral will be consolidated onto 3 pallets
Corral B – All boxes in the completed corral will be consolidated onto 8 pallets.
Corral C – All boxes in the holding corral will be consolidated onto 10 pallets. Pallets will be designated as counted but not processed through paper examination, partially counted, partial PE.

The pallets will be loaded onto the trucks by corral in the following order: A, B, C, D

Schedule of Secured Transfer/Storage of Ballots and Tabulation Machines

Building B (Moving to)
Wed. May 12th, 1200 hrs. - Install Security Fencing
  0730 hrs. – Security Sweep Conducted
  TBD – Installation of Cameras
  Building Security Established 1600 hrs.

Coliseum (Moving from)
Thur. May 13th, 2000 hrs. – Audit Paused
  Security Personnel remain 24/7 through May 14th at 1900 hrs. when all audit property has been securely moved to Bldg B.
  2000 hrs. – Load Manifested Tabulation Machines into 53’ Dry Van inside of coliseum. Trailer is Locked and Sealed inside of Coliseum until moved.

Fri. May 14th, 0700 hrs. – Sealed and Locked Trailer containing tabulation machines are transported under armed escort and video surveillance to Building B where it will be parked inside in same locked and sealed condition until its return to the Coliseum by May, 23rd.
  0800 – 1200 hrs. Inventoried Ballots by processing Category will be loaded onto Dry Vans inside of the coliseum by Pallet. Each Dry Van when Loaded will be Locked, Sealed and moved under armed escort and video surveillance to Building B where they will remain locked and sealed until their scheduled return to the coliseum May 23rd.

Locks to the Building and Trailers will be maintained at all times by the Designated Custodian(s) of the property (ballots and tabulation machines) and a record maintained of any and all access.

Any Access requested during the occupancy of Building B during the Storage not previously authorized will require pre-approval by the custodial owners and controlled by onsite security.
VIA EMAIL

Jordan C. Wolff
Wilenchik & Bartness
The Wilenchik & Bartness Building
2810 North Third Street
Phoenix, Arizona 85004
JordanW@wb-law.com

Re: Response to your letter dated May 13, 2021

Dear Jordan:

On May 11, I sent you a straightforward letter raising several serious concerns regarding the security of ballots and election equipment in Cyber Ninjas’ custody. When I read your response dated May 13, I was disappointed to see that it contained a fair amount of unnecessary and unfounded rhetoric about the Secretary’s supposed motives in raising these issues. I will mostly not engage with this unnecessary rhetoric and I urge you to omit it from future communications. From our side, it is enough to say that the Secretary entered into the Settlement in good faith, making a good faith effort to safeguard the rights of voters and the security of elections in Arizona; has worked in good faith to ensure that these important interests remain protected; and will continue to do so.

Your letter also indicated possible disagreement about the meaning of the Settlement. Of course, the Settlement does not authorize the Secretary to tell Cyber Ninjas exactly how to run its audit. But the Settlement does require Cyber Ninjas to “have and abide by policies to ensure” the security of voting systems, ballots, and voter information. This requires Cyber Ninjas to have the necessary policies and to adequately implement those policies. While it is impossible for the Secretary to monitor every aspect of Cyber Ninjas’ operations, the Secretary has worked to shed light on significant issues that arise and will continue to do so.

With that in mind the Secretary raises the following issues.

Previously identified failures to have and abide by adequate security procedures for ballots. In your response to my prior letter, you were dismissive of concerns the Secretary raised regarding Cyber Ninjas’ failure to have or abide by adequate security procedures. Several of these points merit further discussion.

- In my previous letter, I noted that the Counting Floor Policies document, at pages 3, 10, and 15, reference the use of numbered seals for ballot boxes, but the Secretary’s observers have not seen Cyber Ninjas or its subcontractors use numbered seals on ballot...
boxes. Your response appeared to confirm that Cyber Ninjas and its subcontractors were not following their own policies, purportedly because the “neither the boxes nor the ballot bags were consistently sealed by Maricopa County in the first instance,” and Cyber Ninjas assumed that “Maricopa County would deliver the ballot batches secured by tamper-evident seals, which Senator auditors would re-apply after the completion of tabulation activities.” But regardless of Maricopa County’s practices, to which your policies make no reference, Cyber Ninjas has an independent duty to secure the ballots in its custody, which requires it to create and implement appropriate policies. Moreover, it would not make sense for Cyber Ninjas to re-apply Maricopa County’s seals. A tamper-evident seal cannot be re-applied after it is removed. That would defeat the point.

Particularly because ballots are being stored in a public venue that lack the security measures built into county facilities, it is imperative that Cyber Ninjas and its subcontractors use tamper-evident seals on ballot boxes during storage, as indicated in its current policies.

- Your letter was dismissive of Cyber Ninjas’ inadequate chain of custody documentation, claiming that Cyber Ninjas maintains and has disclosed a chain of custody protocol for ballots. In fact, as the Secretary and I explained in our previous letters, while Cyber Ninjas has disclosed a chain of custody protocol for ballot boxes, it has not disclosed a chain of custody protocol for individual ballots, despite the fact that its procedures (e.g., Wake TSI’s Floor Counting Policies § 13(1)(C)) suggest that individual ballots will be separated from their boxes in certain circumstances. If Cyber Ninjas and its contractors intend to separate ballots from their ballot boxes when counting resumes, they must ensure proper tracking and documentation of chain of custody in such situations.

**Ongoing use of wireless router.** As you probably know, on May 11, 2021, the Secretary’s observers discovered that Cyber Ninjas had connected a wireless router to their servers at the Coliseum. The Secretary’s observers have reported that the router remained in place throughout the time that the “audit” was being conducted last week. A Twitter account associated with the Audit claimed that “[n]o wireless was ever enabled.” This does not allay concerns as wireless routers provide an entry point for cybercriminals and should not be connected to any device that has access to voting systems, electronic data from or images of ballots, or voter registration data. Cyber Ninjas has identified no legitimate purpose for the router. It is imperative that no router be connected when Cyber Ninjas resumes its work.

**Inadequate control over data entry to protect electronic data from ballots.** On May 13, 2021, the Secretary’s observers observed a data entry worker at the audit who was having trouble with his spreadsheet and closed it. When he tried to reopen it, it opened in “Read Only” mode because someone else on the network had the file opened. This indicates that anyone on the network can log in and make edits to the spreadsheets that feed the aggregation files. We bring this to your attention because this lack of control over key data raises serious concerns regarding the accuracy and reliability of Cyber Ninjas’ count.
May 17, 2021
Page 3

**Storage Policies for Ballots After May 14.** Thank you for disclosing your storage policies. We have reviewed them and note that both ballots and voting equipment should be stored in temperature and humidity-controlled rooms. Ballots will have natural degradation when heat and temperature changes, and computerized voting equipment are at significant risk if they are not maintained at the correct temperature and humidity. Indeed, Cyber Ninjas has already been having heating issues with computers at the Coliseum.

We also have concerns with how ballots are being physically secured in practice. While observing the locking and securing of ballots and equipment Friday night, one of the Secretary’s observers saw a dispute play out over who could unlock a trailer, Doug Logan or Ken Bennett. During the confusion, a truck driver came up and unlocked the trailer in question, disturbing both the Secretary’s observer and an Arizona Ranger who was present. The truck driver later explained that it was not his lock, but the camera crew’s lock (rather than Cyber Ninja’s or the Senate’s), and freely offered the combination of the truck’s lock. This caused the Arizona Ranger to go to the Coliseum and get another box of locks, one of which he put on the truck. Cyber Ninjas’ personnel tried to justify this by claiming the trailer was not evidentiary, but this was plainly not true—it held the servers and the computers used to aggregate ballot-derived data. The Arizona Ranger also ensured that one truck was properly sealed, and ensured that Ken Bennett would have the key for the lock he put on. These observations do not instill confidence that all the trailers containing ballots and equipment are properly sealed and locked, that Senate Liaison Ken Bennett is the sole person who can access them, or that lock combinations are not known to non-security personnel such as truck drivers.

Thank you for your prompt attention to these matters.

Sincerely,

Josh Hendor

cc: Kory Langhofer - kory@statecraftlaw.com
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    Emma Cone-Roddy - econe-roddy@omlaw.com
VIA EMAIL ONLY

Maricopa County Board of Supervisors
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Jack.Sellers@maricopa.gov
Supervisor Steve Chucri, District 2
Steve.Chucri@maricopa.gov
Supervisor Bill Gates, District 3
Bill.Gates@maricopa.gov
Supervisor Clint Hickman, District 4
Clint.Hickman@maricopa.gov
Supervisor Steve Gallardo, District 5
Steve.Gallardo@maricopa.gov

RE: SUBPOENAED ELECTION EQUIPMENT

Dear Supervisors,

I am writing to express my concerns about Maricopa County’s election equipment that was turned over to Senate President Karen Fann and Senator Warren Petersen and their agent, Cyber Ninjas, pursuant to the January 12, 2021 subpoena, including components of the certified Dominion Democracy Suite 5.5B voting system. I understand Cyber Ninjas has begun returning the election equipment to the County. I have grave concerns regarding the security and integrity of these machines, given that the chain of custody, a critical security tenet, has been compromised and election officials do not know what was done to the machines while under Cyber Ninjas’ control.

Indeed, such loss of custody constitutes a cyber incident to critical infrastructure—an event that could jeopardize the confidentiality, integrity, or availability of digital information or information systems. Therefore, my Office consulted with election technology and security experts, including at the Department of Homeland Security’s Cybersecurity and Infrastructure Security Agency, regarding the appropriate next steps, and each unanimously

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Page 1 of 3
advised that once election officials lose custody and control over voting systems and components, those devices should not be reused in future elections. Rather, decommissioning and replacing those devices is the safest option as no methods exist to adequately ensure those machines are safe to use in future elections. As such, my Office is urging the County not to re-deploy any of the subpoenaed machines that it turned over to the Senate in any future elections. Instead, the County should acquire new machines to ensure secure and accurate elections in Maricopa County going forward.

A fundamental requirement to ensure the security and integrity of election equipment includes maintaining strict access limitations and a clear chain of custody to prevent both intentional and inadvertent tampering. Arizona’s election procedures enumerate detailed requirements to protect voting equipment from these threats. Federal election standards also set best practices, which require voting equipment to remain securely stored in facilities that prevent unauthorized access. As you know, the Maricopa County Elections Department upholds strict chain of custody procedures for its voting equipment by securing equipment in limited-access facilities, logging access to the equipment, and air-gapping equipment at all times.

However, once the subpoenaed machines were turned over to the Senate and Cyber Ninjas, it is unclear what, if any, procedures were in place or followed to ensure physical security and proper chain of custody. Indeed, our expert observers, as well as multiple news reports, have noted troubling security lapses. And Cyber Ninjas has failed to provide full transparency into what they did with the equipment. No election official or expert observer designated by my Office was allowed to remain with the equipment for the duration of the Cyber Ninjas’ processing and handling of the equipment, nor did Cyber Ninjas provide a continuous, clearly visible livestream of the area where voting equipment was stored and handled. The lack of physical security and transparency means we cannot be certain who accessed the voting equipment and what might have been done to them.

Unfortunately, after a loss of physical custody and control, no comprehensive methods exist to fully rehabilitate the compromised equipment or provide adequate assurance that they remain safe to use. While the machines could be put through an intensive and costly forensic examination by an accredited, national forensics laboratory, even after such forensic examination, machines are generally not recommissioned given that the forensic analysis cannot be guaranteed to locate all potential problems.

Considering the potential impact of decommissioning the subpoenaed equipment, including on taxpayer dollars and County operations, my Office did not reach this decision lightly. However, given the circumstances and ongoing concerns regarding the handling and security of the equipment, I believe the County can agree that this is the only path forward to ensure secure and accurate elections in Maricopa County in the future.

To be clear, this letter pertains only to the specific pieces of subpoenaed election equipment that the county turned over to the Senate and its contractors, and not to the underlying

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2 Elections Procedures Manual, Chapter 4, Section III, at pages 95-98.
4. Security seals will be placed on all doors prior to building use and will be checked regularly for breaches for further action as required. These will remain in place and updated accordingly as the storage requirements change.

5. Perimeter lighting is sufficient for the nighttime hours and will be supplemented in the event of damage or outage where lighting and visibility is reduced.

**Access Control**

All access into the building will be by a single entrance located on the west side of the building. Garage doors will be utilized as movement requires and then secured when all equipment is in situ on site. Access controls will include credentials and physical logs where required to ensure records are kept and available for audit security and reviewing purposes.

Only authorized audit staff and emergency services will be allowed access into the building for the duration of the movement and storage.

**Internal Security Controls**

During the period of storage, 24/7 law enforcement services will be on site on the exterior and interior providing guard and emergency services. They will have post orders and be controlled by WAKE TSI, HSSE, and Senate requirements.

In the event of a building breach, or if unauthorized access is gained into the building, law enforcement will carry out sworn police officer duties they have under Arizona State and Federal laws to ensure the protection and safe custody of the ballots and tabulation machines.

Phoenix PD and DPS station locations are within 5 minutes of the fairgrounds for response in the event onsite law enforcement staff require immediate support.

**Live Streaming and CCTV**

Audit IT and associated services are establishing a live video feed which will be operating inside the venue 24/7 for the duration of the storage. This feed will be recorded and live streamed off site and controlled by audit IT services.

**Operational and Information Security Policies**

All information and documents relating to the movement is considered confidential and not for public information and should be treated as such. No documents should be made available to the public or unauthorized personnel. This is to ensure that the information does not end up in the public arena and therefore compromise the movement or storage of the ballots and tabulation machines which may occur due to the current threat environment.

**Guard Force Management**

For the duration of the storage of ballots and tabulation machines, the building is considered as private property and not public space so any transgression of the fenced and marked perimeter outside the building is considered as criminal trespass and will be dealt with by law enforcement on site as appropriate.

Scheduling will be maintained by LES and the audit HSSE team to ensure 24/7 coverage is maintained during the term of the storage. In the event a change in the schedule occurs, contingency will be made to accommodate supplemental services with LES.

**Rules of Engagement**

Any breaches of criminal law will be dealt with by law enforcement on site in accordance with their statutory powers of arrest under Arizona State Law.
Dominion voting system, which remains certified for use in Arizona, nor any other election equipment that the County did not turn over to the Senate and its contractors.

If the County intends to re-deploy the subpoenaed equipment, over which the County lost custody and control, for use in future Arizona elections, please notify my Office as soon as possible, and no later than July 1, 2021, so that we may properly consider decertification proceedings pursuant to A.R.S. § 16-442 as to the subpoenaed equipment.

Thank you for your prompt attention to this important matter.

Sincerely,

Katie Hobbs
Arizona Secretary of State

cc:

Stephen Richer, Maricopa County Recorder
sricher@risc.maricopa.gov

Scott Jarrett, Director of Election Day and Emergency Voting,
Maricopa County Elections Department
sjarrett@risc.maricopa.gov