



FINAL

Collin County Logic and Accuracy Report



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02/16/2024

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February 16, 2024

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WHAT IS A LOGIC AND ACCURACY TEST?

According to the Election Assistance Commission, "Logic and Accuracy (L&A) Testing is a collection of pre-election procedures that insure that the voting equipment and ballots to be used in an upcoming election can properly display the ballot, collect votes, and tabulate results. Usually referred to as L&A, these tests occur prior to the election and are conducted in such a way as to make public observation of the procedures and results possible. The historical purpose of L&A was to permit candidates, parties and the public to review ballots and lever machine programming prior to the election. The purpose was to demonstrate that the ballot was accurate, complete and votes cast could be properly tabulated."

TEXAS LAW GOVERNING THE LOGIC AND ACCURACY TESTING

Sec. 129.023. PUBLIC TEST OF LOGIC AND ACCURACY.

- a. The general custodian of election records shall create a testing board consisting of at least two persons. The general custodian of election records shall make every reasonable effort to ensure that the testing board consists of at least one person from each political party that holds a primary election.
- b. Not later than 48 hours before voting begins on a voting system, the general custodian of election records shall conduct a logic and accuracy test. Public notice of the test must be published on the county's Internet website, if the county maintains an Internet website, or on the bulletin board used for posting notice of meetings of the commissioners court if the county does not maintain an Internet website, at least 48 hours before the test begins, and the test must be open to the public.
 1. If the test is being conducted for a primary election, the general custodian of election records shall notify the county chair of the test at least 48 hours before the date of the test. The county chair shall confirm receipt of the notice.
 2. If the test is being conducted for an election in which a county election board has been established under Section [51.002](#), the general custodian of election records shall notify each member of the board of the test at least 48 hours before the date of the test. If the county election board chooses to witness the test, each member shall sign the statement required by Subsection (e)(1).
- c. The general custodian of election records shall adopt procedures for testing that:
 1. direct the testing board to cast votes;
 2. verify that each contest position, as well as each precinct and ballot style, on the ballot can be voted and is accurately counted;
 3. include overvotes and undervotes for each race, if applicable to the system being tested;
 4. include write-in votes, when applicable to the election;
 5. include provisional votes, if applicable to the system being tested;
 6. calculate the expected results from the test ballots;
 7. ensure that each voting machine has any public counter reset to zero and presented to the testing board for verification before testing;
 8. require that, for each feature of the system that allows disabled voters to cast a ballot, at least one vote be cast and verified by a two-person testing board team using that feature; and
 9. require that, when all votes are cast, the general custodian of election records and the testing board observe the tabulation of all ballots and compare the actual results to the expected results.

- c-1. A test conducted under this section must also require the general custodian of election records to **demonstrate**, using a representative sample of voting system equipment, that the source code of the equipment has not been altered.
- d. A test is successful if the actual results are identical to the expected results.
- e. To provide a full and accurate account of the condition of a given voting machine, the testing board and the general custodian of election records shall:
 - 1. sign a written statement attesting to:
 - i. the qualification of each direct recording electronic voting machine that was successfully tested;
 - ii. any problems discovered; and
 - iii. the cause of any problem if it can be identified; and
 - 2. provide any other documentation as necessary.
- f. On completing the testing:
 - 1. the testing board shall witness and document all steps taken to reset, seal, and secure any equipment or test materials, as appropriate; and
 - 2. the general custodian for election records shall preserve a copy of the system's software at a secure location that is outside the administrator's and programming entity's control until at least 22 months after election day.

In addition, the Texas Secretary of State has issued the following guidelines for the Logic and Accuracy Testing:

- 1. <https://www.sos.texas.gov/elections/laws/advisory2022-30.shtml>
- 2. <https://www.sos.state.tx.us/elections/forms/seminar/2023/41st/logic-and-accuracy-testing.pdf>

COLLIN'S LOGIC AND ACCURACY TEST VS. OTHER LARGE COUNTIES

County	Harris	Tarrant	Collin
Multi-day L&A Test	YES	YES	NO – lasted 6 hours
Test each ballot style/precinct	YES	YES	UNKNOWN
Batches tested as Absentee, Early, and Election Day	YES	YES	NO – Only Election Day simulation
Percentage of machines tested	UNKNOWN	100% * (normally 10%)	5 / 183 = 3.6% for this election
Tested machines deployed?	YES	YES	NO – put back in storage after testing

Collin County in many ways was rightly rewarded with the award of “Best Election Process in the State” by the supposed forensic audit of the 2020 election. That particular audit was neither forensic nor complete, but in comparison with the others Collin County did do better than the other counties.

If Collin County is the model for election processes in the state, why does Collin County only do six hours of testing?

FEBRUARY 16, 2024- POSITIVES

In general, the Elections office is following the letter of the Law and the Texas Secretary of State guidelines, and they have made improvements since the first time we attended a logic and accuracy test.
The testing board was duly appointed
The Hash validation test was conducted publicly.
The materials were signed by the testing board.
The materials were sealed.
There was a zero report.
The expected results matched the final results.
We appreciate the new signs on the Ballot Marking Devices that alert the voters to read their ballots before depositing them in the Tabulator/Scanner.

FEBRUARY 16, 2024- AREAS FOR IMPROVEMENT

This section provides observations during the Collin County L&A test and includes the issue, the observation, and a comment on each item.

ISSUE	OBSERVATION	COMMENT
<p>Testing began before the Public Arrived</p>	<ul style="list-style-type: none"> • The hash codes for the machines that were to be tested were preloaded the day before the Public Testing • They started running ballots before the public was there to observe. 	<p>This is not public and shows a lack of transparency.</p> <p>How can these things be observed if they were conducted outside of the public's view?</p> <p>How do we know what was on the USB drive if it was preloaded outside of the public purview?</p>
<p>Instructions that we could not take pictures inside the Tabulation Room.</p>	<ul style="list-style-type: none"> • This is a public test. • We have in past years been able to take pictures. • At this testing, we were allowed to take pictures if we stood outside in the hall from the large windows OR from the open doorway. • There are cameras in the tabulation room that are on 24-7 from February 12th. The public can view what is happening in that room. • Poll watchers and workers can see through the large windows into the tabulation room. 	<p>We were told that the reason we could not have phones out was for security reasons.</p> <p>What is the difference between taking pictures from the hall and inside the room?</p> <p>There is a camera, and the room is photographed continually during elections. So, it appears it is not a camera concern.</p> <p>Could it be a phone and internet concern? If this is the case, then the Election Administrator, Asst Election Administrator and members of the testing board should refrain from wearing or using their Apple Watches in that room which we did observe happening on 2/16/2024.</p> <p>If the county is serious about security, no electronic device including watches, tablets, phones, or storage devices would be allowed to enter that room. Possession of such an item would be a misdemeanor of increasing penalty.</p>

<p>Process was out of order</p>	<p>Per the SOS Guidelines, the hash validation must be completed before testing the ballots for accuracy.</p> <p>Since the ballots were already in process before they were hash validated, this was out of order.</p> <p>We asked that the test be stopped, and the hash validation completed in the correct order.</p> <p>They did stop the process, but then hash validated a different scanner and then continued running the ballots on the machine that had not been tested.</p>	<p>Why stop the test on one machine if it is your intention to run hash validation on a separate machine?</p> <p>When asked about the stoppage, the election administrator said that they stopped the test because of a complaint by Debbie Lindstrom and to make her happy.</p> <p>This type of statement is unprofessional and is a form of poisoning the well – making Mrs. Lindstrom out to be the problem rather than the office running a process out of order.</p> <p>Admittedly, given the state of TEC law today, running the test on separate machines is legal to the minute letter of the law.</p> <p>However this was a bad look ultimately by not following the requirements in order.</p>
<p>Password Issue</p>	<p>The password for the tabulation room scanners is the same password that has been used since at least 2020 at every polling place and on every tabulator.</p>	<p>The importance of this issue cannot be emphasized enough. This is a CODE RED security failure by the Election Office and by the County INFOSEC team and is not excusable.</p> <p>The passwords need to be changed after every election at a minimum, and it would be even better if each polling place had a different password that is distributed only on a need-to-know basis.</p> <p>THE PASSWORDS need to change before tomorrow for the March Primary.</p> <p>This issue was originally brought up at the August 28, 2023 Commissioners Court on Election Integrity and later revisited at a meeting on Oct 6 with Judge Hill.</p>

<p>The Public was prevented from observing</p>	<p>We had to stand behind a table and behind workers who were mostly blocking the machines, so it was difficult to see what they were doing.</p> <p>Citizens were told to back up even when they were behind the table.</p> <p>This blocked the view on how the ballots were fed and tabulated on the DS200. They are supposed to feed the ballots in four different ways. We couldn't observe if that occurred or not.</p> <p>The public was not allowed to participate.</p>	<p>This yielded the test unobservable, and therefore it was not truly a public test, nor was it transparent.</p>
<p>Testing Board did not cast votes</p>	<p>Texas Election Code 129.023 c1 calls for the Election Administrator to instruct the Testing Board to cast ballots.</p> <p>None of the citizen observers noticed any of the members of the testing board casting any ballots. That was only reserved to the contracted workers.</p>	<p>BIG DISCLAIMER – None of the public observers saw any evidence of the testing board casting ballots.</p> <p>So, if the testing board did not participate in casting ballots, then this is a clear violation of state law.</p> <p>The election administrator does not have the authority to waive duly written laws from the legislature. In fact, it is even more serious than simply breaking the law.</p> <p>In <i>Re Coy</i>, 127 US 731 (1888) which is established federal law, it states:</p> <p>It is the affirmative duty of our election officials to comply with all Federal and State laws governing administration and procedure of our elections, thereby guaranteeing our elections are accurate and free from distortion or manipulation. ... The evil intent consists in disobedience to the law.</p> <p>This federal law assigns evil intent to disobedience to the law.</p> <p>If proven true, this omission is considered neglect and the election board, which we have asked to meet regularly to observe and monitor the elections office, should investigate this and every other violation of the law.</p> <p>An election office cannot pick and choose which laws they would like to follow. The <i>Coy</i> case law does not give an excuse for ignorance of the law.</p>

<p>Contingency Plan</p>	<p>One citizen asked about the contingency/emergency plan in the event that the system went down and was told that there is a plan, but that it was not practiced or known by the judges.</p>	<p>While it is commendable that a disaster plan is created, a plan is only as good as its implementation and roll-out. A contingency plan, if it unknown to the judges, is unhelpful in the event of an emergency.</p> <p>Our suggestion is to publicize to the staff and election judges the procedure and have it at every polling location so that they can respond to emergencies instead of reacting to them</p>
<p>Contracted Workers are not forthcoming that they are contracted from ES&S (the vendor)</p>	<p>When asked what company the workers represented, the workers were not forthcoming about their employer.</p> <p>Later we were told that a third party was contracted to provide labor for the L&A test.</p> <p>Based on prior years' L&A tests, it is clear that Collin County is using ES&S trained contractors to run the testing.</p> <p>We conclude that the contractors are either ES&S employees or they are trained by ES&S, and they are the ones that did the majority of the testing.</p>	<p>If true, this is a conflict of interest. It would remind us of the old saying that you don't want the "fox guarding the hen house."</p> <p>If these contractors were ES&S employees, then what motivation would drive them to find an issue in the election system?</p> <p>*These same employees have been performing the L&A testing since at least Oct 2022.</p>
<p>Access Code Bypass</p>	<p>This was noticed on the DS200. We asked what it was for. Neither Bruce nor Kaleb knew at the time. But later looked it up and found that it could be disabled. Here is the response from Kaleb.</p> <p>"After researching this admin option, our team discovered that this option, if disabled, would not require a password upon the opening of the poll during an election period. Currently the default setting for all of our equipment requires a poll worker to enter a code when opening the polls for voting. If this option was disabled on the unit the code would not be required."</p>	<p>This feature should not be anywhere near an election machine that is considered to be critical infrastructure.</p> <p>However, it appears that Kaleb's answer is backwards. An access code bypass, by simple definition means that the system is going to bypass the requirement for an access code.</p> <p>In fact, the ES&S manual for the DS-300 clearly states that the purpose of this feature is to disable access codes when the equipment is in the warehouse.</p> <p>Removing security features is something that a security minded organization would never do. This should at the very least be followed up and this feature should NEVER be utilized, and the State of Texas should demand this feature be removed from the software in future updates.</p>

<p>Suspicious Post-it note on the hash comparison computer</p>	<p>It appeared to be a password for the hash validation test.</p>	<p>Passwords on post-it-notes is not secure. The Collin County INFOSEC team should possibly invest in a password storage program like LASTPASS or other like-minded programs.</p> <p>Every person who uses a machine in the entire election department, as well as temporary election workers should have individual credentials.</p> <p>This will be further elaborated in the <i>How do we Make Things Better</i> section below.</p>
<p>USB sticks unsecured</p>	<p>There were several USB sticks laying around the tabulation room and a large bin of them.</p> <p>ES&S claims in their documentation that the USB sticks are specially crafted to be accepted by the tabulation and scanning hardware.</p> <p>If this is the case, then why does the election office have a relaxed attitude about USB drives scattered around the room?</p>	<p>USB drives is a security concern and Collin County INFOSEC should be engaged to adhere to best practices involving the protection of these devices from theft, or other uses.</p>
<p>Hostile Environment</p>	<p>Kaleb Breaux, the Asst Election Administrator, spoke harshly to two different citizens.</p> <p>One citizen looked at her phone for an email, and he threatened to kick her out. His yelling was loud enough that it could be heard outside. This woman is very shy and felt shamed. In fact, she left shortly after being publicly humiliated.</p> <p>When another citizen notified Kaleb that the contractors were having trouble finding a candidate on the Ballot Marking Device, Kaleb told her that she needed to back up in a very harsh tone even though she was about 5-6 feet away.</p> <p>When the steps were out of order for the hash validation, blame was put on a citizen not the process. And the incident was referred to as a complaint and then later softened to a concern.</p> <p>This L&A test was done at the last minute so that any mistakes or changes would be difficult to make.</p>	<p>Citizens should not be considered as adversaries and treated as if they are there to cause problems. We are there to observe.</p> <p>If there are questions from citizens, they should be answered with respect.</p> <p>If there are instructions to citizens, they should be delivered with respect.</p> <p>The entire demeanor of the staff at the elections office is one of angst and hostility.</p> <p>The citizens are just there to observe what is happening and for accountability to the procedures and law.</p> <p>If the election office is not following the procedures or the law, it should be pointed out and corrected without angst towards the citizens.</p> <p>This hostile attitude just fosters more distrust in the system and those who administer it.</p>

THE CURRENT LOGIC AND ACCURACY TEST IS INADEQUATE.

So what can we do to improve this test?

First of all, the legislature has mandated that the L&A test be performed, and it has given TEC imperatives that must be completed according to the law. This section of this document will show that the current L&A test is missing the mark. An L&A test could be so much better, and it could solve problems before they are discovered during early voting or election day. Of these suggestions, some could be adopted voluntarily by any county in Texas. Some counties will say they do not have enough funds to do it right. Some counties might adopt some of these recommendations. Our prayer is that Collin County will be a leader and voluntarily lead the way to a valid and useful L&A and take it away from the perspective of a dog and pony show – to a real verification and useful tool.

PART ONE – PROBLEMS WITH THE L&A AS DEFINED BY LAW TODAY.

These are the issues with the L&A test today.

1. L&A testing was created for monolithic lever machines. Back in the 1970s and 1980s, large lever machines were used for voting. It was a simpler time, with less population and fewer representatives and fewer ballot styles. The purpose of the test was originally to make sure that if you voted for a person – that the vote was tallied correctly in the final count.
2. L&A testing is by law only mandated for a representative selection of a single machine per type. This means that one DS-200, one DS-850, one DS-650, and one Ballot Marking Device (BMD) are tested. If this is the extent of the testing, then this leads to a test coverage of about 1-5% or even less depending on the total number of machines deployed by a county.
3. To appreciate this deficiency, let's think about a small business with 20 Windows PCs all connected to a network. We envision a security audit where a representative sample of one DELL and one HP computer is selected to make sure that virus and security software is proper, and that there has not been any alteration of the base operating system. This is analogous to the hash validation and the L&A test for election systems. The question is what good is testing 2 out of 20 computers in the above scenario.
4. In the same vein, what good is testing one of each type of voting machine when there are many devices fielded to poll locations for Early Voting and more for Election Day?

SOLUTIONS

1. Even if it takes a few days, every machine should be hash validated. Period. Not enough money and not enough manpower are just excuses to stick with the status quo and not make any changes. The security of our elections is paramount and should be taken seriously.
2. Passwords should be unique for each polling place.
3. Every individual from volunteer to temp employ should have a separate login to every election system with traceability and audit logs.
4. The access code bypass should never be used.
5. Once ballot styles are created, EVERY machine must be tested with EVERY ballot style. If the hash validation is performed for every machine, this plank could be reduced to a small representative sample.
6. The L&A test needs to simulate mail-in, early voting in person, and election day voting in person AND cycle through enough "days" to simulate the entire process.
7. Provide a TESTING PLAN that governs what happens in the L&A and in what order so that the public can follow along and include the secret hardware testing that happens after the public is dismissed.
8. During the L&A test – a blow by blow – almost like a football game color commentary— should be provided so that the public knows what is happening. The commentary should be detailed enough that a new person understands what is happening right now during the flow of the test.
9. If we are going to use machines, we should enact real Cybersecurity measures:
 - a. nmap scan for open ports
 - b. Check for missing Windows updates
 - c. Check for missing antivirus definitions
 - d. Prepare your own test deck (minimum of 1000 ballots) in addition to the vendor-supplied test deck
 - e. SHA software validation on every machine, not just a sample.
 - f. Ballots on counterfeit paper--are they detected and rejected?
 - g. Check that all Windows logs are at least 2GB and set to halt when full.
 - h. Delete all anonymous accounts (such as admin, guest, electionworker01, vendortechician01, etc.) and only allow accounts with personal first and last names (e.g., john.smith).

BOTTOM LINE OF WHAT NEEDS TO BE FIXED IMMEDIATELY

Suggested Immediate Changes:

1. Passwords need to be changed immediately!
2. If technically possible, switch all generic passwords to a system where they are assigned to individuals.

FINAL THOUGHT:

We understand that many of the suggested measures in this document are not a part of the current Logic and Accuracy Test, but why not make Collin County the model of election security rather than just doing the bare minimum.

The bare minimum is not a good look for Collin County who is considered the "model of elections" for the State of Texas.

UPDATES 03/21/24

Testimony from Witnesses to the L&A Testing.

1. Relevant to the coding of the ballots and why coding errors can cause catastrophic and unrecoverable elections.

A group of 10 people were brought in to do the input into the BMD's, I recognized several as doing the same from the October 2023 testing. At that time, when I inquired as to who they were, I was told they were contract employees paid by the county, that had been trained by ES&S. One group appeared to have difficulty with the BMD being "tested" as the hearing impaired machine. Observers were instructed to stay back, and not speak to the testers, as to not distract the testers. Once the ballots were run through the DS200's the machines were closed out, tapes run and USB sticks removed to be taken into the tabulation room to be combined. Reports were run and then an employee called off the pre-determined count to the EA to verify the printed reports. There were 4 people observing the count/call. This process was stopped several times due to discrepancies. It was determined that an incorrect district was input in the ballot entry, which caused the ballot scan to be off, due to incorrect positional programming. That was corrected and the reports were rerun.

2. The Elections office admits that they only do the minimum required

I asked Bruce Sherbert why the USB had not been replaced in the machine before the counting began again. He stated that they didn't have to replace the USB, this all was a simulation of the process, that they had already tested that machine. They only have to publicly test a minimum representative amount per the TX SoS. None of the testing BMD's or DS200's would be used in the actual election, they would be put under "lock and key" as their proof of testing if any questions arose after the election. I asked why kind of testing was done on the actual machines that went into the field for use. He indicated that there was a diagnostic test that was run on each machine, but that was not publicly done. I inquired why they would not do that for transparency to the public, I was told they only do what is minimumly required to be done by the TX SoS. I said "In other words, I have to put my trust in you that this was actually done", reply "basically yes, I have been doing this for a long time" I stated that Tarrant and Harris do week long public testing for transparency, he said "I am doing what the TX SoS requires". I indicated I was not trying to be argumentative, but this wasn't a good look for transparency.

3. Important information about the security vulnerabilities of the ES&S system AND more information about the password situation that is mentioned within this report. [Barry Wernick on X: "🔒 BREAKING NEWS 🔒 Rick Weible presents new evidence of ES&S vulnerabilities at yesterday's March 19, 2024 Brookings County Commission Meeting. Now it's public record. Is his life at risk? He seems to think so. #ElectionIntegrity #WeThePeopleCount #LimitGovernmentNotPeople](#)

This is very concerning and needs immediate attention!