

LOGIC AND ACCURACY QUESTIONS TO ASK BEFORE THE PUBLIC TESTING

PRE L&A QUESTIONS:¹

- **Can you provide the EAC Certificate?²**
- **When was the last time you scanned the equipment for viruses?**
- **When was the battery replaced? Is it older than 3 years?**
- **When was the last time ES&S did maintenance?**
- **Did you back up the tabulator before maintenance was done?**
- **Do you have a logbook for the storage of tabulators, that notes who had access to the systems?**
- **Who will be on the testing board?³ (must be at least 2 with reasonable attempt to have one person from each party that holds primary)**
- **When will the Logic and Accuracy take place?⁴ (must be at least 48 hours before voting begins)**

BALLOT CREATION QUESTIONS

✓	Questions	Answer/Comment
	Who created the test matrix/pattern/script?	
	Who created the test ballots?	
	Who made the actual ballots?	
	How many ballot styles? ⁵	
	How many ballots in the test deck?	
	What is your FORMULA for number of ballots in the test deck?	

¹ <https://uscage.org>

² Texas Election Code 122.001.a.3 <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.122.htm>

³ Texas Election Code 129.023 a <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

⁴ Texas Election Code 129.023 b <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

⁵ Texas Election Code 129.023.c. 2 <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

DOES THE TEST DECK INCLUDE:

✓	Description	Comment
	Every Ballot Style/Precinct ⁶	
	A vote for every choice on the ballot ⁷	
	Undervotes ⁸	
	Overvotes ⁹	
	Blank Ballots. How many? (at least 10)	
	Write-In votes ¹⁰	
	Unique number of votes casts per candidate per race? ¹¹	
	Is a prime number assigned to each contest?	
	Provisional ¹²	
	Limited	
	Labeled “TEST”	
	Absentee ¹³ (Folded: Recommend at least 10%) (Test Bleed Through with Sharpie) Both are recommended in SOS training	Calculate percent of total test deck Calculate percent folded
	Tested Absentee, Early Voting and Election Day ¹⁴	
	Handmarked by Public ¹⁵	

⁶ Texas Election Code 129.023.c.2 <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

⁷ Ibid

⁸ Texas Election Code 129.023.c.3 <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

⁹ Ibid

¹⁰ Texas Election Code 129.023.c.4 <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

¹¹ <https://www.sos.state.tx.us/elections/forms/seminar/2023/41st/logic-and-accuracy-testing.pdf>

¹² Texas Election Code 129.023.c.5

¹³ <https://www.sos.state.tx.us/elections/forms/seminar/2023/41st/logic-and-accuracy-testing.pdf>

¹⁴ <https://www.sos.state.tx.us/elections/forms/seminar/2023/41st/logic-and-accuracy-testing.pdf>

¹⁵ <https://www.sos.state.tx.us/elections/forms/seminar/2023/41st/logic-and-accuracy-testing.pdf>

HASH VALIDATION TEST¹⁶: AT LEAST ONE PIECE OF EQUIPMENT PER DEVICE AND VERSION

Device Type and Version	Asset Tag #

QUESTIONS ON HASH VALIDATION

Was Hash performed on at least one piece of equipment per device type and version? ¹⁷	<table border="1"> <tr> <td>Election Management Computers</td> <td>Central Scanners</td> </tr> <tr> <td>Ballot Scanners (precinct)</td> <td>Tabulation computers</td> </tr> <tr> <td colspan="2">Ballot Marking Devices (to include for accessible use)</td> </tr> </table>	Election Management Computers	Central Scanners	Ballot Scanners (precinct)	Tabulation computers	Ballot Marking Devices (to include for accessible use)	
Election Management Computers	Central Scanners						
Ballot Scanners (precinct)	Tabulation computers						
Ballot Marking Devices (to include for accessible use)							
How were these particular machines selected?							
List the machine types and versions tested							
Were these the same machines that have been tested before?							
What is the source of software comparison tool? ¹⁸							
Is the comparing computer connected to the internet? ¹⁹							
Are the USBs new and unused? ²⁰ Can you show us before you load the information from the equipment?							
Was the Hash Validation test successful for each machine?							
Was the Hash Validation performed before counting any ballots? ²¹							
Were the ballots counted on the same machines that were hash validated?							

¹⁶ Texas Election Code 129.023.c-1 <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

¹⁷ <https://www.sos.state.tx.us/elections/forms/seminar/2023/41st/logic-and-accuracy-testing.pdf>

¹⁸ ibid

¹⁹ ibid

²⁰ <https://www.sos.state.tx.us/elections/forms/seminar/2023/41st/logic-and-accuracy-testing.pdf>

²¹ <https://www.sos.state.tx.us/elections/forms/seminar/2023/41st/logic-and-accuracy-testing.pdf>



LOGIC AND ACCURACY GAME DAY QUESTIONS

TESTING THE BALLOTS

	Did they scan ballots in all four orientations? ²² (top rightside in, top backwards, flipped rightside in, flipped backwards)	
	Did the testing board cast ballots? ²³	
	Does each ballot get tested on each scanner?	
	Are all ballot positions tested? (Related to created ballots above)	
	Did they test any print on demand ballots? (if applicable)	
	How many ExpressVote ballots will be tested per precinct?	
	How many scanners will be used to count? <ul style="list-style-type: none"> • Today? • During the Election 	Today _____ Election _____

TESTING EQUIPMENT

How were these machines in particular selected for the Public Logic and Accuracy Test?	
Are these the same machines that were tested before?	
Can the same ballot be reinserted into the tabulator if removed?	
Can copies be inserted into the tabulator and will they count?	
Will the Test include? ²⁴ <ul style="list-style-type: none"> ○ Hand-marked ballots ○ Ballot marking device ballots ○ DRE ○ E-pollbook (best practice) ○ Tabulators ○ Central Scanners ○ Central accumulator ○ Election Night Reporting 	

²² <https://www.sos.state.tx.us/elections/forms/seminar/2023/41st/logic-and-accuracy-testing.pdf>

²³ Texas Election Code 129.023.c.1 <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

²⁴ <https://www.sos.state.tx.us/elections/forms/seminar/2023/41st/logic-and-accuracy-testing.pdf>

TESTING EQUIPMENT CON'T

DRE (Curbside) must be cast in teams of two²⁵

- Date and Time _____
- Zero report²⁶
- Check Modem Status on Configuration Tape

Tabulators

- Check Date and Time on each tabulator _____
- Zero Reports²⁷
- Check Modem Status on Configuration Tape

Did the expected results match the actual reported results?²⁸

Testing Materials Sealed in Box with members of testing board sign off²⁹

Was SOS form filled out? “Certification Of Hash Validation, Public Logic And Accuracy Test And First Test Of Automatic Tabulating Equipment”³⁰

Is a copy of the system’s software being stored at a secure location at a secure location outside of the administrator’s and programming entitiy’s control for at least 22 months after election day?

²⁵ Texas Election Code 129.023.c.8 <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

²⁶ Texas Election Code 129.023.c.7 <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

²⁷ Ibid

²⁸ Texas Election Code 129.023.d <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

²⁹ Texas Election Code 129.023.f.1 <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>

³⁰ Texas Election Code 129.023.e.1 <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>



LOGIC AND ACCURACY AFTER THE TESTING

DOCUMENTS TO COLLECT BY PUBLIC INFO REQUEST	
	Reports from any ExpressVote machines
	Reports from all Tabulators tested
	Reports from Hardware Diagnostics Test ³¹
	Audit Logs
	Cast Vote Records from the L&A test
	Ballot Image in c and I formats.
	Digital Image of Certificate

Fill out form here:

<https://apps.collincountytx.gov/Forms/PublicInfoRequestProd>

³¹ Texas Election Code 129 Subchapter B <https://statutes.capitol.texas.gov/Docs/EL/htm/EL.129.htm>