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Ms. Christina Adkins
Acting Director of Elections
Texas Secretary of State
Elections Division
208 East 10th Street
Austin, Texas 78711

> Re: Inspection of the EVS 6.3.0.0 System conducted on multiple days in
> January and March of 2023

Dear Ms. Adkins:

Pursuant to my appointment by the Texas Secretary of State as a voting systems examiner under TEXAS ELECTION CODE § 122.035, please allow this letter to serve as my report concerning the above referenced examination. I, along with the other statutory examiners and staff from the Secretary of State's office, examined the Electronic Systems & Software EVS6.3.0.0 voting system ("**ES&S 6.3.0.0 System**") on January 24 and 25 and March 31, 2023, at the offices of Elections Division of the Texas Secretary of State in Austin, Texas.

Prior to the in-person exam, officials from the Texas Secretary of State and the examiners participated in a phone call to discuss the ES&S 6.3.0.0System and the plan of examination. Also prior to the exam day, I reviewed all of the documentation provided by ES&S about the ES&S 6.3.0.0 System. On January 24, 2023, several examiners, Secretary of state staff and I witnessed the trusted build, hash validation and performed accessibility testing on the ES&S 6.3.0.0 System. Some test voting was also performed on the same day. The next day on January 25th, all of the examiners and staff inspected the above referenced software and equipment and

accompanying written materials for compliance with the relevant provisions of the TEXAS ELECTION CODE and Texas Administrative Code related to the requirements for election machines and software.

The ES&S 6.3.0.0 System is the newest version of the ES&S voting system. The last version of the ES&S voting system that the Texas Secretary of State certified for us in Texas was the 6.1.1.0 System (and the certification for the 6.2.0.0 System is still pending). There were limited changes in the ES&S 6.3.0.0 System from previous versions; however, these changes could be viewed as substantive and may require conditions on any approval of the 6.3.0.0 System as detailed below.

ACCESSIBILITY TESTING

On the first day of the inspection, the examiners tested the physical equipment of the ES&S 6.3.0.0 System for accessibility compliance with the applicable state laws and regulations. These tests confirmed that the ES&S 6.3.0.0 System complied with the accessibility requirements of Texas law. There was some limited discussion about terminology and instructions used in the audio portions of the voting assistance recordings. These issues seem to be easily resolved if the Secretary believes they are material, but should not prevent certification.

HARDWARE AND SOFTWARE TESTING

On the first the examination day, ES&S completed the loading and installation of the ES&S 6.3.0.0 System and the hash validation process. The hash validation process raised issues about performing the hash validation using the latest version of the Ubuntu operating system as opposed to a previous version called for the testing standards. The issue was later resolved.

Also on the first day of the inspection, the people present also cast some test ballots on the hardware in the ES&S 6.3.0.0 System. On the Express Vote device, the summary vote card on several voted ballots came out with smudged or "spotty" bar codes on the vote summary ballot. Consequently, those same ballots were not readable on the ES200 and ES300 ballot tabulator/reader devices. The error was not consistent on all the vote summary ballots and the vendor had multiple potential reasons for the problem that includes problems with the ballot paper being exposed to heat or light or a defect in the manufacturing process of the thermal paper. There was also a discussion about a potential problem with the thermal printer inside the

Express Vote that prints the summary ballot (dust, dirt, calibration, etc.). The vendor was unaware of any instances of this problem occurring in the field.

Another issue arose concerning the numbering used on the labels of manufactured version of some of the hardware. However, it appears the discrepancy involved the manufacturing "batch" and not any reference to the versions of the hardware. Therefore, while somewhat confusing, there is no concern about the difference in numbering of the third place of the numbering convention.

On the second day of the examination, ES&S provided the examiners an overview of the changes to the 6.3.0.0 System and a generalized background of the structure of the System. The examiners posed several questions that were answered by ES&S officials.

Later in the examination day, the examiners tested each piece of equipment and cast a script of ballots on each voting machine. Paper ballots were fed into the optical scanners and tabulated and sorted with the larger scanners and election software.

An issue arose in the scanning of ballots due to jams on DS300 machine and the way the jam was cleared. The question arose if the instructions related to the jam made it clear if the ballot had been counted and gave the voter/poll worked adequate information on what to do with the jammed ballots.

The examiners also noted a new "imprinter" on the DS300 that can be used to imprint ballots with certain numbers or information that can be used in newly emerging audit techniques. This imprinter raises issues with the secrecy of the ballot if it uses sequential numbers and it may also cause problems with document feeds based on what examiners witnessed. The option for an imprinter in the ballot scanning devices is not a requirement of Texas law and does not appear to serve any present purpose since the new audit techniques have not been finalized or implemented in Texas. Perhaps most importantly, the imprinter portion od the device can be easily removed and the machine's operation is not affected.

Based on several of the issues listed above, an additional day of examination occurred on March 31, 2023. On this day, the same examiners and staff gathered to hear explanations from ES&S officials about the issues and again test some of the equipment to replicate the printing and jam issues. In feeding ballots into the DS300, an additional issue appeared about scanning the smaller "Vote Summary" ballots in

the lower feed slot. The ballots could be placed on top of a full size ballot and the scanner would accept them both and count it as one vote with the information from the smaller ballot being read into the tabulator. However, it is only when the smaller ballot was on the far side of the scanner slot. These circumstances are not likely to occur in the field if poll workers are monitoring the scanners. Also, the issues with the "smudged" bar codes occurred again, but only on one ballot that was on the top narrow ballot packet. Also, it was noted that the problem may have occurred because the printer on the Express Vote had not fully warmed up.

After another round of cast ballots with and without the imprinter installed, it became clear that the imprinter had no value and possibly caused some jams.

OBSERVATIONS

1. Each of the separate pieces of hardware and software examined met the listed requirements of the TEXAS ELECTION CODE and TEXAS ADMINISTRATIVE CODE.

2. The issues discussed above concerning "smudges" on bar codes coming from printed vote summaries out of the Express Vote machine, the concerns over the imprinter and the jam issues are causes for concern, but do not necessarily rise to the level to where I would not recommend certification. That being said, I do believe it should lead to conditions to any certification the Secretary chooses to make.

3. As discussed on the ES&S 6.2.00 System report, it is not clear if the Regional Reporting function should be used in any System since it creates both confusion and should be scrutinized to see if it can be used by the local jurisdictions in their elections without it creating problems and potential security concerns.
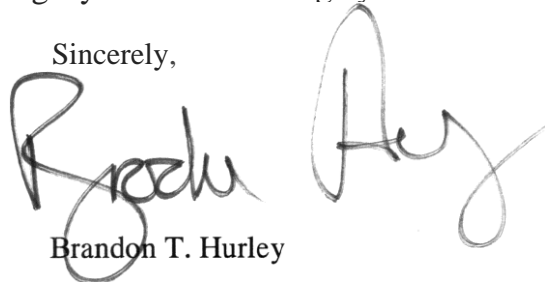
RECOMMENDATION

Based on the foregoing observations and my examination of the ES&S 6.3.0.0 System, its accompanying literature, and the representations made by ES&S officials both in its literature and at the examination, I recommend that the ES&S 6.3.0.0 System be certified as compliant with the requirements of the TEXAS ELECTION CODE and the

TEXAS ADMINISTRATIVE CODE with the express condition that I would NOT recommend the use of the imprinter discussed above on the DS300 or any other tabulator devise in the System be part of any certification. I would also recommend that the Regional Reporting function of the System be further scrutinized to determine if it serves a needed purpose in Texas jurisdictions. Also, I would suggest a condition of certification include additional instructions or training from ES&S concerning the paper/smudge issues and how the issue should be handled by the local jurisdictions.

This report should not be construed as a tacit or implied comment on any of the technical aspects of the ES&S 6.3.0.0 System except as expressly stated herein. In the event any of the equipment, software or security devices examined are altered, changed or decertified by any accrediting agency (other than a "minor modification qualified for administrative certification process" as that term is defined in § 81.65 of the Texas Administrative Code), this report should be considered withdrawn .

Thank you for the opportunity to serve as an examiner and participate in this important process that protects the integrity of Texas' voting systems.

Sincerely,

Brandon T. Hurley