





### **PRELIMINARY STATEMENT**

The relief sought by Plaintiffs would cast this Court in the position of throwing the 2020 election season into complete chaos. The Commonwealth of Pennsylvania more than a year ago certified the ExpressVote XL voting system of Election Systems & Software, LLC (“ES&S”) for use throughout Pennsylvania (including Philadelphia, home to more than one million registered voters). The relief Plaintiffs seek would de-certify ES&S’s voting machines prior to the 2020 primary and general elections. That would make impossible the orderly administration of elections in Philadelphia and other Pennsylvania counties.

### **IDENTITY AND INTEREST OF AMICUS CURIAE**

ES&S serves approximately 3,000 of the nation’s more than 10,000 voting jurisdictions. ES&S is 100% American-owned and, over thirty years, has grown into the industry leader with voting-machine solutions for each phase of an election. ES&S has engaged in continuous investment in research and development, resulting in new and improved voting machine technology built to achieve the highest standards of security which allow election officials to run secure and successful elections. Declaration of Dean C. Baumert (“Baumert Decl.”), Dkt. No. 123-5, ¶¶ 1-2.

ES&S has contracts to provide the ExpressVote XL system to several counties in the Commonwealth of Pennsylvania—including Philadelphia. Those counties, as well as ES&S, have already invested thousands of hours in the procurement, installation, training and use of ES&S’s election systems in preparation for multiple state, local, and federal elections, including the April 2020 primary and November 2020 general elections. This investment of time and resources by local governments and ES&S took place after, and in reliance upon, multiple rounds of testing and certifications by federal and state authorities. ES&S has similarly invested countless hours in partnership with those counties in preparation for the upcoming elections, and

is committed to the success of the ExpressVote XL system in Pennsylvania and throughout the country.

While ES&S is not a party to this litigation, and Plaintiffs do not base their motion on any allegation that ES&S failed to comply with its contractual requirements, ES&S's ExpressVote XL machines are nonetheless the only voting machines to which reference is made in Plaintiffs' motion, despite the fact that those machines have been heavily scrutinized, tested, certified by the Commonwealth and the federal Election Assistance Commission, and re-approved by the Commonwealth in September 2019 in accordance with Pennsylvania law. ES&S is uniquely suited to provide the Court additional information about the security and functionality of those machines. As such, ES&S files this motion and proposed amicus brief to provide additional information that may be helpful to the Court in "insuring a complete and plenary presentation of difficult issues so that the Court may reach a proper decision." *Newark Branch, N.A.A.C.P. v. Harrison*, 940 F.2d 792, 808 (3d Cir. 1991) (internal quotation omitted).

#### **REASONS WHY MOTION FOR LEAVE SHOULD BE GRANTED**

The role of an amicus is to assist the Court "in cases of general public interest by making suggestions to the court, by providing supplementary assistance to existing counsel, and by insuring a complete and plenary presentation of difficult issues so that the court may reach a proper decision." *Harrison*, 940 F.2d at 808 (internal quotation omitted). "A district court has inherent authority to designate amici curiae to assist it in a proceeding." *Liberty Res., Inc. v. Phila. Hous. Auth.*, 395 F. Supp. 2d 206, 209 (E.D. Pa. 2005). Federal courts in Pennsylvania regularly permit non-parties to file amicus briefs. *See, e.g., Burlington v. News Corp.*, No. CIV.A. 09-1908, 2015 WL 2070063, at \*3 (E.D. Pa. May 4, 2015) (permitting amicus brief to be filed); *Shank v. E. Hempfield Twp.*, No. 09-CV-02240, 2010 WL 2854136, at \*3 (E.D. Pa. July 20, 2010); *Perry v. Novartis Pharma. Corp.*, 456 F. Supp. 2d 678, 687 (E.D. Pa. 2006); *Liberty*

*Res., Inc.*, 395 F. Supp. 2d at 209. Ultimately, the inquiry is whether the proposed amicus has “a sufficient ‘interest’ in the case” and whether its proposed brief will be helpful and relevant. *Neonatology Assocs., P.A. v. C.I.R.*, 293 F.3d 128, 129 (3d Cir. 2002) (Alito, J.) (quoting Fed. R. App. P. 29(b)).

The Court should permit the filing of the attached amicus brief in this case. As described above, ES&S has unique knowledge regarding the ExpressVote XL system and its performance. ES&S also has particular expertise in election systems generally as an industry leader. ES&S is one of the largest, if not the largest, election system providers in the United States, and it has successfully responded to requests for proposals (“RFPs”) across Pennsylvania, undergoing certification and testing, and executing the delivery, rollout of and training for new machines. ES&S can confirm that the relief Plaintiffs demand is not only impractical but harmful to the voters of Pennsylvania and to the orderly administration of elections.

ES&S’s amicus brief provides technical and policy-related arguments that will assist the Court. Indeed, “[e]ven when a party is very well represented, an *amicus* may provide important assistance to the court” by ensuring the court understands how its ruling could affect entities not before the court. *Neonatology Assocs.*, 293 F.3d at 132. ES&S respectfully submits that the arguments in the attached amicus brief will be helpful to the Court in deciding Plaintiffs’ motion.

### **CONCLUSION**

For these reasons and for those set forth in the accompanying Exhibit A, ES&S requests leave to file its amicus brief and requests that Exhibit A be docketed as its amicus brief. A proposed form of order is enclosed.

Respectfully submitted,

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Dated: December 17, 2019

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**EXHIBIT A**





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## **ARGUMENT**

### **I. The ExpressVote XL was and is lawfully certified after careful scrutiny.**

#### **A. Federal Approval**

Since well before the ExpressVote XL was selected by Pennsylvania counties as their chosen election machine, ES&S has engaged in continuous investment in research and development, resulting in new and improved voting technology (built with the highest standards of security) that helps election officials conduct secure and successful elections. One example of such voting technology is the ExpressVote XL. Baumert Decl. ¶ 2. The ExpressVote XL is a ballot-marking device that incorporates into a single unit the printing of a voter's selections as a paper voter-verifiable record and tabulation scanning. *Id.* ¶ 3.

The ExpressVote XL, like ES&S's other voting technology, has undergone extensive evaluation at both the state and federal level. At the federal level, voting machines provided by ES&S are certified by the Election Assistance Commission ("EAC") and undergo robust testing for accuracy, reliability, usability and security conducted by accredited independent testing authorities. *Id.* ¶ 8. The ExpressVote XL is no exception. *Id.*

ES&S voluntarily adheres to the EAC's Federal Testing Program. *Id.* ¶ 9. Under that program, ES&S submits all of its systems to voting system test laboratories accredited by the National Institute of Standards and Technology ("NIST"). *Id.* These labs perform tests in accordance with the federal voting system standards. *Id.* EAC-certified systems are required to complete testing with zero errors in over one and one half million marked selections. *Id.*; *see also id.* ¶¶ 13-15.

The ExpressVote XL has been part of the EAC certification testing process for EVS voting system releases 6.0.0.0, 6.0.2.0, 6.0.2.1, 6.0.4.0 and 6.1.0.0. *Id.* ¶ 15. Each release has been certified as compliant with the EAC's Voluntary Voting System Guidelines ("VVSG") 1.0. *See id.*; Election Assistance Commission, Certified Voting Systems, *available at* <https://www.eac.gov/voting-equipment/certified-voting-systems/> (last visited December 10, 2019).

The EVS 6.0.0.0 voting system release includes ES&S's Electionware Election Management Software (EMS), precinct-ballot scanner/tabulators, high-speed central ballot scanner/tabulators, as well as touch screen ballot marking and tabulating products that include the ExpressVote XL. As part of this certification, the ExpressVote XL was subjected to extensive accessibility, reliability, accuracy, security and other testing outlined in the VVSG

version 1.0, to which all voting systems being offered to Pennsylvania must be certified.

Baumert Decl. ¶ 13.

EVSS 6.0.0.0 satisfied those testing requirements and received EAC certification on July 2, 2018, establishing its compliance with VVSG federal standards. *Id.* Each ES&S release undergoes extensive security testing and ES&S submits a complete set of software components to the voting systems testing labs for review. *Id.*

### **B. Pennsylvania Approval, Contracting, and Implementation**

Following EAC certification, the Pennsylvania Department of State first certified the ExpressVote XL on November 30, 2018. *Id.* ¶ 19. That certification followed a rigorous evaluation that covered six main areas: (1) source code review; (2) documentation review; (3) system level testing; (4) security/penetration testing; (5) privacy analysis; and (6) usability analysis. *Id.* ¶ 17. ES&S satisfied all criteria and received all necessary approvals under Pennsylvania law to provide election machines to Pennsylvania’s voters.

As attested to by the Commonwealth Defendants, multiple Pennsylvania counties—including Philadelphia, home to more than one million registered voters—selected the ExpressVote XL as their certified voting machine. *See* Declaration of Kathy Boockvar (“Boockvar Decl.”), Dkt. No. 123-1, ¶¶ 75-77. Selection followed a lengthy and extensive procurement process that consumed roughly one year, and involved more than eight City departments. Declaration of Monique Nesmith-Joyner (“Nesmith-Joyner Decl.”), Dkt. No. 123-3, ¶¶ 7-8, 18; *see also* Boockvar Decl. ¶ 79. Cumberland County’s procurement process also lasted more than one year. Declaration of Bethany Salzarulo (“Salzarulo Decl.”), Dkt. No. 123-4, ¶¶ 3-8. ES&S understands the burden that selecting an election system places on counties. In addition to completing the extensive requirements of the procurement process, ES&S spent significant time, effort and expense in addressing the specific contractual needs of individual

municipalities, delivering and implementing voting machines, and instructing county voting officials and polling staff on the operation of machines.

In Philadelphia, delivery and implementation of more than 3,700 ExpressVote XL machines took place in 2019. Declaration of Joseph Lynch (“Lynch Decl.”), Dkt. No. 123-2, ¶¶ 8, 10. ES&S made nearly 30 shipments of voting machines and equipment, which machines were then tested by the Philadelphia County Board of Elections. *Id.* ¶¶ 8, 10-11. ES&S likewise invested significant time and effort in educating the public on the machines and how to use them. The Board of Elections conducted 827 public demonstrations of the ExpressVote XL between June 2019 and October 2019, and more than 100 poll worker trainings throughout the City. *Id.* ¶¶ 16, 20. A pilot election was conducted in August 2019 involving 80 ExpressVote XLs across the City of Philadelphia and more than 100 Board of Elections employees. *Id.* ¶ 21.

Although the ExpressVote XL was already fully certified by the Commonwealth in 2018, and Philadelphia was implementing the procurement and use of the machines by early 2019, a group of individuals submitted a petition<sup>1</sup> challenging the certification of the ExpressVote XL on July 17, 2019—over eight months after the Commonwealth certification. *See* Declaration of Ilann M. Maazel, Dkt. No. 112-1, at Ex. B (“Re-examination Report”). The petitioners raised ten alleged issues with the voting machines. The Pennsylvania Department of State was then obligated by law to undertake a re-examination of the ExpressVote XL, and it faithfully

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<sup>1</sup> The signatories to the July 17, 2019 petition include an attorney (John Bonifaz) affiliated with Plaintiffs in this same case. *See* Steve Friess, *Inside the Recount*, The New Republic, Feb. 15, 2017 (“Bonifaz went to work to recruit Stein, the Green Party candidate” for recount litigation); *id.* (“I took the information that she could do this to her.” (quoting Bonifaz)); *accord* Gabriel Sherman, *Experts Urge Clinton Campaign to Challenge Election Results in 3 Swing States*, New York Magazine, Nov. 22, 2016 (reporting that a group that included “John Bonifaz and J. Alex Halderman . . . believes they’ve found persuasive evidence that results in Wisconsin, Michigan, and Pennsylvania may have been manipulated or hacked”).

discharged that obligation. *See id*; Baumert Decl. ¶ 20. After an extensive re-examination, the Department and its examiner once again determined that the ExpressVote XL satisfied the requirements of the Election Code and is entitled to its certification. *See Re-examination Report*; Baumert Decl. ¶ 22.

The ExpressVote XL has been state certified in California, Delaware, Mississippi, New Jersey, Pennsylvania and Texas. Baumert Decl. ¶ 11. It has already been sold to numerous municipalities and localities throughout the country, including the State of Delaware; the counties of Gloucester, Warren, Union, Middlesex, Hunterdon, and Morris in New Jersey; the Village of Port Chester and the County of Erie in New York; and the counties of Philadelphia, Northampton, and Cumberland in Pennsylvania. It has also been proposed to numerous others, such as the counties of Hudson, Passaic, Mercer, Ocean, Cumberland, Somerset, Monmouth, Camden, Atlantic, Bergen, Burlington, and Cape May in New Jersey; the counties of Albany, Allegany, Cayuga, Chemung, Chenango, Livingston, Nassau, Onondaga, Ostego, Putnam, Rockland, Schenectady, Warren, Washington and Yates and the municipalities of Herkimer and Montgomery in New York; New York City; and Dauphin County in Pennsylvania.

**II. De-certifying the ExpressVote XL would have dramatically harmful effects on Pennsylvania voters, Pennsylvania counties, and the 2020 electoral process.**

**A. The relief Plaintiffs seek would endanger Pennsylvanians' right to vote.**

As the Commonwealth Defendants explained in their opposition brief, the relief that Plaintiffs seek would create electoral chaos throughout the Commonwealth in an election year that includes (1) the April 2020 Pennsylvania Democratic Presidential Primary, (2) the 2020 general election for President of the United States, (3) elections for the House of Representatives, (4) elections for numerous state and local offices in Pennsylvania, and (5) referenda and other votes on public questions.



The ExpressVote XL has already been evaluated and purchased in multiple Pennsylvania counties, including Philadelphia. Three counties, consisting of more than 1.4 million registered voters, have expended significant resources in procuring the ExpressVote XL and introducing the system to their voters. In so doing, they have relied upon the careful examination, testing and subsequent certification of the ExpressVote XL at the federal and state levels. Plaintiffs' groundless, inexplicably delayed and last-minute attempt to "enforce" the Settlement Agreement would disrupt the reliance interests of municipalities and voters across the Commonwealth in the orderly administration of the upcoming elections. Indeed, such an outcome would be "unnecessary and unfair" to all voters in the Commonwealth. *See Memorandum Op.*, Dkt. 55, at 20.

Because of the inexplicable tardiness of Plaintiffs' latest challenge to the ExpressVote XL, it is likely that the relief they seek would not result in next year's elections proceeding with different equipment, but rather that next year's elections would descend into chaos. Petitioners ask the Court to overlook the fact that it is a practical impossibility for different voting machines to be procured, selected, delivered, stored, and set up—with training completed—in time for next year's elections (which, in the case of the very significant primary election, is just a few months away). As the Secretary of State explained, implementation of a new voting system "takes a great deal of time" – in general "many months, and often over a year." Boockvar Decl. ¶¶ 78-79. The process of reviewing machines, identifying needs, obtaining funding, and negotiating contracts takes "about three to twelve months." *Id.* ¶ 81. In Philadelphia, the expedited procurement process for the ExpressVote XL (including obtaining \$30 million in funding) involved 16 months and coordination by eight City departments. Nesmith-Joyner Decl. ¶ 5.

Once the procurement process is complete, significantly more work would remain. It takes counties “at least three to eight months to seek delivery of the new systems, conduct acceptance testing on the new systems, provide training of county election personnel and poll workers, finalize and print ballots, conduct voter education campaigns, program details of the elections into the equipment, and perform logic and accuracy testing.” Boockvar Decl. ¶ 82. Before the 2002 election, for instance, the City of Philadelphia conducted about 500 community demonstrations and over 100 trainings for poll workers to train them on the machines used that year. Lynch Decl. ¶¶ 4-5. The Board performed 827 demonstrations of the ExpressVote XL from June through October 2019. *Id.* ¶ 16. If Plaintiffs’ motion is granted, there will simply be no time for this critical education in advance of the upcoming elections. As Secretary Boockvar has attested, “[g]iven the complexity of the system and the short timeframe involved, changing voting systems in short time risks confusing voters and election personnel.” Boockvar Decl. ¶ 84.

Further, the ExpressVote XL (and other voting machines) are large devices, which pose real logistical challenges in storing and transporting them. The City of Philadelphia began receiving ExpressVote XL units in April 2019, well before the November 2019 elections. Lynch Decl. ¶ 8. The machines were shipped in deliveries of 60 to 240 machines. *Id.* The Board had to lease additional warehouse space large enough to accommodate the machines and which was appropriately climate controlled. *Id.* ¶ 9. Ultimately, Philadelphia took delivery of approximately 3,750 machines, each of which required approximately one hour of time for initial testing. *Id.* ¶¶ 10-11. In some cases, different polling locations would have to be identified because the existing locations may not be able to physically accommodate the new machines. Boockvar Decl. ¶ 83. For instance, the ExpressVote XL machines required over 800

Philadelphia polling locations to be reevaluated because the ExpressVote XL machines were larger than the previous machines. Lynch Decl. ¶ 22.

As a partner to counties that have purchased the ExpressVote XL system from it, ES&S is deeply involved in the implementation process. Were the ExpressVote XL system to be replaced, ES&S would be required to collect, transport, and return to its facilities thousands of state-certified machines that it had delivered. Poll workers and voters would need to be instructed on how to use new machines, and demonstrations to the public would need to be held at multiple locations throughout each county. These extensive efforts, with ES&S assistance, already took place prior to the November 2019 elections but, were the Court to enter the relief sought by Plaintiffs, would have to be replicated somehow in 2020 prior to the primary.

Secretary Boockvar has affirmed that it is simply “too late for Counties to replace ExpressVote XL machines in time for the 2020 primary, which will be held on April 28, 2020.” *Id.* ¶ 80. That is apparent given the fact that “[t]he ballot for an election is finalized roughly 50 days before the election.” Lynch Decl. ¶ 23. For the April primaries, the ballot will need to be finalized around March 9, 2020 – less than three months from now. This Court should not permit Plaintiffs to substitute their unfounded assertions for the considered judgment of Secretary Boockvar and the Pennsylvania Department of State.

Plaintiffs claim that their intent is to protect the rights of Pennsylvania’s voters. On the contrary, there is a significant risk that the relief sought by Plaintiffs would disenfranchise large numbers of Pennsylvania voters, with statewide and even national consequences. Granting Plaintiffs’ motion would leave several troubling options, each of which is a practical and/or legal impossibility. One would be to delay the elections in those counties that have purchased ExpressVote XL machines – Philadelphia, Northampton, and Cumberland. However, that would

create serious equal protection concerns by treating voters differently in different parts of the state. Moreover, for statewide elections, the results for the entire state would be delayed until voting in those counties could be completed. Another option would be to delay the vote in the entire state. But that would risk the votes of citizens throughout the Commonwealth, and delay the vote until exactly when? Alternatively, officials in Philadelphia, Northampton, and Cumberland could be ordered to proceed by manually tallying votes with no voting system whatsoever. Putting aside the fact that proceeding without a voting system in place almost certainly carries more risk than proceeding with a proven system that has been approved by the state, a manual vote count would take significant time – likely over 100 days in Philadelphia County for the general election. *Id.* ¶ 28.

Each of these options would pose serious risks not only for the rights of individual voters but also for candidates, delegates and for the election as a whole. In the 2016 presidential election, only 44,292 votes separated the Democratic and Republican candidates for President in Pennsylvania. Even if new machines were somehow to be selected, procured, certified, and installed by the time of the general election, it would almost certainly be impossible to do so by the 2020 primary elections. Pennsylvania's votes are critical to the integrity of the 2020 primary election generally, and to the delegate count specifically. Indeed, as one press account has noted, "Pennsylvania Democrats expect the state's April 28 primary to play a key role in deciding who will run against President Donald Trump in 2020." Andrew Seidman, et al., *Think the 2020 Pennsylvania primary won't matter? Think again*, Philadelphia Inquirer, Dec. 8, 2019 (available at <https://www.inquirer.com/politics/pennsylvania/pennsylvania-2020-democratic-presidential-primary-20191208.html>). Each vote is particularly important in light of the number of presidential candidates that may remain in the race by the time of that primary election. The

effect of granting Plaintiffs' motion would be to cast into doubt the results of those elections by creating a risk that Pennsylvanians' votes would not be counted.

**B. The potential harm to Pennsylvania voters and counties has been heightened because of Plaintiffs' delay.**

In addition to their motion lacking any merit, Plaintiffs' unjustified delay in asserting their current challenge to the ExpressVote XL makes it particularly inappropriate to impose on Pennsylvania's counties and voters the significant and irreparable harms that would be caused by the relief that Plaintiffs seek, as well as the unwarranted and unfair burden it would place upon ES&S. This court previously found that Plaintiffs engaged in an "unexplained, highly prejudicial delay" in seeking injunctive relief. Memorandum Op., Dkt. 55, at 1. Plaintiffs now likewise ignore all the contracting, certifying, and performing that has transpired since 2018 and even prior. After the ExpressVote XL was initially certified (and the Settlement Agreement entered) in November 2018, petitioners (who are associated with the current Plaintiffs) waited until July 2019—eight months later—to challenge the Department of State's certification. The Department of State denied that petition on September 3, 2019, yet Plaintiffs waited almost three more months before filing their current motion on November 26, 2019. Plaintiffs have proffered no excuse for this delay.

The consequence of Plaintiffs' delay is not merely theoretical. As described above, Philadelphia's procurement process was lengthy. It began back in February 2018. Nesmith-Joyner Decl. ¶ 7. Thus, throughout the period of Plaintiffs' delay, the City of Philadelphia, other counties, and ES&S have been working and expending considerable resources to implement the ExpressVote XL machines. It would be inequitable to impose upon Pennsylvania's voters, counties, and ES&S the harm that would be caused by the relief Plaintiffs seek, particularly where that harm would result in significant part from Plaintiffs' own delay tactics.

### III. The ExpressVote XL machines are secure.

ES&S values transparency and works closely with all levels of the U.S. government, academia, and other experts to ensure the integrity of the votes being cast on its voting machines. Baumert Decl. ¶ 5. ES&S has invited and welcomed numerous experts and government officials, including critics, to view its election equipment first-hand and to discuss potential improvements. *Id.* ¶ 6. ES&S actively collaborates with the U.S. Department of Homeland Security; has all of its equipment certified through the EAC, a federal agency created by the bipartisan Help America Vote Act of 2002; and voluntarily takes part in many other collaborations with groups and individuals interested in protecting America's voting systems. *Id.* ¶ 7.

In addition to the extensive testing that the ExpressVote XL has undergone to obtain certification, extensive testing and auditing is also performed before and after each election. *Id.* ¶¶ 23-24.

Plaintiffs' declarant merely speculates that it is "feasible for malware to cause the machines to print bar codes that corresponded to candidates the voter did not select." Declaration of J. Alex Halderman ("Halderman Decl."), Dkt. No. 112-2, ¶ 8. The declarant similarly postures that "[i]t would be feasible for malware to compromise [the tabulator] and cause paper records that have been rejected by voters to be tabulated as well as those that have been accepted by voters." *Id.* ¶ 7. Such a highly speculative compromise of the system is not feasible as a practical matter.

There is absolutely no record that any of the kind of hypothetical malicious cybersecurity breaches Plaintiffs describe have ever taken place, either in actual elections or in testing of the ExpressVote XL. Baumert Decl. ¶ 27. The design of the ExpressVote XL, coupled with all the other layers of security that protect ES&S's voting systems, means that any of these breaches are

a practical impossibility. *Id.* Election systems provided by ES&S employ a concept called “security in depth” which utilizes layers of overlapping security measures to ensure that the compromise of a single protection feature does not result in the compromise of the system’s integrity. *Id.* ¶ 28. System-level protections include hardened software for programming the election, encryption and digital signing of data to and from the machines, use of authorized data transfer media, and locks and seals for physical protection. *Id.* ¶ 29. Voting machines that are a part of this system utilize many of these same measures to prevent “hacking” or cybersecurity compromises. In addition to those mentioned, voting machines certified to the VVSG1.0 standard are never connected to the internet. *Id.* ¶ 30.

ES&S voting machines also have multiple layers of security protecting the data, including unique encryption keys for every election. The machines will only accept the certified type of USB media and will ignore all other types. The machines also verify that the media has been programmed for the expected purpose, was programmed by the trusted software, and has not been modified in any way. *Id.* ¶ 31. The ExpressVote XL provides the VVSG-required ability to validate the operating system and application software installed on the machine, allowing for audits before and after each election. *Id.* ¶ 32.

All election programming data is stored and encrypted until it is loaded into random access memory for use during machine operation. At such time, its digital signature is validated to confirm that the data is from the trusted source and has not been altered. All vote and results data generated is encrypted and digitally signed. *Id.* ¶ 33. The ExpressVote XL generates its own public/private key pair for each election and digitally signs each artifact (log files, vote records, results files, etc.) generated by the device during the election. The digital signatures are validated by the system before any artifact is processed, ensuring that should unauthorized access

of a unit occur, it will be detected and reported to the user so no other units can be affected through data transfer. *Id.* ¶ 34.

The ExpressVote XL generates a detailed audit log of all actions and events that have occurred on the unit, which can be printed at any time. Every action and event, including access attempts, access of system functions and errors, is logged and timestamped. The log is digitally signed each time it is updated to allow detection of any potential tampering with the entries. The vote data is encrypted and digitally signed. *Id.* ¶ 35. ES&S also conducts thorough security reviews of its entire supply chain to ensure that every component is trusted, tested and free of malware. Every single item and manufacturer is approved and under engineering revision control to ensure that only authorized components and firmware are used in the production of voting machines. *Id.* ¶ 36.

Moreover, even in the extraordinarily unlikely circumstance that these security measures were breached, such breach would be identified in a post-election recount or audit. Because the ExpressVote XL provides a voter-verified paper record of every vote, election officials would be able to accurately recount the votes using the verified paper record, *id.* ¶ 37, which is precisely what happened in Northampton County (although there was *no security breach*), *infra*.

**IV. Any claimed issues in Northampton County are not a basis on which to grant the relief sought by Plaintiffs.**

Any issues affecting the 2019 election in Northampton County were solely human error issues completely unrelated to the complaints that Plaintiffs now assert in their motion and not caused by any defect in the ExpressVote XL machines. Notably, the ExpressVote XL was used successfully in Philadelphia's 2019 elections. Baumert Decl. ¶ 60; Lynch Decl. ¶ 26.

There were two issues with the 2019 Northampton County election and, again, neither is related to the Settlement Agreement or, therefore, to the underlying motion. First, the



electronically tabulated vote (as opposed to the vote recorded on the paper ballot) reported erroneous results for some candidates in some contests. The paper ballots printed by the ExpressVote XL were used as a backup, and those ballots were used, as intended, to correctly tabulate the votes. Baumert Decl. ¶ 61. Thorough analysis and extensive testing following the election established that the issue was caused by an electronic ballot layout technique that had not been properly tested and that caused the system to not attribute votes to certain candidates. *Id.* ¶ 62. Although the ballot was displayed correctly on the screen and on paper ballots, an error involving instructional text displayed on the screen created a misalignment in the database that resulted in electronically recorded votes not being attributed to candidates in a particular position relative to the instructional text. This was confirmed through testing that replicated the exact electronic ballot used in Northampton County. *Id.* ¶ 63.

In this replication, although the voter's selections displayed correctly on the screen and on the printed ballot, the system assigned the votes to the instructional text, thereby preventing the electronically tabulated votes from registering for the intended candidate. *Id.* ¶ 64. When the instructional text was removed in a recoded version of the election made for analysis purposes, the results were captured accurately and showed all of the corresponding vote totals for all candidates. This instructional text issue was ultimately one of human error in that a layout technique was used that was not fully tested. Tabulators like the high-speed scanners used to tabulate the paper ballots do not display the ballot and do not consider the instructional text. The scanners counted the votes without issue by simply rescanning the paper ballots printed by the ExpressVote XL. *Id.* ¶ 65.

Second, some voters reported difficulty in making selections on the machines' touchscreens. In particular, some voters reported that their touch was not registering the proper

location, or at all, and that the touch screen was too sensitive. They were nonetheless able to verify their votes, as intended, with the paper ballots printed by the ExpressVote XL. *Id.* ¶ 66.

Extensive testing indicated that the primary cause of difficulties with the touch screen displays was that some machines (as many as 30%) were configured improperly at the factory prior to delivery to Northampton County. In addition, the layout of the ballot unnecessarily pushed voting selection areas to the very edge of the touch screen where the screens can be less responsive. *Id.* ¶ 67. The ExpressVote XL uses infrared touch screen technology. Because the sensors cover the entire border, it is possible for selections within the border area not to register properly. Small boxes within the candidate selection box may have also caused an inadvertent selection, by prompting voters to make selections that were on the “border” of another selection option. Any such issues can and will be resolved with an improved ballot layout and corrected machine configuration. *Id.* ¶ 68.

Despite the issues with that specific election, the results, as obtained through the ExpressVote XL machines, were still verifiably accurate. Each voter had the opportunity to read and verify their ballot before they cast it, and the paper ballots that the voters read were used to tabulate the total. *Id.* ¶ 69. In addition, the paper ballots were scanned, tabulated by election officials, and audited for accuracy. The audit confirmed the accuracy of the election results. *Id.* ¶ 70. Indeed, not only did the issues in Northampton County have nothing to do with the complaints that Plaintiffs raise in their motion, but the fact that an accurate count was obtained despite the human errors in that election confirms the robustness of the paper ballot system in the ExpressVote XL.

As the Commonwealth Defendants correctly observe, “Plaintiffs[] . . . do not connect these issues to any of their legal arguments. In fact, there is no connection.” Dkt. No. 123 at 31.

**CONCLUSION**

Plaintiffs claim to be protecting the interests of Pennsylvania voters. But the relief that they would have this Court enter would have the exact opposite effect. Additionally, because of Plaintiffs' inexplicable delay in bringing their current motion, it is a practical impossibility to replace the ExpressVote XL before critical upcoming elections. As a result, the rights of Pennsylvania voters would be endangered, not protected, by the relief Plaintiffs seek from this Court.

For the reasons set forth above, Plaintiffs' motion should be denied.

Respectfully submitted,

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