

COMMONWEALTH OF MASSACHUSETTS
SUPREME JUDICIAL COURT FOR SUFFOLK COUNTY

No. SJ-2026-0164

DR. SHIVA AYYADURAI,

Petitioner,

v.

WILLIAM FRANCIS GALVIN, in his official
capacity as SECRETARY OF THE
COMMONWEALTH OF MASSACHUSETTS,

Respondent.

RESPONDENT’S OPPOSITION TO PETITION FOR WRIT OF MANDAMUS

Respondent William Francis Galvin, in his official capacity as Secretary of the Commonwealth of Massachusetts (“Respondent” or the “Secretary”), hereby opposes the Petition for Writ of Mandamus filed by Petitioner Shiva Ayyadurai (“Petitioner”) on April 17, 2026 (Paper No. 1) (the “Petition” or “Pet.”). As grounds for the Opposition, the Secretary states that the relief requested by Petitioner—*i.e.*, the retention and preservation of “all ballot images and related election records generated in connection with the 2026 United States Senate election in Massachusetts”—would be futile, because ballot images are not utilized in connection with Massachusetts elections. Pet. at ¶ 1. Where the requested records do not and will not exist, there can be no clear-cut duty to preserve them, and any order requiring such preservation would be meaningless. Accordingly, Respondent respectfully requests that the Court deny the Petition.

STATUTORY BACKGROUND

Federal law requires election officials to preserve, for a period of twenty-two months, “all records and papers which come into [their] possession relating to any application, registration,

payment of poll tax, or other act requisite to voting.” 52 U.S.C. § 20701. In Massachusetts, paper ballots constitute the official records of election votes. *See, e.g.*, G.L. c. 54, § 44 (“The official ballots shall . . . be of ordinary white printing paper”); G.L. c. 54, § 107 (describing enclosure, sealing, certification, and transportation of paper ballots); G.L. c. 54, § 105A (describing counting, inspection, transportation, and protection of paper ballots at precincts using approved electronic voting methods). Massachusetts law requires “[c]ity and town clerks [to] retain in their custody the envelopes or containers containing the ballots cast, without examining them or permitting them to be examined by any person except as required by law, and upon the expiration of the period fixed for their preservation [to] cause such ballots to be destroyed.” G.L. c. 54, § 109. The foregoing laws, which relate only to the retention of existing voting documents, do not require the creation of any additional records not otherwise required by law.

With respect to the standards governing voting equipment, 52 U.S.C. § 21081 outlines the requirements for “[e]ach voting system used in an election for Federal office.” The law requires, among other things, that the voting system “permit the voter to verify (in a private and independent manner) the votes selected by the voter on the ballot before the ballot is cast and counted;” “provide the voter with the opportunity (in a private and independent manner) to change the ballot or correct any error;” and “notify the voter” and provide him or her with “the opportunity to correct the ballot” if he or she “selects votes for more than one candidate for a single office.” 52 U.S.C. § 21081(a)(1). It also requires that the voting system “produce a record with an audit capacity;” be accessible to individuals with disabilities; have alternative language accessibility; and meet certain error rate standards. 52 U.S.C. § 21081(a)(2)-(5). Nowhere does the law require the generation or retention of ballot images. To ensure compliance with these and other requirements, Massachusetts law requires that the Secretary “examine all types of voting equipment including

ballot boxes, counting apparatus, and voting machines and determine whether such equipment complies with the minimum requirements for such equipment imposed by law and whether the use of such equipment would further the efficient administration of elections.” G.L. c. 54, § 32.

FACTUAL BACKGROUND

The following facts are drawn from the Petition, supplemented or corrected where necessary by information supplied in the Affidavit of Michelle K. Tassinari (“Tassinari Affidavit” or “Tassinari Aff.”) (attached as Ex. 1).¹

In Massachusetts, all voters cast a paper ballot. *See* Tassinari Aff. at ¶ 7. Some municipalities hand-count these paper ballots to determine the number of votes cast in favor of each candidate; others use electronic tabulating machines (with different machines used by different municipalities). *See id.* at ¶ 8; *id.* at Exs. E-G (certification documents). In order for a municipality to use an electronic tabulator, that particular tabulator model must be certified by the Secretary’s office. *See id.* at ¶ 9; *id.* at Ex. D (Standards for Certification of Voting Equipment in Massachusetts); G.L. c. 54, § 32 (describing examination and approval of voting equipment by Secretary’s office). Some tabulator models used in Massachusetts have the capacity to capture ballot images, but are required to have the ability to disable that capacity before being certified; others do not have the capacity in the first place. *See* Tassinari Aff. at ¶¶ 8-10.

Paper ballots, which are the official records of the votes cast in an election, are sealed and secured for twenty-two months following an election, after which period they are destroyed. *See* Tassinari Affidavit at ¶ 11; 52 U.S.C. § 20701; G.L. c. 54, § 109.

¹ Attorney Tassinari is First Deputy Secretary of the Commonwealth, as well as Director and Legal Counsel of the Elections Division of the Office of the Secretary of the Commonwealth. *See* Tassinari Aff. at ¶ 2.

Petitioner alleges that following the 2020 Massachusetts Republican primary election for United States Senate, in which he ran as a candidate, he requested certain election records “in order to verify the accuracy and integrity of the reported election results, including digital ballot images and related electronic records generated during the vote tabulation process.” Pet. at ¶ 13. Petitioner further alleges that on September 24, 2020, Attorney Tassinari “responded [to his request] by email stating that ballot images generated in Massachusetts elections were not retained and had been deleted.” *Id.* at ¶ 14. According to Petitioner, Attorney Tassinari’s statement “constituted an admission by the Secretary’s office that ballot images generated in a federal election were not preserved for the twenty-two-month period required by 52 U.S.C. § 20701.” *Id.* at ¶ 15. *See also id.* at ¶ 25 (citing “Respondent’s prior admission that ballot images from a federal election were deleted”); *id.* at ¶ 20 (alleging that “there exists a substantial risk that ballot images may again be destroyed, altered, or prematurely deleted”).

These allegations plainly and profoundly misrepresent the contents of the September 24, 2020 correspondence between Petitioner and Attorney Tassinari. In reality, in response to Petitioner’s request for ballot images, Attorney Tassinari stated that “the approval of digital scan equipment in Massachusetts specifically prohibits the capturing of ballot images.” *See* Tassinari Aff. at Ex. C; *id.* at ¶ 6. At no point did Attorney Tassinari state that the images had been “deleted,” nor did she state that they had ever existed in the first place. *See id.*; *contrast* Pet. at ¶¶ 14-15, 20, 25.

Consistent with Attorney Tassinari’s explanation, Massachusetts law prohibits the examination of official ballots except where required by law (*e.g.*, in the case of a recount). *See, e.g.*, G.L. c. 54, § 109 (city and town clerks shall retain ballots “without examining them or permitting them to be examined by any person except as required by law”); G.L. c. 54, § 105A

(describing appropriate procedures, including sealing, for handling paper ballots); G.L. c. 54, § 107 (same); G.L. c. 54, § 135 (describing procedure for unsealing, reviewing, and resealing ballots in connection with a recount). Accordingly, for the subset of voting software that has the capability to capture ballot images, Massachusetts certification documents require said capability to be turned off. *See* Tassinari Aff. at ¶¶ 8-10; *id.* at Ex. E (certification for DS200 tabulator) (noting that although the scanner “has the ability to capture digital images of each ballot, . . . this function can be disabled to comply with current state law”); *id.* at Ex. F (certification for DS450 tabulator) (same); *id.* at Ex. G (certification for ImageCast tabulator) (same).

Petitioner should already be well-aware of the foregoing facts, including that ballot images are not utilized in Massachusetts. Not only was this information communicated to Petitioner in the September 2020 correspondence described above, but it was also publicly filed and served on Petitioner by the Secretary’s office in connection with two prior lawsuits brought by Petitioner in the aftermath of his unsuccessful run for United States Senate in 2020. *See, e.g.*, Tassinari Aff. at Ex. A (*Ayyadurai v. Galvin*, No. 1:20-cv-11889 (D. Mass.) (“Galvin I”),² Docket No. 15-2 (Oct. 29, 2020 Affidavit of Michelle K. Tassinari)), at ¶ 5 (describing September 2020 correspondence and confirming that “no ballot images existed” at the time of the 2020 primary “because the certification of voting equipment in Massachusetts prohibits the capturing of ballot images”);

² Petitioner’s first-filed federal lawsuit arose out of a Twitter post in which Petitioner falsely claimed that Massachusetts had destroyed more than one million ballots from the Republican primary election. *See* Galvin I, Docket No. 1 (Complaint); *id.* at Docket No. 15 (Opposition to Plaintiff’s Motion for an Emergency Temporary Restraining Order). After the Secretary’s office reported Petitioner’s false statements to Twitter, resulting in Petitioner’s suspension from the platform, Petitioner sued for alleged First Amendment violations. In August 2021, Petitioner voluntarily dismissed this lawsuit. *See id.* at Docket No. 196 (Notice of Voluntary Dismissal).

Tassinari Aff. at Ex. B (*Ayyadurai v. Galvin*, No. 1:20-cv-12080 (D. Mass.) (“Galvin II”),³ Docket No. 17-1 (Dec. 4, 2020 Affidavit of Michelle K. Tassinari)), at ¶ 6 (“In Massachusetts, all voters mark their votes on a paper ballot”); *id.* at ¶ 9 (“Voting equipment used in Massachusetts does not create or store ballot images”). *See also* Tassinari Aff. at ¶ 4.

Petitioner has pointed to no changes in Massachusetts law or practice in the intervening years between his 2020 federal lawsuits and the instant Petition. Instead, despite having been repeatedly presented with clear and uncontroverted evidence that the Commonwealth does not have the documents he seeks, he has once again raised the very same unsupported arguments. Moreover, this time, he has requested an unattainable form of relief: retention of “ballot images” that, quite simply, did not exist in prior elections and will not exist in the upcoming 2026 election.

ARGUMENT

I. Petitioner’s Request for a Writ of Mandamus Must Be Denied Because Ballot Images Do Not Exist, and There Is Therefore No Clear-Cut Duty to Preserve Them.

Petitioner requests, first, that this Court issue a writ of mandamus requiring the Secretary to retain and preserve ballot images generated in connection with the 2026 United States Senate election for a minimum of twenty-two months; prohibit the destruction, alteration, overwriting, or non-storage of ballot images during this period; issue binding written guidance regarding the obligation to preserve ballot images; and certify that all ballot images and related electronic records have been preserved. *See* Pet. at Requested Relief. Because tabulators used in Massachusetts are prohibited from capturing ballot images, Petitioner’s request is futile and must be denied.

³ In his second-filed federal lawsuit, Petitioner sought to prevent certification of the Commonwealth’s election results from the 2020 Republican primary and the 2020 United States Senate race, on the grounds that ballot images had allegedly been improperly deleted. *See* Galvin II, Docket No. 1 (Complaint). This lawsuit was dismissed by the federal district court for lack of subject matter jurisdiction. *See id.* at Docket No. 35 (Memorandum and Order).

“A complaint in the nature of mandamus is a call to a government official to perform a clear cut duty, and the remedy is limited to requiring action on the part of the government official.” *Boston Med. Ctr. Corp. v. Sec’y of the Executive Office of Health & Human Servs.*, 463 Mass. 447, 469-70 (2012) (quotations and citations omitted). Mandamus, accordingly, “is an extraordinary writ” granted only “in the discretion of the court where no other relief is available.” *Forte v. Commonwealth*, 429 Mass. 1019, 1020 (1999). Petitioner appears to recognize this exacting legal standard, acknowledging that mandamus is appropriate only where “the Respondent has a clear legal non-discretionary duty; . . . the Respondent has failed or refused to perform that duty; . . . the Petitioner has a clear legal right to performance of that duty; and . . . no adequate alternative remedy exists.” Pet. at ¶ 21.

In support of his argument that the Secretary has a “clear-cut duty” to retain ballot images, Petitioner relies on federal law requiring the retention of “all records and papers which come into [an election officer’s] possession relating to any application, registration, payment of poll tax, or other act requisite to voting,” 52 U.S.C. § 20701, as well as on federal law governing voting systems, 52 U.S.C. § 21081. *See* Pet. at ¶¶ 2, 10-12, 19; Requested Relief. But neither of these federal statutes mandates the creation of ballot images. To the contrary, the very law cited by Petitioner expressly contemplates and permits the use of hand-counted paper ballots, which are used in some Massachusetts municipalities and which, by definition, would not be subject to electronic imaging software generating a ballot image.⁴ *See* 52 U.S.C. § 21081(a)(1)(B) (describing how states or jurisdictions using “a paper ballot voting system, a punch card voting system, or a central count voting system” may meet federal requirements); 52 U.S.C. § 21081(c)(2)

⁴ Just as ballot images could not be generated for votes cast in Massachusetts municipalities which hand-count votes, they could not be generated for votes cast in municipalities which employ tabulators without the technical capacity to capture ballot images. *See* Tassinari Aff. at ¶ 8.

(precluding definitions that “make[] it impossible for a paper ballot voting system to meet the requirements”); *see also* Tassinari Aff. at ¶ 8. Accordingly, nothing in the federal scheme requires that ballot images be created in connection with Massachusetts elections. And, as described above and in the Tassinari Affidavit, they are not. Where no ballot images exist, there can be no duty (let alone a “clear-cut duty”) to preserve them. Accordingly, extraordinary relief in the nature of mandamus is not warranted, and the Petition should be denied.

II. Petitioner’s Request for a Declaratory Judgment Must Be Denied Because It Presents No Actual Controversy.

In addition to seeking relief in the nature of mandamus, Petitioner requests a declaratory judgment that “ballot images constitute ‘records and papers’ under 52 U.S.C. § 20701.” Pet. at Requested Relief. Declaratory judgment is only available, however, in cases where “an actual controversy has arisen and is specifically set forth in the pleadings.” G.L. c. 231A, § 1. An actual controversy exists where there is “a real dispute caused by the assertion by one party of a legal relation, status or right in which he has a definite interest, and the denial of such assertion by another party also having a definite interest in the subject matter, where the circumstances attending the dispute plainly indicate that unless the matter is adjusted such antagonistic claims will almost immediately and inevitably lead to litigation.” *Bunker Hill Distributing, Inc. v. District Attorney for Suffolk County*, 376 Mass. 142, 144 (1978) (citation omitted). “Accordingly, declaratory relief is reserved for real controversies and is not a vehicle for resolving abstract, hypothetical, or otherwise moot questions” or for “seeking an advisory opinion.” *Wells Fargo Financial Massachusetts, Inc. v. Mulvey*, 93 Mass. App. Ct. 768, 771 (2018) (citation omitted). Here, because the subject matter of Petitioner’s requested relief—ballot images—does not exist, any “dispute” is purely hypothetical. For these reasons, the declaratory judgment request should be denied.

III. Petitioner’s Request for Injunctive Relief Must Be Denied Because It Presents No Actual Controversy.

Finally, Petitioner requests that this Court “[e]njoin any policy or practice inconsistent with federal record-retention and preservation laws.” Pet. at Requested Relief. To the extent that this broad and indefinite request, which seeks relief for theoretical and undefined violations, can be construed as a claim, it fails to present any actual controversy between the parties. *See Hubrite Informal Frocks v. Kramer*, 297 Mass. 530, 534 (1937) (“The duty of this court, as of every other judicial tribunal, is to decide actual controversies by a judgment which can be carried into effect, and not to give opinions upon moot questions or abstract propositions, or to declare principles or rules of law which cannot affect the matter in issue in the case before it.”) (citation omitted). Accordingly, the request for injunctive relief should be denied.

CONCLUSION

For the foregoing reasons, Respondent respectfully requests that the Court deny the Petition for Writ of Mandamus. Respondent further states that because the forms of relief requested by Petitioner are plainly unavailable, this matter can and should be resolved without a hearing.

Respectfully submitted,

WILLIAM FRANCIS GALVIN, in his official
capacity as SECRETARY OF THE
COMMONWEALTH OF MASSACHUSETTS,

By his attorneys,

ANDREA JOY CAMPBELL
ATTORNEY GENERAL

/s/ Marina Pullerits
Marina Pullerits, BBO No. 704163
Assistant Attorney General
Government Bureau
Office of the Attorney General
One Ashburton Place

Boston, MA 02108
(617) 963-2968
Marina.Pullerits2@mass.gov

May 21, 2026

EXHIBIT 1

COMMONWEALTH OF MASSACHUSETTS
SUPREME JUDICIAL COURT FOR SUFFOLK COUNTY

No. SJ-2026-0164

DR. SHIVA AYYADURAI,

Petitioner,

v.

WILLIAM FRANCIS GALVIN, in his official
capacity as SECRETARY OF THE
COMMONWEALTH OF MASSACHUSETTS,

Respondent.

AFFIDAVIT OF MICHELLE K. TASSINARI

I, Michelle K. Tassinari, hereby depose and state as follows:

1. The following statements are based on my personal knowledge and my review of the records of the Elections Division of the Office of the Secretary of the Commonwealth of Massachusetts (the “Elections Division”).

2. I am First Deputy Secretary of the Commonwealth, as well as Director and Legal Counsel of the Elections Division. I have been First Deputy since 2022, Director since 2005, and Legal Counsel since 2000. As such, I have personal knowledge of the matters set forth herein.

3. The Office of the Secretary of the Commonwealth, through the Elections Division, is responsible for the administration of state and presidential primaries and elections in the Commonwealth of Massachusetts. This responsibility includes, among other things, certifying voting equipment, printing nomination papers, receiving certified nomination papers, printing candidate lists and ballots (including official ballots, early ballots, and absentee ballots), certifying state election results, and compiling state election results.

4. I am familiar with the candidacy of Shiva Ayyadurai for United States Senate, first as a Republican candidate in the September 2020 primary election and then as a write-in candidate in the November 2020 general election. I am also familiar with two federal lawsuits filed by Ayyadurai in the wake of his unsuccessful candidacy. Indeed, I submitted affidavits in connection with both lawsuits. My prior affidavits, which were publicly filed and served on Ayyadurai, contained many of the same facts contained herein. They are attached as Exs. A-B to this Affidavit.

5. On September 9, 2020, following the September 1, 2020 primary, the Elections Division received a public records request from Ayyadurai for: “(1) All Scanned Digital Ballot Images from all jurisdictions in Massachusetts pertaining to the September 1, 2020, State Primary; (2) All Cast Vote Records (CVRs) from all jurisdictions in Massachusetts pertaining to the September 1, 2020, Massachusetts State Primary; and (3) The List of Vote Records (LVR), also called the Vote Cast Log, Cast Ballot Log, or other designation, from all jurisdictions in Massachusetts pertaining to the September 1, 2020, Massachusetts State Primary.”

6. On September 24, 2020, I responded to Ayyadurai’s request by email. The email string, with attachments, is attached as Ex. C to this Affidavit. In my response, among other things, I informed Ayyadurai that no ballot images existed because the certification of voting equipment in Massachusetts prohibits the capturing of ballot images. Ayyadurai responded with a request for a citation for the prohibition on capturing ballot images. I responded again on September 25, 2020, attaching copies of the certifications for two different types of voting equipment used in Massachusetts.

7. In Massachusetts, all voters mark their votes on a paper ballot.

8. Some Massachusetts municipalities hand-count votes on their paper ballots, while others use electronic tabulators to count votes on their paper ballots. Different municipalities use

different electronic tabulators, some of which have the capacity to capture ballot images and some of which do not.

9. In accordance with state law and regulations, before any voting equipment can be employed in Massachusetts, it must be federally certified and thereafter approved by the Secretary of State's Office. The Standards for Certification of Voting Equipment in Massachusetts are attached as Ex. D to this Affidavit.

10. Voting equipment used in Massachusetts does not create or store ballot images, nor has it ever created or stored ballot images. Rather, the technology used scans the paper ballot to tabulate votes. Although some municipalities use voting equipment with the technical capacity to create digital ballot images, that functionality must be subject to disablement as a condition of certification in Massachusetts. Three sets of certification documents, for three different tabulators, are attached as Exs. E-G to this Affidavit. These certifications make clear that where scanners have "the ability to capture digital images of each ballot, . . . this function can be disabled to comply with current state law." Accordingly, any ballot imaging capability will be turned off for the November 2026 election for United States Senate.

11. Paper ballots are the official records of the votes cast in a given election, and are maintained by local election officials as required by law. Cast ballots are sealed after being counted or tabulated, and remain sealed and secured for twenty-two months following an election. Under Massachusetts law, official ballots may not be unsealed and examined except where required by law (*e.g.*, in the case of a recount or in connection with a post-election audit). After the expiration of the retention period, ballots are destroyed.

Signed under the pains and penalties of perjury this 21st day of May, 2026.

/s/ Michelle K. Tassinari
Michelle K. Tassinari

EXHIBIT A

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

DR. SHIVA AYYADURAI,

Plaintiff,

v.

WILLIAM FRANCIS GALVIN, in his official
capacity as the Secretary of the Commonwealth
of Massachusetts,

Defendant.

CIVIL ACTION
NO. 1:20-cv-11889-MLW

AFFIDAVIT OF MICHELLE K. TASSINARI

I, Michelle K. Tassinari, on oath depose and state on personal knowledge and based on my review of the records of the Elections Division of the Office of the Secretary of the Commonwealth of Massachusetts (hereinafter, “the Elections Division”) as follows:

1. I am the director and legal counsel to the Elections Division. I have been legal counsel since April 2000 and director since 2005. As such, I have personal knowledge of the matters set forth herein.

2. The Elections Division is responsible for administration of state and presidential primaries and elections in the Commonwealth, including, among other things, responsibility for the printing of nomination papers, the receipt of certified nomination papers, and the printing of candidate lists and ballots, both official and absentee.

3. I am familiar with the candidacy of Shiva Ayyadurai for United States Senate, first as a Republican candidate in the September 1, 2020 primary election, and now as a write-in candidate for next week's general election.

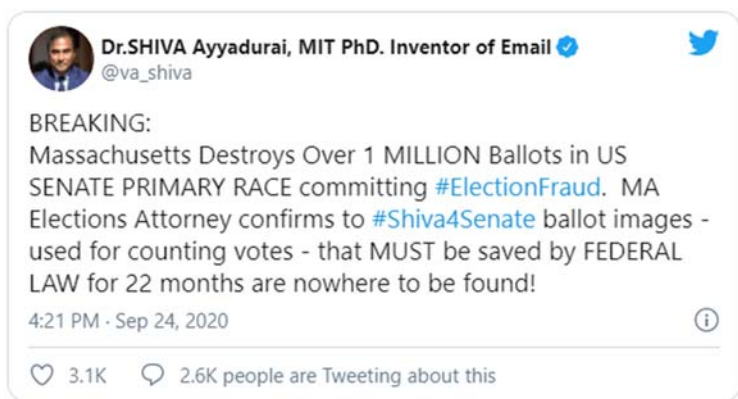
4. Following the September 1 primary, on September 9, 2020, my office received a public records request from Ayyadurai for: "(1) All Scanned Digital Ballot Images from all jurisdictions in Massachusetts pertaining to the September 1, 2020, State Primary; (2) All Cast Vote Records (CVRs) from all jurisdictions in Massachusetts pertaining to the September 1, 2020, Massachusetts State Primary; and (3) The List of Vote Records (LVR), also called the Vote Cast Log, Cast Ballot Log, or other designation, from all jurisdictions in Massachusetts pertaining to the September 1, 2020, Massachusetts State Primary." On September 21, 2020, Ayyadurai filed with my office a "follow up" to his request in which he reiterated his request, apparently under the mistaken belief that our response to his request was due within 10 calendar days instead of 10 business days.

5. At 10:47am on September 24, I responded to Ayyadurai by email, informing him that no responsive records existed and that no ballot images existed because the certification of voting equipment in Massachusetts prohibits the capturing of ballot images. Ayyadurai responded seeking a citation for the prohibition on capturing ballot images. I responded again at 11:44am on September 25, attaching copies of the certification for two different types of digital scan equipment in Massachusetts (which, in any event, are not used by every municipality in Massachusetts – some do not use scanning equipment to tabulate ballots). Copies of these emails and the attachments are attached hereto as Exhibit 1.

6. Ayyadurai then began claiming on social media that the Secretary of State's office had unlawfully destroyed ballots.

7. Those statements were plainly false because, as I told Ayyadurai in an email response, all of the paper ballots – i.e., the *only* ballots – from the September 1 primary are being retained under seal by local election officials in accordance with state and federal law.

8. On September 24, 2020, Ayyadurai Tweeted this false claim:



9. The Elections Division is always concerned about false information being disseminated about the election process, as this can be a form of voter suppression. These concerns are particularly heightened this year, since we know that multiple state-sponsored and private actors engaged in widespread disinformation campaigns in the 2016 presidential election and are doing so now, in an attempt to influence the outcome of the election. For example, on September 28, 2020, the FBI and the Cybersecurity and Infrastructure Security Agency (CISA) issued a joint alert regarding the threat posed by election disinformation:

<http://ic3.gov/Media/Y2020/PSA200928>.

10. I asked our office's Communications Director, Debra O'Malley, to report the Tweet to Twitter as false.

11. That is the one and only time that I, or to my knowledge, anyone in my office, has reported any of Ayyadurai's Tweets to Twitter for any reason.

12. We have no control over Twitter or its complaint process. We do not have any input into whether Twitter imposes a sanction such as removing a Tweet or suspending a user's account. In fact, Twitter does not tell us what, if any, action they take in response to a complaint we submit; we merely receive what appears to be an automated reply stating that they will investigate and contact us if they need more information.

Signed under the pains and penalties of perjury this 29th day of October, 2020.

/s/ Michelle K. Tassinari
Michelle K. Tassinari

EXHIBIT 1

Sterman, Anne (AGO)

From: Tassinari, Michelle (SEC) <Michelle.Tassinari@sec.state.ma.us>
Sent: Thursday, September 24, 2020 10:47 AM
To: vashiva@vashiva.com
Subject: Records Request

Good Morning-

I am writing to acknowledge receipt of your request for records. Please note, that this Office does not maintain voter tabulation software, firmware or hardware. While this office certifies voting equipment, as required by law, we do not purchase or lease equipment. Once equipment is approved by this Office, cities and towns can purchase or lease such equipment. Accordingly, this Office has no records responsive to your request.

Further, to the extent you request the same information from local election officials, please note that the approval of digital scan equipment in Massachusetts specifically prohibits the capturing of ballot images.

Michelle K. Tassinari
Director and Legal Counsel
Elections Division
One Ashburton Place, Room 1705
Boston, MA 02108
617-727-2828

Sterman, Anne (AGO)

From: Tassinari, Michelle (SEC) <Michelle.Tassinari@sec.state.ma.us>
Sent: Friday, September 25, 2020 11:44 AM
To: Shiva Ayyadurai
Subject: RE: Records Request
Attachments: DS200.Certification.5.2014.pdf; ImageCast.Certification.5.2014.pdf

Shiva-

Attached please find the certification of two different types of digital scan equipment in Massachusetts.

Please note that while the ballot images are not stored, the actual ballots voted on at any federal election are secured and stored for 22 months in accordance with federal law. However, under state law, those ballots must remain sealed until such time as they can be destroyed.

Michelle K. Tassinari
Director and Legal Counsel
Elections Division
One Ashburton Place, Room 1705
Boston, MA 02108
617-727-2828

From: Shiva Ayyadurai <vashiva@vashiva.com>
Sent: Thursday, September 24, 2020 11:22 AM
To: Tassinari, Michelle (SEC) <Michelle.Tassinari@sec.state.ma.us>
Subject: Re: Records Request

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Michelle,

Kindly refer me to the statute or law, in which the "...approval of digital scan equipment in Massachusetts specifically prohibits the capturing of ballot images."

Thank you in advance.

Warmest regards,

Dr. Shiva Ayyadurai
US Senate Candidate.

On Thu, Sep 24, 2020 at 10:47 AM Tassinari, Michelle (SEC) <michelle.tassinari@state.ma.us> wrote:

Good Morning-

I am writing to acknowledge receipt of your request for records. Please note, that this Office does not maintain voter tabulation software, firmware or hardware. While this office certifies voting equipment, as required by law, we do not purchase or lease equipment. Once equipment is approved by this Office, cities and towns can purchase or lease such equipment. Accordingly, this Office has no records responsive to your request.

Further, to the extent you request the same information from local election officials, please note that the approval of digital scan equipment in Massachusetts specifically prohibits the capturing of ballot images.

Michelle K. Tassinari

Director and Legal Counsel

Elections Division

One Ashburton Place, Room 1705

Boston, MA 02108

617-727-2828

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Office of V.A. Shiva Ayyadurai, Ph.D.

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Advancing Health

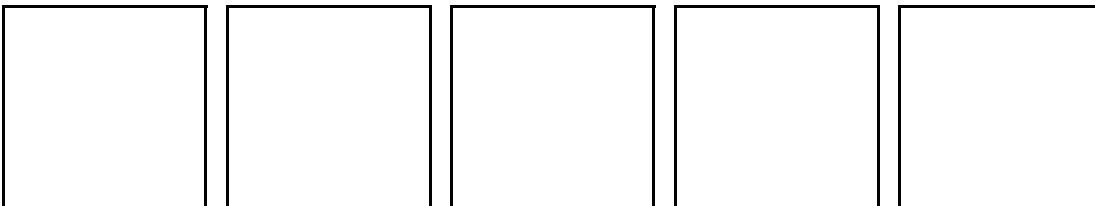
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The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Elections Division

APPROVAL OF VOTING EQUIPMENT IN MASSACHUSETTS

Name of Vendor:

Elections Systems and Software, Inc.
Corporate Headquarters
11208 John Galt Boulevard
Omaha, Nebraska 68137
Phone: (402) 593-0101
(800) 247-8683
Fax: (402) 593-8107
www.essvote.com

Type of Product:

ES&S DS200 Precinct Tabulator (EVS 5.0.0.3)
(Optical Scanning Vote Tabulator)

**Submission of
Detailed Specifications:**

Prior to May 29, 2013, the Office of the Secretary of the Commonwealth received detailed specifications for the DS200.

**Office Demonstration
of Equipment:**

On May 29, 2013, Benjamin Swartz, ES&S State Certification Manager, and other representatives from ES&S presented office demonstrations to members of the Elections Division at One Ashburton Place, Boston. On June 17, 2013, John Lento of ES&S presented another office demonstration (using modified equipment to meet the Massachusetts standards) to members of the Elections Division.

Field Tests:

Field tests were successfully conducted in the Town of Concord at the Annual Town Election held on March 25, 2014 and in the Town of Reading at the Annual Town Election and Special State Election, which were held concurrently on April 1, 2014.

The DS 200 Precinct Tabulator performed without incident in both field tests.

Reasons for Approval:

The Office of the Secretary of the Commonwealth has determined that the DS200 Precinct Tabulator, which is manufactured by ES&S, is a type of voting equipment which is in compliance with the following standards set forth in 950 C.M.R. § 50.02 and the Voluntary Voting System Standards of 2005 adopted by the Election Assistance Commission.

Overview of System:

The DS200 is a paper ballot scanner designed for polling place use. Voters mark selections on a paper ballot and then insert the ballot in any orientation for immediate tabulation. Both sides of the ballot are processed simultaneously with high-resolution scanners and the resulting ballot images are decoded by a proprietary recognition engine. Once voter selections are processed, the ballot is dropped into a secure ballot box. The scanner also has the ability to capture digital images of each ballot, but this function can be disabled to comply with current state law.

Product features of the DS200 include a 12-inch touch screen providing voters and poll worker feedback, an internal thermal printer for generating machine totals and log reports, and USB thumb drive for loading the election definition and storing results. The scanner has also been equipped with a cancellation device, which will mark every ballot as it is dropped into the ballot box.

The scanner is powered by a standard 120-volt AC power cord and contains a back-up battery to power the machine in the event of electrical power failure. When fully charged, the battery can maintain more than two hours of continuous use.

There are three operating modes on the scanner system: Administration, Polls Open Mode, and Polls Closed Mode. The "Administration" mode provides diagnostic and testing functions to calibrate and test the scanner. In "Polls Open" mode, the DS200 actively scans ballots and tabulates results. In "Polls Closed" mode, the scanner prints poll reports, including election results.

Below please find an analysis of the system as it applies to the standards set forth in the General Laws and Regulations.

(1) Simple and Convenient to Use (950 C.M.R. 50.02(1)):

The system is as simple and as easy to use as paper ballots—filling in an oval to indicate the voter's choice. The width of the ballot is 8 ½ inches and the maximum length of the ballot is 19 inches and ballots may be printed with one, two or three columns. However, unlike current approved optical scanner systems, a ballot can be printed with up to three

columns at the top and then printed straight across the entire width at the bottom to accommodate ballot questions.

The vote indicators (ovals) can be filled in with almost any writing utensil, though not all pencil marks will be read by the scanner. While blue and black ink can be read by the tabulator, the BIC Grip Roller Ball Black pen with a .7mm tip is the only approved marking device for the DS200. Red and orange ink is not recommended. The scanner draws three types of information from each ballot during scanning: audit information, ballot information, and voter marks.

- (a) A reasonable and average person should be able to operate the equipment after a brief demonstration or explanation. Ballots can be fed through in all four orientations.
- (b) Voting an average ballot on this equipment should not take an undue length of time. The system seemed to process sample ballots relatively quickly. During the field test, the poll workers commented that the tabulator took longer to process ballots than the equipment they currently used. After careful review by the local election officials and representatives from this Office, it was determined that while the time for processing a ballot was slightly longer than current equipment, it was not significant.
- (c) After the paper ballot is marked, the voter feeds it through the machine. Only after the voter is ready to insert it into the tabulator is the ballot processed, thereby providing the voter with an opportunity to spoil a ballot and receive a new ballot in accordance with state law. The tabulator can be programmed to notify the voter if it detects certain discrepancies on the ballot such as under-votes or over-votes.
- (d) As with other optical scanning voting equipment, the ballot is marked in a separate area from the machine. Accordingly, marking units would be necessary with adequate lighting. Otherwise special lighting would be necessary.

(2) *Maximize Accuracy and Prevent Fraud (950 C.M.R. 50.02(2)):*

The DS200 is designed to maximize accuracy and prevent fraud. When adequate training is given to election officers in the handling of ballots and correct use of the system itself, the system will provide adequate counting accuracy. When correctly programmed and tested, the system registers the number of ballots cast and the number read. Also, the number of votes for each candidate or question(s) are recorded and printed on the paper tape that documents election results.

The ballot is marked by filling in an oval with a black pen beside the candidate's name or voter's yes or no response to a ballot question. This process is similar to marking an "X" beside the voter's selection on a paper ballot.

- (a) There are adequate locks on the compartment sections of the system and the area where the program card is inserted and where the printer tape is located for the end of the night reporting.
- (b) The machine contains electronic components that register votes for candidates and questions electronically as well as a digital display that indicates the number of voters continuously while the machine is in the "Polls Open" mode as a public counter. The DS200 also has a protective counter that registers the total number of times the machine has operated in its lifetime.
- (c) The system receives, registers and cancels each ballot prior to depositing it in a compartment. When using the steel ballot box, the system allows for three compartments: one for ballots tabulated by the unit, one for ballots where write-in votes have been detected which must be hand-counted at the close of polls, and one auxiliary compartment for ballots unable to be read by the machine. When using the plastic ballot box, the system has two compartments: the main compartment for ballots tabulated by the machine and the auxiliary compartment for ballots unable to be read by the machine. The plastic ballot box does not allow for the separation of write-in ballots.
- (d) Only when the scanner is in "Polls Open" mode can votes be registered which prevents the machine from being used to register votes before and after the election.
- (e) When marks for an office or question exceed the number to be elected, the tabulator will display a notification to the voter identifying a discrepancy on the ballot and allowing the voter to correct the ballot. If the voter chooses to cast the ballot with mistakes, the tabulator can be programmed to register the vote as a blank to prevent double voting.
- (f) The DS200 can be programmed to accept multiple ballot styles, including any party ballot for a party primary. As with paper ballots, the election official is responsible for ensuring that the voter is qualified to receive a particular party ballot to vote on.

(3) Secrecy (950 C.M.R. 50.02(3)):

The voter's choice can be kept from the public view by enclosing it in a secrecy sleeve, placing the top of the secrecy sleeve near the protective cover of the system and feeding the ballot into the scanner.

(4) Must Meet Demands of Average Election (950 C.M.R. 50.02(4)):

The DS200 is adequate to demands of average election.

- (a) The programmable cards used for the DS200 have a great capacity for reading and recording data. The size of the ballots is adequate to print candidates and questions for an average election.

(b) A recount of votes on the DS200 is absolutely possible as the actual paper ballots are retained for a hand recount if necessary.

(c) Ballots can be printed and the election definition programmed to receive write-in votes.

(5) Absentee Ballots (950 C.M.R. 50.02(5)):

Absentee ballots for use in the DS200 are optical scanner ballots.

(6) Service by Manufacturer (950 C.M.R. 50.02(6)):

Service for the DS200 is provided by ES&S.

Conditions for Approval:

The Vendor will provide any city or town who purchases or leases the equipment with a sufficient supply of the approved ballot marking devices at no additional charge. The Vendor will include a printing kit and complete instructions to all purchasers of the system. No printer will be required to purchase paper stock from the Vendor. Further, the Vendor will work with any printer with whom the Commonwealth or any city or town contracts for the printing of ballots to assure that all ballots printed will be processed by the system and shall not require any such printer to pay for training or special equipment required to print any ballots for use with the equipment. This includes testing sample ballots sent by a printer as quickly as possible to prevent any delays in the ballot printing process.

Dated: May 7, 2014



WILLIAM FRANCIS GALVIN
Secretary of the Commonwealth



The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Elections Division

APPROVAL OF VOTING EQUIPMENT IN MASSACHUSETTS

Name of Vendor: LHS Associates, Inc.
10 Manor Parkway Unit B
Salem, NH 03079
www.lhsassociates.com

Name of Manufacturer: Dominion Voting Systems Corporation
1201 18th Street, Suite 210
Denver, Colorado 80303
www.dominionvoting.com

Type of Product: ImageCast Precinct Tabulator (ICP)
(Optical Scanning Vote Tabulator)

Submission of Detailed Specifications: Prior to May 6, 2013 the Office of the State Secretary received detailed specifications for the ImageCast Precinct Tabulator.

Office Demonstration of Equipment: On May 6, 2013, John Silvestro, President of LHS, and other representatives from LHS presented office demonstrations to members of the Elections Division at One Ashburton Place, Boston. On August 5, 2013, John Silvestro of LHS presented a further office demonstration (using modified equipment to meet the Massachusetts standards) to members of the Elections Division.

Field Test: The equipment was field tested in the City of Quincy at their municipal election on November 5, 2013 and in the City of Easthampton for their municipal election on November 5, 2013. Based on issues identified during the field test in the City of Quincy, the equipment was required

to conduct another field test, which was done in the Town of Needham at their annual town election on April 8, 2014.

The ImageCast Precinct Tabulator performed without incident in two field tests as required by law.

Reason for Approval:

The Office of the Secretary of the Commonwealth has determined that the ImageCast Precinct Tabulator, which is manufactured by Dominion Voting Systems, is a type of voting equipment which is in compliance with the following standards set forth in 950 C.M.R. § 50.02, and the Voluntary Voting System Standards of 2005 adopted by the Election Assistance Commission.

Overview of System:

The ImageCast Precinct Ballot Tabulator is a precinct-based optical scan tabulator that is used in conjunction with ImageCast compatible ballot storage boxes. The system is designed to scan marked paper ballots, interpret voter marks on the paper ballot, and store and tabulate each vote from each paper ballot. The scanner also has the ability to capture digital images of each ballot, but this function can be disabled to comply with current state law.

The ImageCast Precinct Tabulator can process single or double-sided ballots, and may be configured to handle multiple ballot scenarios. The ImageCast can be programmed to accept multiple cards and ballot styles. The scanner has also been equipped with a cancellation device, which will mark every ballot as it is inserted into the scanner.

The scanner is powered by a standard 120-volt AC power cord and contains a back-up battery to power the machine in the event of electrical power failure. When fully charged, the battery can maintain more than two hours of continuous use. The scanner is equipped with a thermal printer, which may be locked to prevent tampering.

There are five operating modes on the scanner system: Powered Down, Administration Mode, Election Run Mode, Election Run Mode with Ballot Review, and Ballot Test Mode. The "Powered Down Mode" allows the battery pack to continue to charge if the AC power supply is connected. The "Administration Mode" allows officials to perform administrative functions, such as changing modes, printing reports, and closing the polls. The "Election Run Mode" is used during voting hours and allows the tabulator to process ballots. The "Election Run Mode with Ballot Review" is used during voting hours, and allows the voter to review their choices on the LCD screen before casting the ballot. The "Ballot Test Mode" may be used by officials to test ballots, prior to an election.

Below please find an analysis of the system as it applies to the standards set forth in the General Laws and Regulations.

(1) Simple and Convenient to Use (950 C.M.R. § 50.02(1)):

The system is as simple and as easy to use as paper ballots and requires filling in an oval to indicate the voter's choice. The width of the ballot is 8 ½ inches and the maximum length of the ballot is 19 inches. The ballots may be printed with one, two or three columns. However, unlike current approved optical scanner systems, a ballot can be printed with up to three columns at the top and then printed straight across the entire width at the bottom to accommodate ballot questions.

The vote indicators (ovals) can be filled in with a ballot marking device. The scanner reads blue and black ink, though the ImageCast Ballot Marking Device (BMD) is the only approved marking device for the ImageCast. Red and orange ink is not recommended.

- (a)* A reasonable and average person should be able to operate the equipment after a brief demonstration or explanation. Ballots can be fed through in all four orientations.
- (b)* Voting an average ballot on this equipment should not take an undue length of time. The system seemed to process sample ballots relatively quickly. During the field test, the poll workers commented that the tabulator took longer to process ballots than the equipment they currently used. After careful review by the local election officials and representatives from this Office, it was determined that while the time for processing a ballot was slightly longer than current equipment, it was not significant.
- (c)* After the paper ballot is marked, the voter feeds it through the machine. Only after the voter is ready to insert it into the tabulator is the ballot processed, thereby providing the voter with an opportunity to spoil a ballot and receive a new ballot in accordance with state law. The tabulator can be programmed to notify the voter if it detects certain discrepancies on the ballot such as under-votes or over-votes.
- (d)* As with other optical scanning voting equipment, the ballot is marked in a separate area from the machine. Accordingly, marking units would be necessary with adequate lighting. Otherwise, special lighting would be necessary.

(2) Maximize Accuracy and Prevent Fraud (950 C.M.R. § 50.02(2)):

The ImageCast Precinct Tabulator is designed to maximize accuracy and prevent fraud. When adequate training is given to election officers in the handling of ballots and correct use of the system itself, the system will provide adequate counting accuracy. When correctly programmed and tested, the system registers the number of ballots cast and the number read. Also, the number of votes for each candidate or question(s) are recorded and printed on the paper tape that documents election results.

The ballot is marked by filling in an oval with a black pen beside the candidate's name or voter's yes or no response to a ballot question. This process is similar to marking an "X" beside the voter's selection on a paper ballot.

- (a) There are adequate locks on the compartment sections of the system and the area where the program card is inserted and where the printer tape is located for the end of the night reporting.
- (b) The machine contains electronic components that register votes for candidates and questions electronically as well as a digital display that indicates the number of voters continuously while the machine is in the "Election Run" mode as a public counter. The ImageCast also has a protective counter that registers the total number of times the machine has operated in its lifetime.
- (c) The system receives, registers and cancels each ballot prior to depositing it in a compartment. The system allows for three compartments: one for ballots tabulated by the unit, one for ballots where write-in votes have been detected which must be hand-counted at the close of polls, and one auxiliary compartment for ballots unable to be read by the machine.
- (d) Only when the scanner is in "Election Run" mode and "Election Run with Ballot Review" mode can votes be registered which prevents the machine from being used to register votes before and after the election.
- (e) When marks for an office or question exceed the number to be elected, the tabulator will display a notification to the voter identifying a discrepancy on the ballot and allowing the voter to correct the ballot. If the voter chooses to cast the ballot with mistakes, the tabulator can be programmed to register the vote as a blank to prevent double voting.
- (f) The ImageCast can be programmed to accept multiple ballot styles, including any party ballot for a party primary. As with paper ballots, the election official is responsible for ensuring that the voter is qualified to receive a particular party ballot to vote on.

(3) Secrecy (950 C.M.R. § 50.02(3)):

The voter's choice can be kept from the public view by enclosing it in a secrecy sleeve, placing the top of the secrecy sleeve near the protective cover of the system and feeding the ballot into the scanner.

(4) Must Meet Demands of Average Election (950 C.M.R. § 50.02(4)):

The ImageCast is adequate to demands of average election.

- (a) The programmable cards used for the ImageCast have a great capacity for reading and recording data. The size of the ballots is adequate to print candidates and questions for an average election.

- (b) A recount of votes on the ImageCast is absolutely possible as the actual ballots are retained for a hand recount if necessary.
- (c) Ballots can be printed and the election definition programmed to receive write-in votes.

(5) Absentee Ballots (950 C.M.R. § 50.02(5)):

Absentee ballots for use in the ImageCast are optical scanner ballots.

(6) Service by Manufacturer (950 C.M.R. § 50.02(6)):

Service for the ImageCast is provided by LHS.

Conditions for Approval: The Vendor will provide any city or town who purchases or leases the equipment with a sufficient supply of the approved ballot marking devices at no additional charge. The Vendor will include a printing kit and complete instructions to all purchasers of the system. No printer will be required to purchase paper stock from the Vendor. Further, the Vendor will work with any printer with whom the Commonwealth or any city or town contracts for the printing of ballots to assure that all ballots printed will be processed by the system and shall not require any such printer to pay for training or special equipment required to print any ballots for use with the equipment. This includes testing sample ballots sent by a printer as quickly as possible to prevent any delays in the ballot printing process.

Dated: May 7, 2014


WILLIAM FRANCIS GALVIN
Secretary of the Commonwealth

EXHIBIT B

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

DR. SHIVA AYYADURAI,

Plaintiff,

v.

WILLIAM FRANCIS GALVIN, in his official
capacity as the Secretary of the Commonwealth
of Massachusetts,

Defendant.

CIVIL ACTION
NO. 1:20-cv-12080-MLW

AFFIDAVIT OF MICHELLE K. TASSINARI

I, Michelle K. Tassinari, on oath depose and state on personal knowledge and based on my review of the records of the Elections Division of the Office of the Secretary of the Commonwealth of Massachusetts (hereinafter, “the Elections Division”) as follows:

1. I am the director and legal counsel to the Elections Division. I have been legal counsel since April 2000 and director since 2005. As such, I have personal knowledge of the matters set forth herein.

2. The Office of the Secretary of the Commonwealth through the Elections Division is responsible for administration of state and presidential primaries and elections in the Commonwealth of Massachusetts, including, among other things, responsibility for the printing of nomination papers, the receipt of certified nomination papers, the printing of candidate lists and ballots, both official, early and absentee, certification of state primary results and compilation of state election results.

3. I am familiar with the candidacy of Shiva Ayyadurai for United States Senate, first as a Republican candidate in the September 1, 2020 primary election, and then as a write-in candidate for the November 3rd General Election.

4. Following the September 1 primary, on September 9, 2020, the Elections Division received a public records request from Ayyadurai for: “(1) All Scanned Digital Ballot Images from all jurisdictions in Massachusetts pertaining to the September 1, 2020, State Primary; (2) All Cast Vote Records (CVRs) from all jurisdictions in Massachusetts pertaining to the September 1, 2020 , Massachusetts State Primary; and (3) The List of Vote Records (LVR), also called the Vote Cast Log, Cast Ballot Log, or other designation, from all jurisdictions in Massachusetts pertaining to the September 1, 2020, Massachusetts State Primary.” On September 21, 2020, Ayyadurai filed a “follow up” to his request in which he reiterated his request, apparently under the mistaken belief that a response to his request was due within 10 calendar days instead of 10 business days.

5. At 10:47am on September 24, I responded to Ayyadurai by email, informing him that no responsive records existed and that no ballot images existed because the certification of voting equipment in Massachusetts prohibits the capturing of ballot images. Ayyadurai responded seeking a citation for the prohibition on capturing ballot images. I responded again at 11:44 am on September 25, attaching copies of the certification for two different types of digital scan equipment in Massachusetts (which, in any event, are not used by every municipality in Massachusetts – some do not use scanning equipment to tabulate ballots).

6. In Massachusetts, all voters mark their votes on a paper ballot. This includes disabled voters who may opt to use an AutoMark machine at their polling location to assist them

in marking their ballot. There are, however, different methods used for tallying those paper ballots.

7. For the 2020 State Primary Election held on September 1 and the 2020 Statewide General Election held on November 3, 59 municipalities hand counted their paper ballots and the remaining 292 used an electronic tabulator to count votes on their paper ballots. 73 municipalities used Accuvote voting machines, 7 municipalities used Optech voting machines, 37 municipalities used DS200 voting machines and 175 used Imagecast voting machines. These four machines are the only machines certified and being used in Massachusetts elections.¹

8. In accordance with state law and regulation, before any voting equipment can be used in Massachusetts, it must be federally certified and thereafter approved by the Secretary's Office. Equipment must first be submitted for an office demonstration and be successfully used in two field tests before it can be approved for general use. During the office demonstration, staff from the Elections Division mark multiple ballots, tally those votes by hand, deposit them into the tabulator and then compare the hand count to the machine count for accuracy and to ensure there are no anomalies. Once equipment is certified by the Secretary's Office, any city or town can vote to use it to count votes at any elections.

9. Voting equipment used in Massachusetts does not create or store ballot images. Of the equipment listed in Paragraph 7, only the Imagecast and the DS200, which fall into the category of digital scanning machines, have the technological capacity to create digital ballot images. However, as a condition of certification in Massachusetts, that functionality must be

¹ Both the Imagecast and DS200 have compatible high-speed scanners that are certified for use in Massachusetts at a central tabulation facility for processing early voting ballots in accordance with applicable regulations.

disabled. I have confirmed with the vendors of the Imagecast and DS200 voting equipment that the scanning functionality was disabled for the September 1st State Primary and November 3rd General Election and that no ballot images were created. Both the Imagecast and the DS200 read the completed vote indicators, which are ovals filled in by the voter next to their choices on the paper ballots. Accuvote and Optech voting machines are not digital scanners but rather are optical scanners that do not have the technological capability to create an image of a ballot; they merely scan paper ballots for marked vote indicators and tabulate those vote indicators. For Accuvote machines, the vote indicator is an oval that the voter fills in, and for Optech machines, the vote indicator is an arrow that the voter must complete. The voting equipment used in Massachusetts meets the federal standards, as certified by an independent testing lab, that require recording each vote precisely as indicated by the voter and producing an accurate report of all votes cast, and does not “weight” votes.

10. The paper ballots for each election are the official records of the votes cast in that election, and are maintained by local election officials as required by law. For federal elections, like the September 1st State Primary and the November 3rd General Election, the cast ballots have been sealed and will remain sealed and secured for 22 months following the date of each respective election.

11. The Secretary’s Office is responsible for printing ballots for the state primaries and election. Ballots used for voters voting absentee or early, either in-person or by mail, have the words “Early/Absentee Official Ballot” printed in the header. Ballots used for voters voting at a polling place on Election Day only reference “Official Ballot.” However, the remainder of the information contained on those ballots are identical, including candidate names and timing

marks used by the equipment to read the votes. Accordingly, none of the four types of voting machines certified for use in Massachusetts distinguish between votes cast using these two types of ballots.

12. By regulation, all voting machines are tested before each and every election. Local election officials must mark at least 50 ballots for each precinct (in a primary, local election officials must mark at least 50 ballots per party for each precinct), which must be hand counted, deposited into the tabulator and then the results from the hand count compared to the machine count. This testing process is performed in public and notice is posted at least 3 days in advance. If, during the testing process, there are any problems, including tabulation errors and/or mechanical failures, the local election official is required to report those errors to the Secretary's office. The Elections Division did not receive any reports of tabulation errors, inaccuracies or mechanical failures from testing done before the September 1st State Primary or the November 3rd General Election.

13. After the close of polls on Election Night, municipalities that use tabulator machines print the tapes which contain the total votes counted for the precinct at which each tabulator was used. Those totals are then included in a total tally sheet, on which election officials also record votes cast on any ballots that could not be read by the tabulator and are hand-counted, as well as any write-in votes, which are also hand-tallied. Those precinct level totals are combined to create a total tally for each city and town. Votes are not counted separately by how they were cast, i.e., using an absentee or early ballot or on Election Day.

14. The Imagecast and the DS200 machines are capable of generating a "Cast Vote Record," but only if the municipality has purchased additional software, which is not required by

the Secretary's Office or by the certification standards set forth in regulation. The Accuvote and Optech voting machines cannot produce such records, even with additional software.

15. After each presidential election, post-election audits are conducted in Massachusetts. State law requires that the ballots cast in 3% of precincts statewide – this year, 66 precincts -- be hand counted. Those precincts are selected in a public, non-computerized, random drawing that occurred this year on November 5, 2020. As required by law, the selected precincts hand counted their ballots for offices of Electors for President and Vice President, Senator in Congress, Representative in Congress, Senator in General Court, and Representative in General Court, as well as one of the state-wide ballot questions, which was also chosen during the drawing.

16. In 2016, 99.16% of the votes recorded on Election Day were the same as during the audit. In 2016, local election officials reported that they believed that some of the difference may have come from human error during the audit. In particular, local election officials believed that at least some of the discrepancies came from different judgment calls in determining the intent of the voter made during the audit than on election night by poll workers.

17. In 2020, of the 66 precincts audited, 100,349 cast ballots were counted on Election Night and local election officials reported that they counted 100,422 ballots during the post-election audit, which resulted in 73 additional ballots being counted among all 66 precincts. The additional 73 ballots account for 0.07% of ballots audited. Of the 66 precincts audited, 47 reported no changes in the number of ballots cast, while 14 precincts reported changes of fewer than 5 ballots, likely due to tabulator jams and poll worker error in reading the message on the tabulator indicating whether or not the jammed ballot had been counted. The majority of the

additional ballots were identified in 4 audited precincts in which local election officials reported that the poll workers failed to tally a small number of ballots not read by the machine, which should have been hand-counted by the poll workers on Election Night. In one precinct, a difference of 12 fewer ballots in the audit may be the result of poll workers incorrectly tallying votes for every office on ballots containing write-in votes, rather than counting only the write-in votes for the offices not already counted by the tabulator.

18. In the post-election audit reports from both 2016 and 2020, the local election officials reported that many errors were attributed to ballots being marked contrary to instructions, ballots being incorrectly hand-tallied by poll workers, or ballots not being tallied on Election Night as they should have been.

19. Relevant to Plaintiff's claims, this year's audit resulted in candidate Markey receiving an additional 81 votes, candidate O'Connor receiving 28 fewer votes, and Plaintiff receiving 88 additional votes. The report noted that:

The number of votes reported on Election Night as "All Others" was reduced by 60 and the blank votes were reduced by 81. It is likely that write-in candidate SHIVA AYYADURAI gained additional votes during the audit that were on ballots not segregated by the tabulator because voters did not fill in the vote indicator next to the write-in space, and poll workers failed to categorize write-in votes for the candidate separately from "All Others."

20. The audit results did not differ from the initial results in any systemic or consistent way, as one would expect to see if tabulators were being employed improperly (for example, using weighted calculations).

21. After each primary and election, candidates can petition for a recount and request that the ballots be counted by hand. Candidates who receive total votes within one half of one

percent of the votes received by the winner may request a statewide or district-wide recount by filing a petition signed by one-fourth the number of voters required to sign nomination papers for state primary candidates as set forth in state law. Candidates who do not fall within that margin may request precinct level recounts by filing petitions signed by 10 registered voters in each precinct of a town, 10 registered voters in each ward of a city, except Boston, which requires 50 voter signatures per precinct. As set forth in section 88 of chapter 142 of the Acts of 2019, for the September 1st State Primaries, the deadline to file petitions for recounts was 5:00 p.m. on September 4, 2020. As set forth in section 135 of chapter 54 of the General Laws, the deadline to file recount petitions for the November 3rd General Election was 5:00 p.m. on November 13, 2020.

22. For all elections, including the September 1st State Primaries and the November 3rd General Election, each city and town uses a paper voter list to record voters who are voting. This list contains the names and addresses of eligible voters for each precinct. The list is marked for each voter participating in the election. For a primary election, local election officials must also record the party ballot selected by voters not enrolled in a party.

23. After each primary and general election, the local election officials use those paper voter lists to update voter activity in the statewide database of registered voters. This information can be updated manually or by scanning a barcode printed on the voter list. There are often some small discrepancies between the number of voters checked on the paper list and the number of names contained on an electronic file produced after the data is entered in the statewide database. These discrepancies can be caused by inaccurate scanning, failing to save progress as data is entered, or inability to scan in primaries. For example, if a voter is not

enrolled in a party and votes in a primary, but the local election official did not record the party ballot chosen by that voter, the local election official will be unable to update the voter activity.

24. The discrepancy in the electronic list provided to the Defendant from the City of Boston is easily explained. When the data was requested and provided to the Defendant, the City of Boston had not finished updating the voter activity from the paper lists using the process described above.

25. Just as the paper ballots are the official records from the election, the original voter lists used in each city and town are the official records of the election and will be retained for 22 months following a federal election.

26. Under the provisions of section 115 of chapter 54 of the General Laws, the Secretary's Office "shall lay before the governor and council the copies of the votes cast" for senators and representatives in congress, councillors, senators and representatives in the general court, register of probate and sheriff, which are thereafter certified by the governor and council in accordance with section 116.

27. In keeping with this statutory requirement, the Secretary's Office transmitted a "Return of Votes" book to the Governor's Council setting forth totals and a city/town breakdown of all results from the November 3 general election on Tuesday, November 24, 2020. On Wednesday, November 25, 2020, the Governor's Council voted to certify these results.

28. On November 30, 2020, Governor Baker signed, and the Secretary attested to, a "Certificate of Election" stating that Edward J. Markey was duly elected as Senator in Congress for Massachusetts, as required by federal law and the Senate Rules. That certificate was

transmitted to the President of the United States Senate on December 1, 2020. A copy of the certificate and letter of transmittal are attached.

Signed under the pains and penalties of perjury this 4th day of December, 2020.

/s/ Michelle K. Tassinari
Michelle K. Tassinari



The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Elections Division

December 1, 2020

Julie E. Adams
Secretary of the Senate
c/o Office of Public Records
P.O. Box 77578
Washington, DC 20013-7578

Dear Secretary Adams:

On behalf of Secretary of the Commonwealth William Francis Galvin, enclosed please find the Certificate of Election for U.S. Senator Edward J. Markey from Massachusetts, duly elected on November 3, 2020.

I have also enclosed a copy of the Return of Votes showing the number of votes received for Senator Markey. The election results were certified on November 25, 2020 in accordance with state law.

Please let me know if you have any questions.

Very truly yours,

A handwritten signature in blue ink that reads "Michelle K. Tassinari".

Michelle K. Tassinari
Director/Legal Counsel
Elections Division

Enclosures

The Commonwealth of Massachusetts



To the President of the Senate of the United States:

This is to certify that on the third day of November, two thousand and twenty

Edward J. Markey

*was duly chosen by the qualified electors of the Commonwealth of Massachusetts a **Senator** from said Commonwealth to represent said Commonwealth in the Senate of the United States for the term of six years, beginning on the third day of January, two thousand and twenty-one.*

Witness: His Excellency the Governor, Charles D. Baker, and Our Great Seal hereto affixed at Boston, this thirtieth day of November in the year of Our Lord two thousand and twenty.

A handwritten signature in blue ink, appearing to read "Charles D. Baker".

By His Excellency the Governor

A handwritten signature in black ink, appearing to read "Julius G. Phillips".
Secretary of the Commonwealth

EXHIBIT C

Sterman, Anne (AGO)

From: Tassinari, Michelle (SEC) <Michelle.Tassinari@sec.state.ma.us>
Sent: Thursday, September 24, 2020 10:47 AM
To: vashiva@vashiva.com
Subject: Records Request

Good Morning-

I am writing to acknowledge receipt of your request for records. Please note, that this Office does not maintain voter tabulation software, firmware or hardware. While this office certifies voting equipment, as required by law, we do not purchase or lease equipment. Once equipment is approved by this Office, cities and towns can purchase or lease such equipment. Accordingly, this Office has no records responsive to your request.

Further, to the extent you request the same information from local election officials, please note that the approval of digital scan equipment in Massachusetts specifically prohibits the capturing of ballot images.

Michelle K. Tassinari
Director and Legal Counsel
Elections Division
One Ashburton Place, Room 1705
Boston, MA 02108
617-727-2828

Sterman, Anne (AGO)

From: Tassinari, Michelle (SEC) <Michelle.Tassinari@sec.state.ma.us>
Sent: Friday, September 25, 2020 11:44 AM
To: Shiva Ayyadurai
Subject: RE: Records Request
Attachments: DS200.Certification.5.2014.pdf; ImageCast.Certification.5.2014.pdf

Shiva-

Attached please find the certification of two different types of digital scan equipment in Massachusetts.

Please note that while the ballot images are not stored, the actual ballots voted on at any federal election are secured and stored for 22 months in accordance with federal law. However, under state law, those ballots must remain sealed until such time as they can be destroyed.

Michelle K. Tassinari
Director and Legal Counsel
Elections Division
One Ashburton Place, Room 1705
Boston, MA 02108
617-727-2828

From: Shiva Ayyadurai <vashiva@vashiva.com>
Sent: Thursday, September 24, 2020 11:22 AM
To: Tassinari, Michelle (SEC) <Michelle.Tassinari@sec.state.ma.us>
Subject: Re: Records Request

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Michelle,

Kindly refer me to the statute or law, in which the "...approval of digital scan equipment in Massachusetts specifically prohibits the capturing of ballot images."

Thank you in advance.

Warmest regards,

Dr. Shiva Ayyadurai
US Senate Candidate.

On Thu, Sep 24, 2020 at 10:47 AM Tassinari, Michelle (SEC) <michelle.tassinari@state.ma.us> wrote:

Good Morning-

I am writing to acknowledge receipt of your request for records. Please note, that this Office does not maintain voter tabulation software, firmware or hardware. While this office certifies voting equipment, as required by law, we do not purchase or lease equipment. Once equipment is approved by this Office, cities and towns can purchase or lease such equipment. Accordingly, this Office has no records responsive to your request.

Further, to the extent you request the same information from local election officials, please note that the approval of digital scan equipment in Massachusetts specifically prohibits the capturing of ballot images.

Michelle K. Tassinari

Director and Legal Counsel

Elections Division

One Ashburton Place, Room 1705

Boston, MA 02108

617-727-2828

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Office of V.A. Shiva Ayyadurai, Ph.D.

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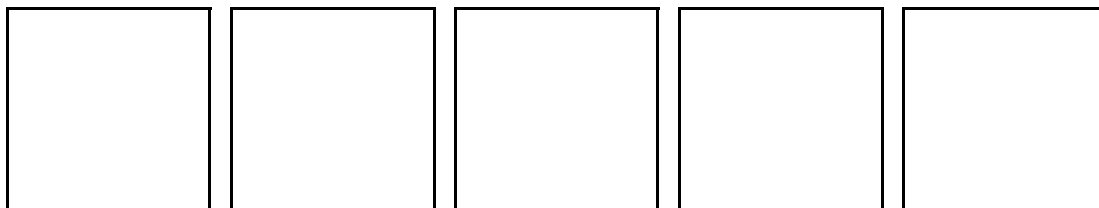
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The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Elections Division

APPROVAL OF VOTING EQUIPMENT IN MASSACHUSETTS

Name of Vendor:

Elections Systems and Software, Inc.
Corporate Headquarters
11208 John Galt Boulevard
Omaha, Nebraska 68137
Phone: (402) 593-0101
(800) 247-8683
Fax: (402) 593-8107
www.essvote.com

Type of Product:

ES&S DS200 Precinct Tabulator (EVS 5.0.0.3)
(Optical Scanning Vote Tabulator)

**Submission of
Detailed Specifications:**

Prior to May 29, 2013, the Office of the Secretary of the Commonwealth received detailed specifications for the DS200.

**Office Demonstration
of Equipment:**

On May 29, 2013, Benjamin Swartz, ES&S State Certification Manager, and other representatives from ES&S presented office demonstrations to members of the Elections Division at One Ashburton Place, Boston. On June 17, 2013, John Lento of ES&S presented another office demonstration (using modified equipment to meet the Massachusetts standards) to members of the Elections Division.

Field Tests:

Field tests were successfully conducted in the Town of Concord at the Annual Town Election held on March 25, 2014 and in the Town of Reading at the Annual Town Election and Special State Election, which were held concurrently on April 1, 2014.

The DS 200 Precinct Tabulator performed without incident in both field tests.

Reasons for Approval:

The Office of the Secretary of the Commonwealth has determined that the DS200 Precinct Tabulator, which is manufactured by ES&S, is a type of voting equipment which is in compliance with the following standards set forth in 950 C.M.R. § 50.02 and the Voluntary Voting System Standards of 2005 adopted by the Election Assistance Commission.

Overview of System:

The DS200 is a paper ballot scanner designed for polling place use. Voters mark selections on a paper ballot and then insert the ballot in any orientation for immediate tabulation. Both sides of the ballot are processed simultaneously with high-resolution scanners and the resulting ballot images are decoded by a proprietary recognition engine. Once voter selections are processed, the ballot is dropped into a secure ballot box. The scanner also has the ability to capture digital images of each ballot, but this function can be disabled to comply with current state law.

Product features of the DS200 include a 12-inch touch screen providing voters and poll worker feedback, an internal thermal printer for generating machine totals and log reports, and USB thumb drive for loading the election definition and storing results. The scanner has also been equipped with a cancellation device, which will mark every ballot as it is dropped into the ballot box.

The scanner is powered by a standard 120-volt AC power cord and contains a back-up battery to power the machine in the event of electrical power failure. When fully charged, the battery can maintain more than two hours of continuous use.

There are three operating modes on the scanner system: Administration, Polls Open Mode, and Polls Closed Mode. The "Administration" mode provides diagnostic and testing functions to calibrate and test the scanner. In "Polls Open" mode, the DS200 actively scans ballots and tabulates results. In "Polls Closed" mode, the scanner prints poll reports, including election results.

Below please find an analysis of the system as it applies to the standards set forth in the General Laws and Regulations.

(1) Simple and Convenient to Use (950 C.M.R. 50.02(1)):

The system is as simple and as easy to use as paper ballots—filling in an oval to indicate the voter's choice. The width of the ballot is 8 ½ inches and the maximum length of the ballot is 19 inches and ballots may be printed with one, two or three columns. However, unlike current approved optical scanner systems, a ballot can be printed with up to three

columns at the top and then printed straight across the entire width at the bottom to accommodate ballot questions.

The vote indicators (ovals) can be filled in with almost any writing utensil, though not all pencil marks will be read by the scanner. While blue and black ink can be read by the tabulator, the BIC Grip Roller Ball Black pen with a .7mm tip is the only approved marking device for the DS200. Red and orange ink is not recommended. The scanner draws three types of information from each ballot during scanning: audit information, ballot information, and voter marks.

- (a) A reasonable and average person should be able to operate the equipment after a brief demonstration or explanation. Ballots can be fed through in all four orientations.
- (b) Voting an average ballot on this equipment should not take an undue length of time. The system seemed to process sample ballots relatively quickly. During the field test, the poll workers commented that the tabulator took longer to process ballots than the equipment they currently used. After careful review by the local election officials and representatives from this Office, it was determined that while the time for processing a ballot was slightly longer than current equipment, it was not significant.
- (c) After the paper ballot is marked, the voter feeds it through the machine. Only after the voter is ready to insert it into the tabulator is the ballot processed, thereby providing the voter with an opportunity to spoil a ballot and receive a new ballot in accordance with state law. The tabulator can be programmed to notify the voter if it detects certain discrepancies on the ballot such as under-votes or over-votes.
- (d) As with other optical scanning voting equipment, the ballot is marked in a separate area from the machine. Accordingly, marking units would be necessary with adequate lighting. Otherwise special lighting would be necessary.

(2) *Maximize Accuracy and Prevent Fraud (950 C.M.R. 50.02(2)):*

The DS200 is designed to maximize accuracy and prevent fraud. When adequate training is given to election officers in the handling of ballots and correct use of the system itself, the system will provide adequate counting accuracy. When correctly programmed and tested, the system registers the number of ballots cast and the number read. Also, the number of votes for each candidate or question(s) are recorded and printed on the paper tape that documents election results.

The ballot is marked by filling in an oval with a black pen beside the candidate's name or voter's yes or no response to a ballot question. This process is similar to marking an "X" beside the voter's selection on a paper ballot.

- (a) There are adequate locks on the compartment sections of the system and the area where the program card is inserted and where the printer tape is located for the end of the night reporting.
- (b) The machine contains electronic components that register votes for candidates and questions electronically as well as a digital display that indicates the number of voters continuously while the machine is in the "Polls Open" mode as a public counter. The DS200 also has a protective counter that registers the total number of times the machine has operated in its lifetime.
- (c) The system receives, registers and cancels each ballot prior to depositing it in a compartment. When using the steel ballot box, the system allows for three compartments: one for ballots tabulated by the unit, one for ballots where write-in votes have been detected which must be hand-counted at the close of polls, and one auxiliary compartment for ballots unable to be read by the machine. When using the plastic ballot box, the system has two compartments: the main compartment for ballots tabulated by the machine and the auxiliary compartment for ballots unable to be read by the machine. The plastic ballot box does not allow for the separation of write-in ballots.
- (d) Only when the scanner is in "Polls Open" mode can votes be registered which prevents the machine from being used to register votes before and after the election.
- (e) When marks for an office or question exceed the number to be elected, the tabulator will display a notification to the voter identifying a discrepancy on the ballot and allowing the voter to correct the ballot. If the voter chooses to cast the ballot with mistakes, the tabulator can be programmed to register the vote as a blank to prevent double voting.
- (f) The DS200 can be programmed to accept multiple ballot styles, including any party ballot for a party primary. As with paper ballots, the election official is responsible for ensuring that the voter is qualified to receive a particular party ballot to vote on.

(3) Secrecy (950 C.M.R. 50.02(3)):

The voter's choice can be kept from the public view by enclosing it in a secrecy sleeve, placing the top of the secrecy sleeve near the protective cover of the system and feeding the ballot into the scanner.

(4) Must Meet Demands of Average Election (950 C.M.R. 50.02(4)):

The DS200 is adequate to demands of average election.

- (a) The programmable cards used for the DS200 have a great capacity for reading and recording data. The size of the ballots is adequate to print candidates and questions for an average election.

(b) A recount of votes on the DS200 is absolutely possible as the actual paper ballots are retained for a hand recount if necessary.

(c) Ballots can be printed and the election definition programmed to receive write-in votes.

(5) Absentee Ballots (950 C.M.R. 50.02(5)):

Absentee ballots for use in the DS200 are optical scanner ballots.

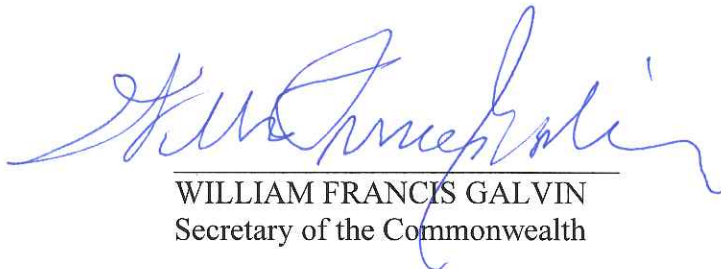
(6) Service by Manufacturer (950 C.M.R. 50.02(6)):

Service for the DS200 is provided by ES&S.

Conditions for Approval:

The Vendor will provide any city or town who purchases or leases the equipment with a sufficient supply of the approved ballot marking devices at no additional charge. The Vendor will include a printing kit and complete instructions to all purchasers of the system. No printer will be required to purchase paper stock from the Vendor. Further, the Vendor will work with any printer with whom the Commonwealth or any city or town contracts for the printing of ballots to assure that all ballots printed will be processed by the system and shall not require any such printer to pay for training or special equipment required to print any ballots for use with the equipment. This includes testing sample ballots sent by a printer as quickly as possible to prevent any delays in the ballot printing process.

Dated: May 7, 2014



WILLIAM FRANCIS GALVIN
Secretary of the Commonwealth



The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Elections Division

APPROVAL OF VOTING EQUIPMENT IN MASSACHUSETTS

Name of Vendor: LHS Associates, Inc.
10 Manor Parkway Unit B
Salem, NH 03079
www.lhsassociates.com

Name of Manufacturer: Dominion Voting Systems Corporation
1201 18th Street, Suite 210
Denver, Colorado 80303
www.dominionvoting.com

Type of Product: ImageCast Precinct Tabulator (ICP)
(Optical Scanning Vote Tabulator)

Submission of Detailed Specifications: Prior to May 6, 2013 the Office of the State Secretary received detailed specifications for the ImageCast Precinct Tabulator.

Office Demonstration of Equipment: On May 6, 2013, John Silvestro, President of LHS, and other representatives from LHS presented office demonstrations to members of the Elections Division at One Ashburton Place, Boston. On August 5, 2013, John Silvestro of LHS presented a further office demonstration (using modified equipment to meet the Massachusetts standards) to members of the Elections Division.

Field Test: The equipment was field tested in the City of Quincy at their municipal election on November 5, 2013 and in the City of Easthampton for their municipal election on November 5, 2013. Based on issues identified during the field test in the City of Quincy, the equipment was required

to conduct another field test, which was done in the Town of Needham at their annual town election on April 8, 2014.

The ImageCast Precinct Tabulator performed without incident in two field tests as required by law.

Reason for Approval:

The Office of the Secretary of the Commonwealth has determined that the ImageCast Precinct Tabulator, which is manufactured by Dominion Voting Systems, is a type of voting equipment which is in compliance with the following standards set forth in 950 C.M.R. § 50.02, and the Voluntary Voting System Standards of 2005 adopted by the Election Assistance Commission.

Overview of System:

The ImageCast Precinct Ballot Tabulator is a precinct-based optical scan tabulator that is used in conjunction with ImageCast compatible ballot storage boxes. The system is designed to scan marked paper ballots, interpret voter marks on the paper ballot, and store and tabulate each vote from each paper ballot. The scanner also has the ability to capture digital images of each ballot, but this function can be disabled to comply with current state law.

The ImageCast Precinct Tabulator can process single or double-sided ballots, and may be configured to handle multiple ballot scenarios. The ImageCast can be programmed to accept multiple cards and ballot styles. The scanner has also been equipped with a cancellation device, which will mark every ballot as it is inserted into the scanner.

The scanner is powered by a standard 120-volt AC power cord and contains a back-up battery to power the machine in the event of electrical power failure. When fully charged, the battery can maintain more than two hours of continuous use. The scanner is equipped with a thermal printer, which may be locked to prevent tampering.

There are five operating modes on the scanner system: Powered Down, Administration Mode, Election Run Mode, Election Run Mode with Ballot Review, and Ballot Test Mode. The "Powered Down Mode" allows the battery pack to continue to charge if the AC power supply is connected. The "Administration Mode" allows officials to perform administrative functions, such as changing modes, printing reports, and closing the polls. The "Election Run Mode" is used during voting hours and allows the tabulator to process ballots. The "Election Run Mode with Ballot Review" is used during voting hours, and allows the voter to review their choices on the LCD screen before casting the ballot. The "Ballot Test Mode" may be used by officials to test ballots, prior to an election.

Below please find an analysis of the system as it applies to the standards set forth in the General Laws and Regulations.

(1) Simple and Convenient to Use (950 C.M.R. § 50.02(1)):

The system is as simple and as easy to use as paper ballots and requires filling in an oval to indicate the voter's choice. The width of the ballot is 8 ½ inches and the maximum length of the ballot is 19 inches. The ballots may be printed with one, two or three columns. However, unlike current approved optical scanner systems, a ballot can be printed with up to three columns at the top and then printed straight across the entire width at the bottom to accommodate ballot questions.

The vote indicators (ovals) can be filled in with a ballot marking device. The scanner reads blue and black ink, though the ImageCast Ballot Marking Device (BMD) is the only approved marking device for the ImageCast. Red and orange ink is not recommended.

- (a)* A reasonable and average person should be able to operate the equipment after a brief demonstration or explanation. Ballots can be fed through in all four orientations.
- (b)* Voting an average ballot on this equipment should not take an undue length of time. The system seemed to process sample ballots relatively quickly. During the field test, the poll workers commented that the tabulator took longer to process ballots than the equipment they currently used. After careful review by the local election officials and representatives from this Office, it was determined that while the time for processing a ballot was slightly longer than current equipment, it was not significant.
- (c)* After the paper ballot is marked, the voter feeds it through the machine. Only after the voter is ready to insert it into the tabulator is the ballot processed, thereby providing the voter with an opportunity to spoil a ballot and receive a new ballot in accordance with state law. The tabulator can be programmed to notify the voter if it detects certain discrepancies on the ballot such as under-votes or over-votes.
- (d)* As with other optical scanning voting equipment, the ballot is marked in a separate area from the machine. Accordingly, marking units would be necessary with adequate lighting. Otherwise, special lighting would be necessary.

(2) Maximize Accuracy and Prevent Fraud (950 C.M.R. § 50.02(2)):

The ImageCast Precinct Tabulator is designed to maximize accuracy and prevent fraud. When adequate training is given to election officers in the handling of ballots and correct use of the system itself, the system will provide adequate counting accuracy. When correctly programmed and tested, the system registers the number of ballots cast and the number read. Also, the number of votes for each candidate or question(s) are recorded and printed on the paper tape that documents election results.

The ballot is marked by filling in an oval with a black pen beside the candidate's name or voter's yes or no response to a ballot question. This process is similar to marking an "X" beside the voter's selection on a paper ballot.

- (a) There are adequate locks on the compartment sections of the system and the area where the program card is inserted and where the printer tape is located for the end of the night reporting.
- (b) The machine contains electronic components that register votes for candidates and questions electronically as well as a digital display that indicates the number of voters continuously while the machine is in the "Election Run" mode as a public counter. The ImageCast also has a protective counter that registers the total number of times the machine has operated in its lifetime.
- (c) The system receives, registers and cancels each ballot prior to depositing it in a compartment. The system allows for three compartments: one for ballots tabulated by the unit, one for ballots where write-in votes have been detected which must be hand-counted at the close of polls, and one auxiliary compartment for ballots unable to be read by the machine.
- (d) Only when the scanner is in "Election Run" mode and "Election Run with Ballot Review" mode can votes be registered which prevents the machine from being used to register votes before and after the election.
- (e) When marks for an office or question exceed the number to be elected, the tabulator will display a notification to the voter identifying a discrepancy on the ballot and allowing the voter to correct the ballot. If the voter chooses to cast the ballot with mistakes, the tabulator can be programmed to register the vote as a blank to prevent double voting.
- (f) The ImageCast can be programmed to accept multiple ballot styles, including any party ballot for a party primary. As with paper ballots, the election official is responsible for ensuring that the voter is qualified to receive a particular party ballot to vote on.

(3) Secrecy (950 C.M.R. § 50.02(3)):

The voter's choice can be kept from the public view by enclosing it in a secrecy sleeve, placing the top of the secrecy sleeve near the protective cover of the system and feeding the ballot into the scanner.

(4) Must Meet Demands of Average Election (950 C.M.R. § 50.02(4)):

The ImageCast is adequate to demands of average election.

- (a) The programmable cards used for the ImageCast have a great capacity for reading and recording data. The size of the ballots is adequate to print candidates and questions for an average election.

(b) A recount of votes on the ImageCast is absolutely possible as the actual ballots are retained for a hand recount if necessary.

(c) Ballots can be printed and the election definition programmed to receive write-in votes.

(5) Absentee Ballots (950 C.M.R. § 50.02(5)):

Absentee ballots for use in the ImageCast are optical scanner ballots.

(6) Service by Manufacturer (950 C.M.R. § 50.02(6)):

Service for the ImageCast is provided by LHS.

Conditions for Approval: The Vendor will provide any city or town who purchases or leases the equipment with a sufficient supply of the approved ballot marking devices at no additional charge. The Vendor will include a printing kit and complete instructions to all purchasers of the system. No printer will be required to purchase paper stock from the Vendor. Further, the Vendor will work with any printer with whom the Commonwealth or any city or town contracts for the printing of ballots to assure that all ballots printed will be processed by the system and shall not require any such printer to pay for training or special equipment required to print any ballots for use with the equipment. This includes testing sample ballots sent by a printer as quickly as possible to prevent any delays in the ballot printing process.

Dated: May 7, 2014


WILLIAM FRANCIS GALVIN
Secretary of the Commonwealth

EXHIBIT D



The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Elections Division

M E M O R A N D U M

TO: Voting Equipment Vendors

FROM: Michelle K. Tassinari, Director/Legal Counsel, Elections Division

RE: Standards for Certification of Voting Equipment in Massachusetts

Below please find a brief overview of the standards for certification of voting equipment in Massachusetts as well as the applicable references to the General Laws and Code of Massachusetts Regulations.

Procedurally, to have voting equipment approved for certification in Massachusetts, a vendor must first provide an office demonstration of such voting equipment. After a successful office demonstration, the voting equipment must be field-tested in two elections. Voting equipment will be certified in the Commonwealth only after two successful field-tests.

Prior to scheduling an office demonstration, certain paperwork must be submitted to the Elections Division for review. Specifically, vendors must supply detailed specifications, including an operator's manual, proof that the voting system complies with the standards adopted by the Federal Election Commission on February 5, 1990, as they may be amended from time to time including those amendments from 2002, and results from an independent test authority to confirm compliance. Additionally, the Elections Division would request that any vendor supply any sample ballots displaying dual language requirements, font size and paper stock.

Additionally, please note that there is legislation pending in Massachusetts that would make an additional requirement in the certification process for voting equipment in Massachusetts. Specifically, the legislation would not permit the Secretary to certify for use any new voting equipment unless such equipment was universally accessible.

The following information is taken from the General Laws and Code of Massachusetts Regulations.

General Laws:

Chapter 54: Section 32. Examination and approval of voting equipment.

Section 32. The state secretary shall examine all types of voting equipment including ballot boxes, counting apparatus, and voting machines and determine whether such equipment complies with the minimum requirements for such equipment imposed by law and whether the use of such equipment would further the efficient administration of elections.

Any person owning or interested in such equipment may submit it to the state secretary for examination. For the purpose of assistance in examining such new equipment, the secretary, subject to appropriation, may employ not more than three individuals who are experts in one or more of the fields of data processing, mechanical engineering and public administration.

Within thirty days after completing the examination and approval of any such equipment the state secretary shall make and file in his office his report on the equipment together with a written or printed description and drawings and photographs clearly identifying the equipment. As soon as practicable after such filing, the state secretary upon request shall send a copy of the report to any governing body within the state.

Any voting equipment that receives the approval of the state secretary may be used for conducting elections. Any voting equipment that does not receive such approval shall not be adopted for or used at any election. After such equipment has been approved by the state secretary, any change or improvement in the equipment that does not impair its accuracy, efficiency or capacity shall not render necessary a reexamination or reapproval of the equipment.

All voting equipment being used upon the effective date of this act shall within twelve months of said effective date be submitted to the state secretary for his approval. Within twenty-four months of the effective date of this act the secretary shall approve or disapprove of such equipment and promulgate uniform regulations for such equipment in accordance with section thirty-seven.

Chapter 54: Section 33. Requirements and use of voting machines, electronic voting systems, ballots, etc.

Section 33. Voting machines shall furnish convenient, simple and satisfactory means of voting at primaries and elections and of ascertaining and recording the true result thereof with facility and accuracy, special regard being given to the prevention and detection of double voting at primaries and elections and of voting for candidates of more than one political party at a primary; but no machine shall be approved which does not secure to the voter as much secrecy in voting as is afforded by the use of the official ballot. Ballot boxes shall have sufficient locks and keys or seal fastenings, and shall contain mechanical devices for receiving, registering and cancelling every ballot deposited

therein; but no such box shall record any distinguishing number or mark upon a ballot. No machine, ballot box or counting apparatus, not approved in accordance with this and the preceding section, shall be used at any election, primary or caucus; nor shall any such machines, ballot boxes or counting apparatus be used except in accordance with the laws relating to primaries and elections.

On voting machines which provide adequate mechanical safeguards, the names of candidates and the questions to be submitted to the voters may be arranged in the same manner as on the official paper ballot. On all other voting machines to be used at state elections the names of the candidates for each office shall be arranged in a horizontal row or vertical column under or opposite to the titles of the offices, to be determined in accordance with the type of mechanical safeguard against over-voting used in the particular machine. At state primaries separate voting machines may be used for the listing of names of candidates of each of the political parties; provided, that the number of machines to be used for each such party in each polling place shall be determined by the city or town clerk or election commissioners and notice of such determination shall be sent to the state secretary not later than one hundred and twenty days preceding the date of the primary.

Electronic voting systems shall furnish convenient and simple means of voting at primaries, preliminary elections and elections, and of ascertaining and recording the results thereof with facility and accuracy, special regard being given to the prevention and detection of double voting, or of voting for candidates of more than one political party at a primary; but no system shall be approved which does not secure to the voter as much secrecy in voting as is afforded by the use of the official ballot.

At primaries, separate marking units, where necessary, may be used for the marking of the ballots of each party, as determined by the city or town clerk.

The arrangement of names and questions on voting machines and on ballots or ballot labels used in electronic voting systems shall be, in general, the same as on the official ballot, except as hereinbefore provided.

Chapter 54: Section 33A. Additional requirements of voting machines.

Section 33A. Voting machines shall be provided with convenient spaces, which shall be specified and described on the cards of instructions, where the name of a person may be written in or a paster or sticker affixed by a voter who desires to vote for a person whose name does not appear on the voting machine. They shall be suitably lighted so that the voter will be able to easily read the titles of the offices, the names of the candidates and the questions submitted to the voters. The machines shall be equipped with proper devices or locks to prevent any operation of the machine before or after the voting, and with the following counters or indicators: a "Public Counter", which shall mean the counter or other device that registers each time the machine is operated during the election and shows the number of persons who have voted thereon, a "Protective Counter", which shall mean the device or counter which registers the grand total of times that the machine has been operated, a "Candidate Counter", which shall mean the

counters on which are registered numerically the votes cast for candidates, a "Question Counter", which shall mean the counters upon which are registered numerically the votes cast on questions submitted to the voters, and the "Vote Indicators", which shall mean the pointers or other devices upon which are registered the votes for candidates or on questions submitted to voters. Voting machines which contain electronic components need not be equipped with a protective counter, and, instead of candidate and question counters, may be equipped with internal components which register votes electronically. All voting machines used in primary elections shall be so equipped that the election officers can adjust the machines to prevent voters from voting for candidates of any party in which they are not enrolled.

Chapter 54: Section 33G. Lease or purchase of marking units or tabulating units; bonds of manufacturers or distributors.

Section 33G. If any special marking units or special tabulating units are leased or purchased by a city or town, the manufacturer or distributor of such units shall give to the city or town clerk a bond, with sufficient sureties, to keep such units in working order for at least two calendar years from the date of lease or purchase. Said manufacturer or distributor shall also give to said clerk a bond, with sufficient sureties, conditioned to defend and indemnify the city or town leasing the units against any suit at law or in equity and for any expense, damage or inconvenience which they may incur or suffer by reason of any suit brought against them for infringement of patents or other rights arising from the lease or use of such units.

Chapter 54: Section 37. Regulations governing approval of voting equipment, ballots, and voting procedures.

Section 37. The state secretary shall promulgate regulations governing the approval of voting equipment under section thirty-two.

The state secretary shall promulgate regulations governing the contents, form, character and kind of ballots, ballot labels, ballot cards, formats, records, papers and documents and other materials and supplies and procedures necessary in the use of any voting equipment approved in accordance with section thirty-two and in the process of counting and tabulating the ballots.

The state secretary shall prescribe by regulation approved methods of voting such as paper ballot voting, machine voting and electronic voting.

The state secretary shall prescribe rules and regulations to achieve and maintain the maximum degree of accuracy, impartiality and efficiency on the procedures of voting and of counting, tabulating and recording votes.

Code of Massachusetts Regulations

950 CMR 50.01

TITLE 950: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

CHAPTER 50.00: VOTING EQUIPMENT

50.01: General Provisions

950 CMR 50.01 applies to 950 CMR 50.00 through 54.00.

(1) Definitions. Terms shall have the meanings provided in M.G.L. c. 50, § 1. In addition:

Electronic voting system means any system for casting or counting ballots which uses electrical or electronic tabulating equipment, or which uses special marking inks or punch card devices in the marking of ballots.

Secretary means the state secretary.

Voting machine means any mechanical or automatic device for casting and counting votes which is not part of an electronic voting system.

(2) Application. 950 CMR 50.01 through 50.06 apply to all primaries, preliminary elections, and elections, referred to collectively as "elections", except to the extent provided otherwise. 950 CMR 52.00 applies where paper ballots are used; 950 CMR 53.00 where voting machines are used; and 950 CMR 54.00 where electronic voting systems are used.

(3) Effective Date. 950 CMR 50.01 through 50.06 are effective as soon as publication occurs in the Massachusetts Register, under M.G.L. c. 30A, § 6.

(4) Amendment. These chapters may be amended at any time in the manner provided by law. Any interested person may petition the Secretary requesting the adoption, amendment, or repeal of any regulation, under M.G.L. c. 30A, § 4. This petition shall be considered by the Secretary within 30 days after filing.

(5) Authority. These chapters are promulgated under authority of M.G.L. c. 54, § 37.

50.02: Standards

The Secretary shall determine the approved types of voting equipment based on compliance with the minimum requirements for this equipment imposed by law and the ability of this equipment to further the efficient administration of elections. Specifically:

(1) Equipment actually used to vote shall be simple and convenient to use:

(a) A reasonable and average person should be able to operate the equipment after a brief demonstration or explanation.

- (b) Voting an average ballot on the equipment shall not take an undue length of time.
- (c) Safeguards such as indicator devices or markings must be employed so as to allow the voter to examine the choices he has made and ensure that the correct choices have been indicated. The voter shall have the ability to change a vote either by resetting the device or by obtaining as many as two new ballots until the time when the final vote has been registered either by pulling a lever or other device or by casting the ballot.
- (d) If ordinary lighting is inadequate, special lighting must be supplied.
- (e) Voting machines shall be equipped to permit the insertion of four-inch wide ballot labels for display of ballot questions.

(2) Equipment shall be designed so as to maximize accuracy and prevent fraud:

- (a) There shall be a sufficient number of locks and seals to prevent tampering with the counters or other mechanisms.
- (b) Voting machines that do not contain electronic components shall have the following counters:
 1. public counter-the counter or other device that registers each time the machine is operated during the election and shows the number of persons who have voted on that machine in that election.
 2. protective counter-the counter or other device which registers the total number of times the machine has been operated in its lifetime.
 3. vote counters-the counters which numerically register the votes cast for candidates and on questions to voters.
 4. vote indicators-the pointers or other devices by which are indicated the votes for candidates or on questions to voters.

Voting machines that contain electronic components need not be equipped with a protective counter, and, instead of candidate and question counters, may be equipped with internal components which register votes electronically.

- (c) Ballot boxes shall contain mechanical devices for receiving, registering, and canceling every ballot deposited in them, but no ballot box shall record any distinguishing number or mark on a ballot, other than the identity of the ward or precinct. Ballot boxes that contain electronic components may be equipped with internal components which register votes electronically.
- (d) If a marking device used in a punch-card electronic system contains a mask and template, the mask and template must contain at least 235 positions.
- (e) Devices shall be present in voting machines that can prevent the machines from being used to register votes before and after the election, or provide a means for detection of such use.
- (f) Special regard must be given to the prevention and detection of double voting.
- (g) Special regard must be given to the prevention and detection of voting for candidates of more than one political party at a primary election. All voting machines used in primary elections shall be equipped so that election officers can

adjust the machines to prevent voters from voting for candidates of any party in which they are not enrolled. Similar safeguards must be provided for electronic voting devices.

(3) The minimum standard for secrecy in voting shall be that afforded by the use of paper ballots.

(4) Equipment must be adequate to the demands of an average election.

(a) Equipment capacity must be such as to accommodate a reasonable number of candidates and offices on a ballot. Voting machines not in use as of April 3, 1979 must contain spaces for at least 50 candidate names in a single row or column, unless: (i) machines are purchased solely for the purpose of replacing less than a majority of the machines in a city or town which already uses only the same type of machines containing fewer spaces, or (ii) the construction of the machine permits the names of candidates and questions to be arranged in the same format as on the official paper ballot.

(b) A recount of votes cast for each candidate and on each question shall be possible.

(c) Space must be provided where the voter may indicate a write-in or sticker vote if desired.

(d) Punch cards used in an electronic voting system must meet Electronic Industries Association standard RS-292 and U.S.A. standard X3.21-1967.

(5) Absentee ballots used with punch-card systems shall be punch-card ballots. Absentee ballots used with optical scanner systems shall be optical scanner ballots.

(6) Equipment must be accompanied by availability of service by the manufacturer or other persons.

(7) Equipment must be judged sturdy and reliable and able to withstand regular use at elections for at least a decade.

(8) The Secretary may take into account any other factors which he considers relevant pursuant to statutory and regulatory mandates.

(9) Nothing in 950 CMR 50.00 shall be interpreted as removing from the city or town the obligation to test individual pieces of approved types of voting equipment to ensure compliance with these standards.

50.03: Submission and Approval Schedule

The Secretary shall decide whether to approve all types of voting equipment according to the following schedule:

(1) Equipment must be approved by the Secretary before it may be used.

(2) The Secretary shall make and file his report in his office, together with a written or printed description and drawings and photographs clearly identifying the equipment, within 30 days after the time of submission.

(3) No electronic voting system and no direct electronic voting machine may be approved after January 1, 1992 that does not meet the voting system standards adopted by the Federal Election Commission on February 5, 1990, as they may be amended from time to time, and that has not been tested by an independent test authority to confirm compliance.

(4) Only voting equipment approved by the Secretary at least 180 days before a state primary or state election shall be used at such primary or election, unless it is to be used in a field test (950 CMR 50.04(3)) before final approval of the equipment.

(5) Any additional printing cost incurred by the Secretary as a result of final approval or field testing of new voting equipment, after receipt by the State Purchasing Agent of the proposed state ballot printing contract, shall be the responsibility of the vendor.

50.04: Submission and Approval Procedure

Submission of voting equipment to the Secretary consists of:

(1) Submission of detailed specifications, including proof of compliance with 950 CMR 50.03(3).

(2) Office demonstration of the equipment.

(3) Field test in at least two elections in one or more communities according to the discretion of the Secretary.

These requirements may be modified at the Secretary's discretion. In all of this procedure the Secretary shall determine whether the equipment meets the standards for voting equipment as specified in 950 CMR 50.02. The Secretary subject to appropriation may employ not more than three individuals who are experts in one or more of the fields of data processing, mechanical engineering and public administration to help him make this determination.

50.05: Monitoring Performance

The Secretary shall monitor the performance of all approved voting equipment, and may for this purpose have representatives observe its use at elections in various cities and towns. If at any time the Secretary decides after a public hearing that any equipment does not conform with the requirements of law and 950 CMR 50.00, he may revoke his approval of that equipment. He shall file a written report to that effect, and shall notify all interested city and town clerks. Revocation shall prevent the continued use of previously approved equipment in cities and towns where it is then in use.

EXHIBIT E



The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Elections Division

APPROVAL OF VOTING EQUIPMENT IN MASSACHUSETTS

Name of Vendor:

Elections Systems and Software, Inc.
Corporate Headquarters
11208 John Galt Boulevard
Omaha, Nebraska 68137
Phone: (402) 593-0101
(800) 247-8683
Fax: (402) 593-8107
www.essvote.com

Type of Product:

ES&S DS200 Precinct Tabulator (EVS 5.0.0.3)
(Optical Scanning Vote Tabulator)

**Submission of
Detailed Specifications:**

Prior to May 29, 2013, the Office of the Secretary of the Commonwealth received detailed specifications for the DS200.

**Office Demonstration
of Equipment:**

On May 29, 2013, Benjamin Swartz, ES&S State Certification Manager, and other representatives from ES&S presented office demonstrations to members of the Elections Division at One Ashburton Place, Boston. On June 17, 2013, John Lento of ES&S presented another office demonstration (using modified equipment to meet the Massachusetts standards) to members of the Elections Division.

Field Tests:

Field tests were successfully conducted in the Town of Concord at the Annual Town Election held on March 25, 2014 and in the Town of Reading at the Annual Town Election and Special State Election, which were held concurrently on April 1, 2014.

The DS 200 Precinct Tabulator performed without incident in both field tests.

Reasons for Approval:

The Office of the Secretary of the Commonwealth has determined that the DS200 Precinct Tabulator, which is manufactured by ES&S, is a type of voting equipment which is in compliance with the following standards set forth in 950 C.M.R. § 50.02 and the Voluntary Voting System Standards of 2005 adopted by the Election Assistance Commission.

Overview of System:

The DS200 is a paper ballot scanner designed for polling place use. Voters mark selections on a paper ballot and then insert the ballot in any orientation for immediate tabulation. Both sides of the ballot are processed simultaneously with high-resolution scanners and the resulting ballot images are decoded by a proprietary recognition engine. Once voter selections are processed, the ballot is dropped into a secure ballot box. The scanner also has the ability to capture digital images of each ballot, but this function can be disabled to comply with current state law.

Product features of the DS200 include a 12-inch touch screen providing voters and poll worker feedback, an internal thermal printer for generating machine totals and log reports, and USB thumb drive for loading the election definition and storing results. The scanner has also been equipped with a cancellation device, which will mark every ballot as it is dropped into the ballot box.

The scanner is powered by a standard 120-volt AC power cord and contains a back-up battery to power the machine in the event of electrical power failure. When fully charged, the battery can maintain more than two hours of continuous use.

There are three operating modes on the scanner system: Administration, Polls Open Mode, and Polls Closed Mode. The "Administration" mode provides diagnostic and testing functions to calibrate and test the scanner. In "Polls Open" mode, the DS200 actively scans ballots and tabulates results. In "Polls Closed" mode, the scanner prints poll reports, including election results.

Below please find an analysis of the system as it applies to the standards set forth in the General Laws and Regulations.

(1) Simple and Convenient to Use (950 C.M.R. 50.02(1)):

The system is as simple and as easy to use as paper ballots—filling in an oval to indicate the voter's choice. The width of the ballot is 8 ½ inches and the maximum length of the ballot is 19 inches and ballots may be printed with one, two or three columns. However, unlike current approved optical scanner systems, a ballot can be printed with up to three

columns at the top and then printed straight across the entire width at the bottom to accommodate ballot questions.

The vote indicators (ovals) can be filled in with almost any writing utensil, though not all pencil marks will be read by the scanner. While blue and black ink can be read by the tabulator, the BIC Grip Roller Ball Black pen with a .7mm tip is the only approved marking device for the DS200. Red and orange ink is not recommended. The scanner draws three types of information from each ballot during scanning: audit information, ballot information, and voter marks.

- (a) A reasonable and average person should be able to operate the equipment after a brief demonstration or explanation. Ballots can be fed through in all four orientations.
- (b) Voting an average ballot on this equipment should not take an undue length of time. The system seemed to process sample ballots relatively quickly. During the field test, the poll workers commented that the tabulator took longer to process ballots than the equipment they currently used. After careful review by the local election officials and representatives from this Office, it was determined that while the time for processing a ballot was slightly longer than current equipment, it was not significant.
- (c) After the paper ballot is marked, the voter feeds it through the machine. Only after the voter is ready to insert it into the tabulator is the ballot processed, thereby providing the voter with an opportunity to spoil a ballot and receive a new ballot in accordance with state law. The tabulator can be programmed to notify the voter if it detects certain discrepancies on the ballot such as under-votes or over-votes.
- (d) As with other optical scanning voting equipment, the ballot is marked in a separate area from the machine. Accordingly, marking units would be necessary with adequate lighting. Otherwise special lighting would be necessary.

(2) *Maximize Accuracy and Prevent Fraud (950 C.M.R. 50.02(2)):*

The DS200 is designed to maximize accuracy and prevent fraud. When adequate training is given to election officers in the handling of ballots and correct use of the system itself, the system will provide adequate counting accuracy. When correctly programmed and tested, the system registers the number of ballots cast and the number read. Also, the number of votes for each candidate or question(s) are recorded and printed on the paper tape that documents election results.

The ballot is marked by filling in an oval with a black pen beside the candidate's name or voter's yes or no response to a ballot question. This process is similar to marking an "X" beside the voter's selection on a paper ballot.

- (a) There are adequate locks on the compartment sections of the system and the area where the program card is inserted and where the printer tape is located for the end of the night reporting.
- (b) The machine contains electronic components that register votes for candidates and questions electronically as well as a digital display that indicates the number of voters continuously while the machine is in the "Polls Open" mode as a public counter. The DS200 also has a protective counter that registers the total number of times the machine has operated in its lifetime.
- (c) The system receives, registers and cancels each ballot prior to depositing it in a compartment. When using the steel ballot box, the system allows for three compartments: one for ballots tabulated by the unit, one for ballots where write-in votes have been detected which must be hand-counted at the close of polls, and one auxiliary compartment for ballots unable to be read by the machine. When using the plastic ballot box, the system has two compartments: the main compartment for ballots tabulated by the machine and the auxiliary compartment for ballots unable to be read by the machine. The plastic ballot box does not allow for the separation of write-in ballots.
- (d) Only when the scanner is in "Polls Open" mode can votes be registered which prevents the machine from being used to register votes before and after the election.
- (e) When marks for an office or question exceed the number to be elected, the tabulator will display a notification to the voter identifying a discrepancy on the ballot and allowing the voter to correct the ballot. If the voter chooses to cast the ballot with mistakes, the tabulator can be programmed to register the vote as a blank to prevent double voting.
- (f) The DS200 can be programmed to accept multiple ballot styles, including any party ballot for a party primary. As with paper ballots, the election official is responsible for ensuring that the voter is qualified to receive a particular party ballot to vote on.

(3) Secrecy (950 C.M.R. 50.02(3)):

The voter's choice can be kept from the public view by enclosing it in a secrecy sleeve, placing the top of the secrecy sleeve near the protective cover of the system and feeding the ballot into the scanner.

(4) Must Meet Demands of Average Election (950 C.M.R. 50.02(4)):

The DS200 is adequate to demands of average election.

- (a) The programmable cards used for the DS200 have a great capacity for reading and recording data. The size of the ballots is adequate to print candidates and questions for an average election.

(b) A recount of votes on the DS200 is absolutely possible as the actual paper ballots are retained for a hand recount if necessary.

(c) Ballots can be printed and the election definition programmed to receive write-in votes.

(5) Absentee Ballots (950 C.M.R. 50.02(5)):

Absentee ballots for use in the DS200 are optical scanner ballots.

(6) Service by Manufacturer (950 C.M.R. 50.02(6)):

Service for the DS200 is provided by ES&S.

Conditions for Approval:

The Vendor will provide any city or town who purchases or leases the equipment with a sufficient supply of the approved ballot marking devices at no additional charge. The Vendor will include a printing kit and complete instructions to all purchasers of the system. No printer will be required to purchase paper stock from the Vendor. Further, the Vendor will work with any printer with whom the Commonwealth or any city or town contracts for the printing of ballots to assure that all ballots printed will be processed by the system and shall not require any such printer to pay for training or special equipment required to print any ballots for use with the equipment. This includes testing sample ballots sent by a printer as quickly as possible to prevent any delays in the ballot printing process.

Dated: May 7, 2014



WILLIAM FRANCIS GALVIN
Secretary of the Commonwealth

EXHIBIT F



The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Elections Division

APPROVAL OF VOTING EQUIPMENT IN MASSACHUSETTS

Name of Vendor:

Elections Systems and Software, Inc.
Corporate Headquarters
11208 John Galt Boulevard
Omaha, Nebraska 68137
Phone: (402) 593-0101
(800) 247-8683
Fax: (402) 593-8107
www.essvote.com

Type of Product:

ES&S DS450 Central Tabulator (EVS 5.3.4.0)
Hardware version 1.0 firmware version 3.0.0.0

Use is limited to Advance Depositing and Central
Tabulation Facilities for processing of early voting
ballots.

Submission of

Detailed Specifications:

Between February 2016 and February 12, 2020,
the Secretary of the Commonwealth's Office received
detailed specifications for the DS450.

Office Demonstration

Of Equipment:

On February 12, 2020 ES&S provided an office
demonstration to members of the Elections Division at
One Ashburton Place, Boston.

Field Tests:

Field tests were successfully conducted on March 3,
2020 in the cities of Somerville and Worcester for
central tabulation of early voting ballots only. The
DS450 performed without incident in both field tests.

Reasons for Approval:

The Office of the Secretary of the Commonwealth has determined that the
DS450 Central Tabulator, which is manufactured by ES&S, is a type of voting

equipment used for central tabulation which is in compliance with the standards set forth in 950 C.M.R. § 50.02, and the Voluntary Voting System Standards of 2005 adopted by the Election Assistance Commission.

Overview of System:

The DS450 is a self-contained, stand-alone ballot tabulator, designed to process folded ballots such as absentee or early ballots. The DS450 works in conjunction with the DS200, a precinct tabulator that was approved for use in Massachusetts in 2014. In Massachusetts, the central tabulator would be used to read the paper ballots marked by voters during early voting.

The system is controlled with a touch-screen user interface which is displayed on a 15" LCD touch-screen console. The console provides visual cues and feedback prompt for the use of any procedural set-up steps, session open, ballot scanning, and session closing routines. The system provides three dedicated out stack bins, which allow flexibility in the configurations to sort ballots containing write-ins, overvotes, undervotes, etc. for real time adjudication at the scanner.

Product features of the DS450 include a 1 GB Compact Flash (CF) card running a customized Operating System and proprietary central scan and tabulation application, a 1TB data drive that stores results, and USB connections for Election Media and printer connections. All components necessary for operation of the DS450 are built into the system, with the exception of the dedicated log and report printers, and the UPS (Uninterruptable Power Supply) which ensures a stable power source in the case of power loss or surges. The expected speed of the DS450 is 85 11" ballots per minute or 50 19" ballots per minute, approximately 3,974 11" ballots/hour or 2,237 19" ballots per hour.

Both sides of the ballot are processed simultaneously with high-resolution scanners and the resulting ballot images are decoded by a proprietary recognition engine. Once voter selections are processed, the ballot is sorted into the appropriate out stack bin. The scanner also has the ability to capture digital images of each ballot, but this function can be disabled to comply with current state law.

Below please find an analysis of the system as it applies to the standards set forth in the General Laws and Regulations.

(1) Simple and Convenient to Use (950 C.M.R. § 50.02(1):

The system is simple and as easy to use. It reads and tabulates the paper ballots prepared for the DS200 on which a voter fills in an oval to indicate their choice.

- (a) A reasonable and average person should be able to operate the equipment after a brief demonstration or explanation. Multiple ballots can be fed through at one time and can be read regardless of the

orientation within the stack. The interface provides clear instructions and notifications to the user.

- (b) Voting an average ballot on this equipment should not take an undue length of time. The system processed ballots quickly and in accordance within the time expectations provided in the written materials.
- (c) The tabulator can be programmed to sort ballots if it detects certain discrepancies on the ballot such as under-votes or over-votes and can segregate out ballots that appear to have a write-in.
- (d) As a standalone central tabulator, lighting is not a consideration.

(2) Maximize Accuracy and Prevent Fraud (950 C.M.R. § 50.02(2)):

The DS450 is designed to maximize accuracy and prevent fraud. When adequate training is given to election officers in the handling of ballots and correct use of the system itself, the system will provide adequate counting accuracy. When correctly programmed and tested, the system registers the number of ballots cast and the number read. Also, the number of votes for each candidate or question(s) are recorded and printed on a report that documents election results.

The early voting ballot is marked by filling in an oval with a black pen beside the candidate's name or voter's yes or no response to a ballot question. This process is similar to marking an "X" beside the voter's selection on a paper ballot.

- (a) There are adequate locks in the area where the program cards are inserted.
- (b) The machine contains electronic components that register votes for candidates and questions electronically as well as a digital display that indicates the number of ballots processed total and by batch.
- (c) The system receives and registers each ballot prior to sorting into the applicable tray.
- (d) Only when the scanner is in the correct mode and password entered can votes be registered which prevents the machine from being used to register votes before and after the election. The machine prints a "zero" tape to show that no votes have been recorded.
- (e) When marks for an office or question exceed the number to be elected, the tabulator can sort the ballot into a different tray for manual review or can be programmed to count the vote as a blank to prevent double voting.

- (f) The DS450 can be programmed to accept multiple ballot styles, including any party ballot for a party primary. The DS450 allows for individual precincts to be tabulated without having to change media.

(3) Secrecy (950 C.M.R. § 50.02(3)):

Use of this equipment is limited to processing early voting ballots at a central tabulation facility. The ballots are sealed in individual envelopes by the voter when early voting. It is incumbent on the election official at the central tabulation facility to preserve the secrecy of the ballot when opening the envelope and preparing ballots to be fed into the scanner.

(4) Must Meet Demands of Average Election (950 C.M.R. § 50.02(4)):

The DS450 is adequate to demands of average election.

- (a) The programmable cards used for the DS450 have a great capacity for reading and recording data. It can read ballots printed to a size that can accommodate candidates and questions for an average election.
- (b) A recount of votes on the DS450 is absolutely possible as the actual ballots are retained for a hand recount if necessary.
- (c) It can sort ballots on which a write-in is detected into a separate tray.

(5) Absentee Ballots (950 C.M.R. § 50.02(5)):

This tabulator could be used to process absentee ballots, if state law is changed to allow such.

(6) Service by Manufacturer (950 C.M.R. § 50.02(6)):

Service for the DS450 is provided by ES&S.

Conditions for Approval: The Vendor will include complete instructions to and technical support all purchasers of the system. The Vendor will work with any printer with whom the Commonwealth or any city or town contracts for the printing of ballots to assure that all ballots printed will be processed by the system.

Dated: August 10, 2020


Michelle K. Tassinari
Director and Legal Counsel
Elections Division

EXHIBIT G



The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Elections Division

APPROVAL OF VOTING EQUIPMENT IN MASSACHUSETTS

Name of Vendor: LHS Associates, Inc.
10 Manor Parkway Unit B
Salem, NH 03079
www.lhsassociates.com

Name of Manufacturer: Dominion Voting Systems Corporation
1201 18th Street, Suite 210
Denver, Colorado 80303
www.dominionvoting.com

Type of Product: ImageCast Precinct Tabulator (ICP)
(Optical Scanning Vote Tabulator)

Submission of Detailed Specifications: Prior to May 6, 2013 the Office of the State Secretary received detailed specifications for the ImageCast Precinct Tabulator.

Office Demonstration of Equipment: On May 6, 2013, John Silvestro, President of LHS, and other representatives from LHS presented office demonstrations to members of the Elections Division at One Ashburton Place, Boston. On August 5, 2013, John Silvestro of LHS presented a further office demonstration (using modified equipment to meet the Massachusetts standards) to members of the Elections Division.

Field Test: The equipment was field tested in the City of Quincy at their municipal election on November 5, 2013 and in the City of Easthampton for their municipal election on November 5, 2013. Based on issues identified during the field test in the City of Quincy, the equipment was required

to conduct another field test, which was done in the Town of Needham at their annual town election on April 8, 2014.

The ImageCast Precinct Tabulator performed without incident in two field tests as required by law.

Reason for Approval:

The Office of the Secretary of the Commonwealth has determined that the ImageCast Precinct Tabulator, which is manufactured by Dominion Voting Systems, is a type of voting equipment which is in compliance with the following standards set forth in 950 C.M.R. § 50.02, and the Voluntary Voting System Standards of 2005 adopted by the Election Assistance Commission.

Overview of System:

The ImageCast Precinct Ballot Tabulator is a precinct-based optical scan tabulator that is used in conjunction with ImageCast compatible ballot storage boxes. The system is designed to scan marked paper ballots, interpret voter marks on the paper ballot, and store and tabulate each vote from each paper ballot. The scanner also has the ability to capture digital images of each ballot, but this function can be disabled to comply with current state law.

The ImageCast Precinct Tabulator can process single or double-sided ballots, and may be configured to handle multiple ballot scenarios. The ImageCast can be programmed to accept multiple cards and ballot styles. The scanner has also been equipped with a cancellation device, which will mark every ballot as it is inserted into the scanner.

The scanner is powered by a standard 120-volt AC power cord and contains a back-up battery to power the machine in the event of electrical power failure. When fully charged, the battery can maintain more than two hours of continuous use. The scanner is equipped with a thermal printer, which may be locked to prevent tampering.

There are five operating modes on the scanner system: Powered Down, Administration Mode, Election Run Mode, Election Run Mode with Ballot Review, and Ballot Test Mode. The "Powered Down Mode" allows the battery pack to continue to charge if the AC power supply is connected. The "Administration Mode" allows officials to perform administrative functions, such as changing modes, printing reports, and closing the polls. The "Election Run Mode" is used during voting hours and allows the tabulator to process ballots. The "Election Run Mode with Ballot Review" is used during voting hours, and allows the voter to review their choices on the LCD screen before casting the ballot. The "Ballot Test Mode" may be used by officials to test ballots, prior to an election.

Below please find an analysis of the system as it applies to the standards set forth in the General Laws and Regulations.

(1) Simple and Convenient to Use (950 C.M.R. § 50.02(1)):

The system is as simple and as easy to use as paper ballots and requires filling in an oval to indicate the voter's choice. The width of the ballot is 8 ½ inches and the maximum length of the ballot is 19 inches. The ballots may be printed with one, two or three columns. However, unlike current approved optical scanner systems, a ballot can be printed with up to three columns at the top and then printed straight across the entire width at the bottom to accommodate ballot questions.

The vote indicators (ovals) can be filled in with a ballot marking device. The scanner reads blue and black ink, though the ImageCast Ballot Marking Device (BMD) is the only approved marking device for the ImageCast. Red and orange ink is not recommended.

- (a)* A reasonable and average person should be able to operate the equipment after a brief demonstration or explanation. Ballots can be fed through in all four orientations.
- (b)* Voting an average ballot on this equipment should not take an undue length of time. The system seemed to process sample ballots relatively quickly. During the field test, the poll workers commented that the tabulator took longer to process ballots than the equipment they currently used. After careful review by the local election officials and representatives from this Office, it was determined that while the time for processing a ballot was slightly longer than current equipment, it was not significant.
- (c)* After the paper ballot is marked, the voter feeds it through the machine. Only after the voter is ready to insert it into the tabulator is the ballot processed, thereby providing the voter with an opportunity to spoil a ballot and receive a new ballot in accordance with state law. The tabulator can be programmed to notify the voter if it detects certain discrepancies on the ballot such as under-votes or over-votes.
- (d)* As with other optical scanning voting equipment, the ballot is marked in a separate area from the machine. Accordingly, marking units would be necessary with adequate lighting. Otherwise, special lighting would be necessary.

(2) Maximize Accuracy and Prevent Fraud (950 C.M.R. § 50.02(2)):

The ImageCast Precinct Tabulator is designed to maximize accuracy and prevent fraud. When adequate training is given to election officers in the handling of ballots and correct use of the system itself, the system will provide adequate counting accuracy. When correctly programmed and tested, the system registers the number of ballots cast and the number read. Also, the number of votes for each candidate or question(s) are recorded and printed on the paper tape that documents election results.

The ballot is marked by filling in an oval with a black pen beside the candidate's name or voter's yes or no response to a ballot question. This process is similar to marking an "X" beside the voter's selection on a paper ballot.

- (a) There are adequate locks on the compartment sections of the system and the area where the program card is inserted and where the printer tape is located for the end of the night reporting.
- (b) The machine contains electronic components that register votes for candidates and questions electronically as well as a digital display that indicates the number of voters continuously while the machine is in the "Election Run" mode as a public counter. The ImageCast also has a protective counter that registers the total number of times the machine has operated in its lifetime.
- (c) The system receives, registers and cancels each ballot prior to depositing it in a compartment. The system allows for three compartments: one for ballots tabulated by the unit, one for ballots where write-in votes have been detected which must be hand-counted at the close of polls, and one auxiliary compartment for ballots unable to be read by the machine.
- (d) Only when the scanner is in "Election Run" mode and "Election Run with Ballot Review" mode can votes be registered which prevents the machine from being used to register votes before and after the election.
- (e) When marks for an office or question exceed the number to be elected, the tabulator will display a notification to the voter identifying a discrepancy on the ballot and allowing the voter to correct the ballot. If the voter chooses to cast the ballot with mistakes, the tabulator can be programmed to register the vote as a blank to prevent double voting.
- (f) The ImageCast can be programmed to accept multiple ballot styles, including any party ballot for a party primary. As with paper ballots, the election official is responsible for ensuring that the voter is qualified to receive a particular party ballot to vote on.

(3) Secrecy (950 C.M.R. § 50.02(3)):

The voter's choice can be kept from the public view by enclosing it in a secrecy sleeve, placing the top of the secrecy sleeve near the protective cover of the system and feeding the ballot into the scanner.

(4) Must Meet Demands of Average Election (950 C.M.R. § 50.02(4)):

The ImageCast is adequate to demands of average election.

- (a) The programmable cards used for the ImageCast have a great capacity for reading and recording data. The size of the ballots is adequate to print candidates and questions for an average election.

(b) A recount of votes on the ImageCast is absolutely possible as the actual ballots are retained for a hand recount if necessary.

(c) Ballots can be printed and the election definition programmed to receive write-in votes.

(5) Absentee Ballots (950 C.M.R. § 50.02(5)):

Absentee ballots for use in the ImageCast are optical scanner ballots.

(6) Service by Manufacturer (950 C.M.R. § 50.02(6)):

Service for the ImageCast is provided by LHS.

Conditions for Approval: The Vendor will provide any city or town who purchases or leases the equipment with a sufficient supply of the approved ballot marking devices at no additional charge. The Vendor will include a printing kit and complete instructions to all purchasers of the system. No printer will be required to purchase paper stock from the Vendor. Further, the Vendor will work with any printer with whom the Commonwealth or any city or town contracts for the printing of ballots to assure that all ballots printed will be processed by the system and shall not require any such printer to pay for training or special equipment required to print any ballots for use with the equipment. This includes testing sample ballots sent by a printer as quickly as possible to prevent any delays in the ballot printing process.

Dated: May 7, 2014



WILLIAM FRANCIS GALVIN
Secretary of the Commonwealth

CERTIFICATE OF SERVICE

I, Marina Pullerits, hereby certify that this document, filed electronically on May 21, 2026, will be sent via mail and email to:

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