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12 SUPERIOR COURT OF THE STATE OF CALIFORNIA

13 COUNTY OF SAN FRANCISCO

14
15 JOSEPH HOLDER, PETER CANTISANI,
DOLORES HUERTA, JUDY
16 BERTELSEN, CHARLES L. KRUGMAN,
DAVID HAGUE GOGGIN, ALYCE E.
17 FRET LAND, HELEN ACOSTA, MARY
C. KENNEDY, CHARLES FOX, MARTY
18 KRASNEY, MITCH CLOGG, BEN P.
VAN METER, NANCY TILCOCK,
19 CHARLES O. LOWERY, JR., LILLIAN
RITT, HAROLD C. CASE, SUSAN J.
20 CASE, KENNETH MARTIN
STEVENSON, LARRY MARKS, HARRY
21 JOHN RAPF. MERRILEE DAVIES,
BERNICE M. KANDARIAN, VICTORIA
22 POST, and VERONICA ELSEA,
individuals,

23
24 Plaintiffs/Petitioners,

25 v.

26 BRUCE MCPHERSON, as California
Secretary of State; ELAINE GINNOLD, as
Elections Official of Alameda County;
27 VICTOR E. SALAZAR, as Elections
Official of Fresno County; CAROLYN
28 WILSON CRNICH, as Elections Official of

ENDORSED
FILED
San Francisco County Superior Court

MAR 21 2006

GORDON PARK-II, Clerk
BY: DEBORAH STEPPE
Deputy Clerk

No. CPF 06-506171

VERIFIED PETITION FOR WRIT OF
MANDATE (ELEC. CODE 13314(a);
CODE CIV. PROC. §§1085, 1094.5),
DECLARATORY AND INJUNCTIVE
RELIEF

IMMEDIATE ACTION REQUESTED,
ELECTION LAW MATTER CALENDAR
PREFERENCE PURSUANT TO ELEC.
CODE §13314(a)(3)

1 Humboldt County, ANN BARNETT, as
Elections Official of Kern County;
2 THERESA NAGEL, as Elections Official
of Lassen County; CONNY
3 MCCORMACK, as Elections Official of
Los Angeles County; MICHAEL SMITH,
4 as Elections Official of Marin County;
MARSHA WHARFF, as Elections Official
5 of Mendocino County; MAXINE
MADISON, as Elections Official of Modoc
6 County; JIM MCCAULEY, as Elections
Official of Placer County; KATHLEEN
7 WILLIAMS, as Elections Official of
Plumas County; MIKEL HASS, as
8 Elections Official of San Diego County;
DEBBIE HENCH, as Elections Official of
9 San Joaquin County; JULIE RODEWALD,
as Elections Official of San Luis Obispo
10 County; JOSEPH E. HOLLAND, as
Elections Official of Santa Barbara County;
11 COLLEEN BAKER, as Elections Official
of Siskiyou County; DERO FORSLUND,
12 as Elections Official of Trinity County;
JERRY T. MESSINGER, as Elections
13 Official of Tulare County; and DOES 1
through 50.

14 Defendants/Respondents.
15

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1 Plaintiffs and Petitioners Joseph Holder, Peter Cantisani, Dolores Huerta, Judy
2 Bertelsen, Charles L. Krugman, David Hague Goggin, Alyce E. Fretland, Helen Acosta,
3 Mary C. Kennedy, Charles Fox, Marty Krasney, Mitch Clogg, Ben P. Van Meter, Nancy
4 Tilcock, Charles O. Lowery, Jr., Lillian Ritt, Harold C. Case, Susan J. Case, Kenneth Martin
5 Stevenson, Larry Marks, Harry John Rapf, Merrilee Davies, Bernice M. Kandarian, Victoria
6 Post, and Veronica Elsea (collectively "Petitioners") allege as follows:
7

8 INTRODUCTION

9 1. Petitioners bring this Verified Petition For Writ Of Mandate, Declaratory And
10 Injunctive Relief (the "Petition") to protect their fundamental rights to vote and to protect the
11 integrity of their votes in California elections. Petitioners seek to reverse a decision by the
12 California Secretary of State improperly certifying an electronic voting system that does not
13 satisfy state law requirements and that presents unacceptable risks of vote manipulation,
14 election uncertainty and disputation, and incorrect election outcomes. Petitioners also seek
15 to prevent county election officials from using electronic voting equipment that does not
16 comply with applicable state law (or the federal requirements it incorporates), and from
17 expending their limited resources to purchase computerized voting systems that do not meet
18 these requirements and should not have been certified for use in California.

19 2. On February 17, 2006, Defendant/Respondent California Secretary of State Bruce
20 McPherson "conditionally" certified an electronic voting system manufactured by Diebold
21 Election Systems, Inc. (the "Diebold Voting System" or "Voting System") for use in
22 elections in California, including statewide elections to be held on June 6, 2006 and
23 November 7, 2006. The Diebold Voting System includes both the AccuVote-OS ("AV-
24 OS"), an optical scanner that reads votes from paper ballots, and the AccuVote-TSx ("AV-
25 TSx"), a Direct Recording Electronic ("DRE") device that allows a voter to vote by pressing
26 choices displayed on a computer "touchscreen."

27 3. As is explained in greater detail below, the Secretary of State's "conditional"
28 certification of the Voting System was improper and unlawful on numerous independent

1 grounds:

2 (a) *First*, the Secretary of State's certification of the AV-TSx violated
3 Petitioners' constitutional rights to vote, to have their votes counted, and to equal protection
4 of laws with respect to their votes in California elections. The Diebold AV-TSx does not
5 meet disability access requirements and is fraught with demonstrated substantive
6 vulnerabilities to "hacking," fraud and vote manipulation. Indeed, the Secretary's own
7 experts' analysis recognized that the Diebold Voting System failed to meet the requirements
8 of state law, that it has a large number of security flaws, and that there are additional known
9 security vulnerabilities outside the limited scope of their investigation. Moreover, the AV-
10 TSx does not meet accessibility requirements and its thermal paper "toilet roll" voting record
11 is inadequate to meet the vote audit and/or recount requirements. Use of the Diebold Voting
12 System poses a grave and present danger to the integrity of California elections in violation
13 of Petitioners' constitutional rights.

14 (b) *Second*, the Secretary of State's certification decision was unlawful
15 because, as his own voting experts acknowledged, the Voting System software was not
16 compliant with federal voluntary standards for voting system software because it contains
17 prohibited "interpreted code." The federal voluntary standards were adopted as mandatory
18 requirements in California law and the acknowledged presence of "interpreted code" in the
19 Voting System renders the Secretary of State's certification illegal.

20 (c) *Third*, the Secretary's attempt to impose "conditions" on the certification
21 was improper and unlawful. The Secretary's certification purports to require counties using
22 the Voting System to implement certain physical security regulations. However, these stop-
23 gap physical security regulations were designed to be *short-term* measures for *local*
24 elections, and they were designed by computer scientists with at best limited expertise in the
25 areas of physical and procedural, as opposed to programming, safeguards to the integrity of
26 the vote. The Secretary of State also did not address the feasibility or efficacy of adoption of
27 the new physical security regulations by California county election officials and poll
28 workers. For example, they may be ineffective because the AV-TSx memory cards, which

1 the measures are designed to protect, appear to be accessible and programmable *even when*
2 *the cards are inserted and sealed into AV-TSx terminals*. Moreover, these new regulations
3 were not previously disclosed, have never been tested, and materially change the way in
4 which elections using the Voting System will be conducted. Nonetheless, the Secretary of
5 State improperly adopted them without holding a public hearing on the new regulations or
6 subjecting them to public scrutiny.

7 (d) *Fourth*, the Secretary of State’s certification of the Voting System violated
8 California law requirements with respect to audits of election results. The AV-TSx system
9 does not include a paper ballot that can be subjected to the election audit required by state
10 law. California law requires that county elections officials perform a manual (*i.e.* non-
11 computer assisted) recount of at least 1% of each county’s ballots, and perform a full manual
12 recount under certain circumstances. While votes counted by the other main component of
13 the Diebold Voting System, the AV-OS optical scanner, can be easily audited by using the
14 original paper ballots that were passed through the scanner, the AV-TSx records votes
15 electronically from the AV-TSx’s touchscreen, then prints them on a continuous roll of thin
16 thermal paper. The AV-TSx system does not utilize, and has not been certified as utilizing,
17 an “auditable” paper trail in accordance with the Elections Code. In fact, the Secretary of
18 State has never tested the usability or the durability of the AV-TSx’s thermal paper roll
19 under the conditions of the 1% and sometimes full manual audit required by the Elections
20 Code, and the evidence shows that the AV-TSx is not auditable by any reasonable standard.

21 (e) *Fifth*, the Secretary of State’s certification of the AV-TSx system was
22 improper because the AV-TSx does not comply with California requirements that a paper
23 record be “accessible” to blind and visually impaired voters. California law requires that all
24 DREs, such as the AV-TSx, create *accessible* voter-verified paper trails. By statute, a DRE
25 must be able to convey the information contained in the paper trail by both visual *and* non-
26 visual means, such as through an audio component. As the Secretary of State has already
27 acknowledged, the AV-TSx does not provide an audible “read-back” of its thermal paper roll
28 record for blind and visually-impaired voters. Rather, it provides an audible “read-back” of

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1 an electronic vote record that may or may not be the same as the information shown on the
2 thermal roll paper trail. As such, any thermal paper roll records generated by the AV-TSx
3 are not “accessible” to blind and visually impaired voters.

4 (f) *Sixth*, the Secretary of State’s certification of the AV-TSx also was
5 improper because the system fails to comply with Section 301 of the federal Help America
6 Vote Act because the AV-TSx has no feature to enable low-dexterity individuals to vote
7 privately and independently. Compliance with the act is made mandatory in California
8 under the Secretary of State’s certification of the system.

9 (g) *Seventh*, perhaps recognizing the problems inherent in his certification of
10 machines that failed to comply with state and federal requirements, the Secretary of State
11 added language to his certification order purporting to shift potential liability for non-
12 compliance with state law and federal requirements to Diebold and, more objectionably, to
13 the county elections officials responsible for purchasing voting machines. In light of the
14 Secretary of State’s statutory duty to insure that voting machines he certifies comply with
15 the law, this was an improper delegation of duty.

16 4. On information and belief, Defendants/Respondents county elections officials
17 (“County Elections Officials”) plan to purchase or use the AV-TSx system in statewide
18 elections in 2006.

19 5. The procedural and substantive flaws in the AV-TSx certification compel a
20 finding that the AV-TSx system, as it is currently configured, cannot be used for elections in
21 California and should not have been certified. Petitioners therefore seek: (1) a writ of
22 mandate requiring that the Secretary of State to rescind the certification of the AV-TSx; (2) a
23 writ of mandate requiring that the County Elections Officials not use, or make contracts for
24 the use of, the AV-TSx in the general election scheduled for November 7, 2006; (3)
25 declaratory relief that the AV-TSx certification is invalid as a matter of law; (4) declaratory
26 relief that the new regulations and requirements accompanying the AV-TSx certification are
27 invalid as a matter of law; (5) injunctive relief barring the Secretary of State from re-
28 certifying the AV-TSx until its security, auditability and accessibility flaws have been

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1 addressed; and (6) injunctive relief barring counties' purchase or use of the AV-TSx until it
2 meets the requirements of state law.

3 6. Petitioners also bring this action to address a different, but related, violation of
4 the Elections Code. Pursuant to Elections Code 15360, county elections officials are
5 required to manually audit ballots tabulated on voting systems from one percent of a
6 county's precincts. This audit helps protect against fraud and problems in the voting
7 systems' technology. On information and belief, some county elections officials are not
8 complying with Elections Code 15360, either because they are not conducting any post-
9 election manual audit, or because they are not including absentee and early voter mail-in
10 ballots as part of their audits. Petitioners seek a declaration that neither of these procedures
11 complies with Elections Code 15360.

12
13 **THE PARTIES**

14 7. Plaintiff/Petitioner JOSEPH HOLDER is a resident and registered voter of San
15 Joaquin County, California.

16 8. Plaintiff/Petitioner PETER CANTISANI is a resident and registered voter of
17 Alameda County, California. Mr. Cantisani is also blind.

18 9. Plaintiff/Petitioner DOLORES HUERTA is a resident and registered voter of
19 Kern County, California.

20 10. Plaintiff/Petitioner JUDY BERTELSEN, M.D. is a resident and registered voter
21 of Alameda County, California.

22 11. Plaintiff/Petitioner CHARLES L. KRUGMAN is a resident and registered voter
23 of Fresno County, California. Mr. Krugman is also blind.

24 12. Plaintiff/Petitioner DAVID HAGUE GOGGIN is a resident and registered voter
25 of Humboldt County, California.

26 13. Plaintiff/Petitioner ALYCE E. FRET LAND is a resident and registered voter of
27 Humboldt County, California.

28 14. Plaintiff/Petitioner HELEN ACOSTA is a resident and registered voter of Kern

1 County, California.

2 15. Plaintiff/Petitioner MARY C. KENNEDY is a resident and registered voter of
3 Los Angeles County, California.

4 16. Plaintiff/Petitioner CHARLES FOX is a resident and registered voter of Marin
5 County, California. Mr. Fox has advanced multiple sclerosis, low vision, and full
6 quadriplegia.

7 17. Plaintiff/Petitioner MARTY KRASNEY is a resident and registered voter of
8 Marin County, California.

9 18. Plaintiff/Petitioner MITCH CLOGG is a resident and registered voter of
10 Mendocino County, California.

11 19. Plaintiff/Petitioner BEN P. VAN METER is a resident and registered voter of
12 Modoc County, California.

13 20. Plaintiff/Petitioner NANCY TILCOCK is a resident and registered voter of
14 Placer County, California.

15 21. Plaintiff/Petitioner CHARLES O. LOWERY, JR., is a resident and registered
16 voter of San Diego County, California.

17 22. Plaintiff/Petitioner LILLIAN RITT is a resident and registered voter of San
18 Diego County, California.

19 23. Plaintiff/Petitioner HAROLD C. CASE is a resident and registered voter of San
20 Luis Obispo County, California.

21 24. Plaintiff/Petitioner SUSAN J. CASE is a resident and registered voter of San Luis
22 Obispo County, California.

23 25. Plaintiff/Petitioner KENNETH MARTIN STEVENSON is a resident and
24 registered voter of Santa Barbara County, California.

25 26. Plaintiff/Petitioner LARRY MARKS is a resident and registered voter of
26 Siskiyou County, California.

27 27. Plaintiff/Petitioner HARRY JOHN RAPF is a resident and registered voter of
28 Trinity County, California.

1 28. Plaintiff/Petitioner MERRILEE DAVIES is a resident and registered voter of
2 Tulare County, California.

3 29. Plaintiff/Petitioner BERNICE M. KANDARIAN is a resident and registered
4 voter of Santa Clara County, California. Ms. Kandarian has low vision. Ms. Kandarian is
5 the President of the Council of Citizens with Low Vision International.

6 30. Plaintiff/Petitioner VICTORIA POST is a resident and registered voter of San
7 Francisco County, California. Ms. Post is also blind.

8 31. Plaintiff/Petitioner VERONICA ELSEA is a resident and registered voter of
9 Santa Cruz County, California. Ms. Elsea is also blind.

10 32. Defendant/Respondent BRUCE MCPHERSON is the Secretary of State of
11 California and the Chief Elections Officer for the state.

12 33. Defendant/Respondent ELAINE GINNOLD is the Acting Registrar of Voters for
13 the County of Alameda and is responsible for conducting statewide primary and statewide
14 general elections in that county. On information and belief, Alameda County intends to use
15 Diebold AV-TSx touchscreen systems in upcoming 2006 elections.

16 34. Defendant/Respondent VICTOR E. SALAZAR is the Registrar of Voters for the
17 County of Fresno and is responsible for conducting statewide primary and statewide general
18 elections in that county. On information and belief, Fresno County intends to use Diebold
19 AV-TSx touchscreen systems in upcoming 2006 elections.

20 35. Defendant/Respondent CAROLYN WILSON CRNICH is the Registrar of Voters
21 for the County of Humboldt and is responsible for conducting statewide primary and
22 statewide general elections in that county. On information and belief, Humboldt County
23 intends to use Diebold AV-TSx touchscreen systems in upcoming 2006 elections.

24 36. Defendant/Respondent ANN BARNETT is the Registrar of Voters for the County
25 of Kern and is responsible for conducting statewide primary and statewide general elections
26 in that county. On information and belief, Kern County intends to use Diebold AV-TSx
27 touchscreen systems in upcoming 2006 elections.

28 37. Defendant/Respondent THERESA NAGEL is the County Clerk for the County of

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1 Lassen and is responsible for conducting statewide primary and statewide general elections
2 in that county. On information and belief, Lassen County intends to use Diebold AV-TSx
3 touchscreen systems in upcoming 2006 elections.

4 38. Defendant/Respondent CONNIE MCCORMACK is the County Clerk for the
5 County of Los Angeles and is responsible for conducting statewide primary and statewide
6 general elections in that county. On information and belief, Los Angeles County intends to
7 use Diebold AV-TSx touchscreen systems in upcoming 2006 elections.

8 39. Defendant/Respondent MICHAEL SMITH is the Registrar of Voters for the
9 County of Marin and is responsible for conducting statewide primary and statewide general
10 elections in that county. On information and belief, Marin County intends to use Diebold
11 AV-TSx touchscreen systems in upcoming 2006 elections.

12 40. Defendant/Respondent MARSHA WHARFF is the County Clerk for the County
13 of Mendocino and is responsible for conducting statewide primary and statewide general
14 elections in that county. On information and belief, Mendocino County intends to use
15 Diebold AV-TSx touchscreen systems in upcoming 2006 elections.

16 41. Defendant/Respondent MAXINE MADISON is the County Clerk for the County
17 of Modoc and is responsible for conducting statewide primary and statewide general
18 elections in that county. On information and belief, Modoc County intends to use Diebold
19 AV-TSx touchscreen systems in upcoming 2006 elections.

20 42. Defendant/Respondent JIM MCCAULEY is the County Clerk for the County of
21 Placer and is responsible for conducting statewide primary and statewide general elections in
22 that county. On information and belief, Placer County intends to use Diebold AV-TSx
23 touchscreen systems in upcoming 2006 elections.

24 43. Defendant/Respondent KATHLEEN WILLIAMS is the Registrar of Voters for
25 the County of Plumas and is responsible for conducting statewide primary and statewide
26 general elections in that county. On information and belief, Plumas County intends to use
27 Diebold AV-TSx touchscreen systems in upcoming 2006 elections.

28 44. Defendant/Respondent MIKEL HASS is the Registrar of Voters for the County

1 of San Diego and is responsible for conducting statewide primary and statewide general
2 elections in that county. On information and belief, San Diego County intends to use
3 Diebold AV-TSx touchscreen systems in upcoming 2006 elections.

4 45. Defendant/Respondent DEBORAH HENCH is the Registrar of Voters for the
5 County of San Joaquin and is responsible for conducting statewide primary and statewide
6 general elections in that county. On information and belief, San Joaquin County intends to
7 use Diebold AV-TSx touchscreen systems in upcoming 2006 elections.

8 46. Defendant/Respondent JULIE RODEWALD is the County Clerk for the County
9 of San Luis Obispo and is responsible for conducting statewide primary and statewide
10 general elections in that county. On information and belief, San Luis Obispo County intends
11 to use Diebold AV-TSx touchscreen systems in upcoming 2006 elections.

12 47. Defendant/Respondent JOSEPH E. HOLLAND is the County Clerk for the
13 County of Santa Barbara and is responsible for conducting statewide primary and statewide
14 general elections in that county. On information and belief, Santa Barbara County intends to
15 use Diebold AV-TSx touchscreen systems in upcoming 2006 elections.

16 48. Defendant/Respondent COLLEEN BAKER is the County Clerk for the County of
17 Siskiyou and is responsible for conducting statewide primary and statewide general elections
18 in that county. On information and belief, Siskiyou County intends to use Diebold AV-TSx
19 touchscreen systems in upcoming 2006 elections.

20 49. Defendant/Respondent DERO B. FORSLUND is the County Clerk for the
21 County of Trinity and is responsible for conducting statewide primary and statewide general
22 elections in that county. On information and belief, Trinity County intends to use Diebold
23 AV-TSx touchscreen systems in upcoming 2006 elections.

24 50. Defendant/Respondent JERRY T. MESSINGER is the Registrar of Voters for the
25 County of Tulare and is responsible for conducting statewide primary and statewide general
26 elections in that county. On information and belief, Tulare County intends to use Diebold
27 AV-TSx touchscreen systems in upcoming 2006 elections.

28 51. All Defendants/Respondents, apart from the Secretary of State, are referred to

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1 herein collectively as the “County Elections Officials.”

2 52. Petitioners are unaware of the true names and capacities of the individuals sued
3 herein as Does 1 through 50, inclusive, and therefore sue these Defendants/Respondents by
4 such fictitious names pursuant to Code of Civil Procedure Section 474. Petitioners will
5 amend this Petition to state the true names and capacities of such fictitiously named
6 Defendants/Respondents when ascertained. Petitioners are informed and believe, and on
7 that basis allege, that the Defendants/Respondents fictitiously named as Does 1 through 25
8 are County Elections Officials from California counties who seek to purchase or use Diebold
9 Voting Systems in California elections and/or are failing or threatening to fail their election
10 audit responsibilities under Elections Code 153600. Petitioners are informed and believe,
11 and on that basis allege, that the Defendants/Respondents fictitiously named as Does 26
12 through 50 are also in some manner connected with the matters alleged herein and similarly
13 subject to the relief requested herein.

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14 JURISDICTION AND VENUE

15
16 53. Petitioners bring this action for mandamus pursuant to Elections Code Section
17 13314(a) and/or Code of Civil Procedure Section 1085, for administrative mandamus
18 pursuant to Code of Civil Procedure Section 1094.5, for declaratory relief pursuant to Code
19 of Civil Procedure Section 1060 and Government Code Section 11350, and for injunctive
20 relief pursuant to Civil Code Sections 3420 through 3422. This Court has jurisdiction over
21 actions arising under California law.

22 54. Pursuant to Elections Code Section 13314(b)(1) and Code of Civil Procedure
23 Section 393, venue in this action is proper in Sacramento County. However, “whenever it is
24 provided by any law of this State that an action or proceeding against the State or a
25 department, institution, board, commission, bureau, officer or other agency thereof shall or
26 may be commenced in, tried in, or removed to the County of Sacramento, the same may be
27 commenced and tried in any city or city and county of this State in which the Attorney
28 General has an office.” Code Civ. Proc. §401(1). *See Harris v. Alcoholic Beverage Control*

1 *Appeals Board*, 197 Cal. App. 2d 759, 762 (1961). The State Attorney General has an
2 office located at 455 Golden Gate Avenue, #11000, San Francisco, 94102. Thus, venue in
3 this action is proper in the County of San Francisco.

4
5 **COMMON ALLEGATIONS**

6 **I. THE EVOLUTION OF LEGAL REQUIREMENTS**
7 **RELATING TO USE OF ELECTRONIC VOTING MACHINES**
8 **IN CALIFORNIA ELECTIONS.**

9 **A. Federal Requirements.**

10 55. The chaos of the Florida recount in the 2000 Presidential election raised public
11 consciousness about the need to modernize the nation’s voting technology. Although media
12 attention largely focused on punch card voting systems, which are now rarely used in
13 California, Diebold’s machinery also experienced a massive malfunction in Florida. At one
14 point, a memory card in a Diebold system registered *negative* 16,022 votes for Al Gore. The
15 malfunction led many news organizations to call the election prematurely. Elections
16 officials eventually decided that a hand recount of the system’s paper ballots was the only
17 way to determine the true vote count.

18 56. In the debate that followed Florida’s election problems, concerns were voiced
19 about many aspects of the voting process including convenience, auditability, vote security
20 and accessibility for the disabled. The federal government weighed in with new
21 legislation—the Help America Vote Act of 2002—that required states to provide voting
22 systems accessible to the disabled and provided federal funds for their acquisition.

23 57. In April 2002, the Federal Election Commission (“FEC”) promulgated the
24 voluntary *Voting Systems Performance and Test Standards* (“2002 Standards”). Those
25 revised standards, which replaced earlier standards from 1990, provide guidance for the use
26 of new technologies, most notably Direct Recording Electronic (“DRE”) devices. DREs,
27 often referred to as touchscreens, record votes electronically. A true and correct copy of
28 relevant pages from the 2002 Standards is included as Exhibit I in the Appendix In Support
Of Verified Petition For Writ Of Mandate, Declaratory And Injunctive Relief (the

1 “Appendix”) which is being filed concurrently with this Petition and is incorporated herein
2 and its contents verified by reference.

3
4 **B. California Laws Protecting The Integrity Of California Elections.**

5 58. California has taken additional steps to attempt to ensure that new voting
6 technologies will continue to guarantee the integrity of votes in California elections.

7 (a) *First*, California made compliance with the voluntary federal standards for
8 electronic voting machines mandatory. *See* Elec. Code §§19250(a-b), 19251(d). Under
9 Elections Code Section 19250(a), the Secretary of State cannot approve a voting system
10 unless it has received “federal qualification.” “Federal qualification” means the system is
11 *both* approved by an independent testing authority (“ITA”) *and* meets or exceeds the
12 voluntary standards set by the Federal Election Commission. Elec. Code §19251(d).

13 (b) *Second*, California passed legislation to ensure that DREs would have a
14 “voter-verified paper audit trail” that would serve as the official record of the vote in a
15 disputed election. *See* Elec. Code §§19250(a-b), 19251(c), 19253.

16 (c) *Third*, California passed legislation requiring that the contents of a DRE
17 paper audit trail be “accessible” to visually impaired voters. *See* Elec. Code §§19250(a-b),
18 19251(a). To be considered “accessible,” the contents of the paper trail must be “provided
19 or conveyed to voters via *both* a visual *and* a nonvisual method.” Elec. Code §19251(a)
20 (emphasis added).

21 59. The California Secretary of State is charged with enforcing the Elections Code
22 and is responsible for certifying whether a voting system meets all the requirements of the
23 Elections Code. Gov’t Code §12172.5. The Secretary of State cannot approve a voting
24 system or part of a voting system “unless it fulfills the requirements of this code and the
25 regulations of the Secretary of State.” Elec. Code §19200.

26 60. The Secretary of State is responsible for establishing “the specifications for and
27 the regulations governing” voting systems. Elec. Code §19205. The specifications and
28 regulations must ensure that the system is “suitable for the purpose for which it is intended”

1 and is “safe from fraud or manipulation.” *Id.*

2 61. County Elections Officials must follow both valid regulations of the Secretary of
3 State and the general mandates of the Elections Code. *See* Elec. Code §§19201(b),
4 19250(b), Gov’t Code §26802. Counties cannot use voting systems “unless [the voting
5 system] has received the approval of the Secretary of State prior to any election at which it is
6 to be first used.” Elec. Code §19201(a). They also cannot “purchase or contract for a voting
7 system, in whole or in part, unless it has received the approval of the Secretary of State”
8 (Elec. Code §19201(b)) and met the requirements for federal qualification. Elec. Code
9 §§19250(b), 19251(d).

10
11 **II. THE DUBIOUS HISTORY OF DIEBOLD VOTING
12 SYSTEMS IN CALIFORNIA AND ELSEWHERE.**

13 **A. California’s Disastrous Experiment With Diebold Voting Systems In The
14 March 2004 Primary Results In Decertification Of The AV-TSx.**

15 62. Diebold marketed and sold its systems—including an earlier version of the AV-
16 TSx touchscreen at issue here—in California for use in the 2004 elections.

17 63. Based on representations from Diebold that federal qualification was imminent
18 and that Diebold would comply with certain conditions, the Secretary of State conditionally
19 certified the AV-TSx on November 20, 2003.

20 64. On February 11, 2004, the Secretary of State asked Diebold to implement two
21 safeguards to its systems before the March 2004 primary election. First, Diebold was
22 required to print an image of each of the ballots cast. Second, Diebold was required to
23 provide voters an option of using a paper ballot.

24 65. During the March 2004 primary election, Diebold voting systems experienced
25 operating problems which severely curtailed voting in San Diego County and significantly
26 affected voting in Alameda County. In a special report on the March 2004 elections, the
27 Secretary of State concluded that:

28 (a) Diebold neither alerted elections officials about this equipment problem, nor
did it indicate to counties that additional poll worker training or documentation was

1 necessary to address this problem. Diebold's own investigation report concedes that its
2 equipment created the problem, not poll worker error.

3 (b) The net effect was that the problems with the equipment, together with a
4 lack of documentation and training by the vendor about how to resolve the problem, led to a
5 "worst case scenario" in San Diego County, and serious difficulties in Alameda County.
6 Most polling places had only one PCM machine. Therefore, when the device failed, there
7 were no means for voters to access and use the touchscreen machines in that polling place.

8 (c) Without access to the touchscreens, voters could not vote. This was
9 because San Diego County, despite repeated recommendations from the Secretary of State's
10 office, failed to provide back-up paper ballots at polling places. Over half of San Diego's
11 polling places could not open on time as a result of the equipment failure and the failure to
12 provide back-up paper ballots. Voters were turned away or sent to other polling places to
13 vote provisionally. Presumably, some of these voters cast their ballots later in the day. There
14 was no way to estimate the number of voters who failed to return to the polls after being
15 turned away.

16 Office of the Secretary of State's Report on the March 2, 2004 Statewide Primary Election
17 (April 2004), at 5. A true and correct copy of this report is included in the Appendix as
18 Exhibit 2.

19 66. Later investigations revealed that some of the problems were traceable to last-
20 minute changes Diebold made to the voting systems.

21 67. On April 20, 2004, the Secretary of State's staff issued a staff report highly
22 critical of Diebold. A true and correct copy of the staff report is included in the Appendix as
23 Exhibit 3. The report concluded that Diebold:

24 (a) marketed and sold the AV-TSx system before it was fully functional, and
25 before it was federally qualified;

26 (b) misrepresented the status of the AV-TSx system in federal testing in order
27 to obtain state certification;

28 (c) failed to obtain federal qualification of the AV-TSx system despite

1 assurances that it would;

2 (d) failed even to pursue testing of the firmware installed on its AV-TSx
3 machines in California until only weeks before the election, choosing instead to pursue
4 testing of newer firmware that was even further behind in the ITA testing process and that,
5 in some cases, required the use of other software that also was not approved in California;

6 (e) installed uncertified software on election machines in 17 counties;

7 (f) sought last-minute certification of allegedly essential hardware, software
8 and firmware that had not completed federal testing; and

9 (g) in doing so, jeopardized the conduct of the March 2004 Primary. Ex. 3 at 5.

10 68. Citing Diebold's misconduct as outlined in the April 20, 2004, staff report, then-
11 Secretary of State Kevin Shelley decertified the AV-TSx machines.

12 69. Secretary of State Shelley also asked the California Attorney General's office to
13 consider bringing criminal fraud charges against Diebold. The Attorney General launched a
14 criminal investigation but later decided to intervene in a civil False Claims Act lawsuit
15 against Diebold. Diebold paid \$2.6 million to settle the claim.

16
17 **B. Numerous Studies of Diebold Products By Other States Show Widespread**
18 **Security Flaws And Problems.**

19 70. The Johns Hopkins University Study. On July 23, 2003, four computer scientists,
20 three from the faculty of Johns Hopkins University and the fourth from the faculty of Rice
21 University, published "An Analysis of an Electronic Voting System." The article reported
22 on their analysis of the source code for the Diebold AccuVote-TS voting terminal, which is
23 the predecessor of the AV-TSx. The authors concluded that "this voting system is far below
24 even the most minimal security standards applicable in other contexts." They highlighted
25 several issues including "unauthorized privilege escalation, incorrect use of cryptography,
26 vulnerabilities to network threats, and poor software development processes." A true and
27 correct copy of the Johns Hopkins report is included in the Appendix as Exhibit 4.

28 71. The Science Application International Corporation ("SAIC")/Maryland Study.

1 On September 2, 2003, Science Application International Corporation (“SAIC”) issued a
2 “Risk Assessment Report: Diebold AccuVote-TS Voting System and Processed”
3 commission by the Governor of the State of Maryland. The report identified 328 security
4 flaws, 26 of them “critical” and concluded that “[t]he system, as implemented in policy,
5 procedure, and technology, is at high risk of compromise.” A true and correct copy of the
6 SAIC report is included in the Appendix as Exhibit 5.

7 72. The Nevada Study. In a report to the Nevada Secretary of State dated November
8 26, 2003, the Chief of the Nevada Gaming Control Board’s Electronic Services Division
9 concluded that “the Diebold electronic voting machine, operating on the software analyzed
10 in the Johns Hopkins report and the SAIC Risk Assessment Report, represents a legitimate
11 threat to the integrity of the election process” and recommended against its use in Nevada.
12 A true and correct copy of the Nevada Study is included in the Appendix as Exhibit 6.

13 73. The Compuware/Ohio Study. On December 2, 2003, the Ohio Secretary of State
14 released a “DRE Technical Security Assessment” prepared by a private firm, Compuware
15 (the “Compuware Report”). The report assessed touchscreen voting systems sold by
16 Diebold and three other vendors. It found the Diebold AV-TS voting system had more
17 security risks rated “high” than any other vendor. It stated that the same PIN—1111—was
18 used on all supervisor smart cards issued nationwide, and that an unauthorized person could
19 use it to gain access to supervisor functions on the voting terminal. The report also found
20 that an unauthorized person could use the widely available Microsoft Access database
21 program to change ballot definition files and election results in the Diebold GEMS software.
22 A true and correct copy of the Compuware Report is included in the Appendix as Exhibit 7.

23 74. The RABA Technologies/Maryland Study. On January 20, 2004, the Maryland
24 Department of Legislative Services released a report on Diebold product security entitled
25 “Trusted Agent Report: Diebold AccuVote-TS Voting System,” prepared by RABA
26 Technologies LLC (the “RABA Report”). The RABA team, which included two prominent
27 computer security professors and several former National Security Agency and Central
28 Intelligence Agency computer security experts, identified numerous security vulnerabilities

1 in the Diebold GEMS tabulation software and server and in the “smart” memory cards used
2 with the AV-TS and -TSx systems. These security vulnerabilities were confirmed and
3 demonstrated in a single day under election day conditions after a single week of analysis
4 and preparation by this small team of computer security experts. A true and correct copy of
5 the RABA Report is included in the Appendix as Exhibit 8.

6
7 **C. Computer Expert Harry Hursti’s “Exploits” Demonstrate Vulnerabilities In**
8 **The Diebold Voting System And Expose Diebold Misrepresentations.**

9 75. In May 2005, computer security expert Harri Hursti demonstrated the existence
10 of several security vulnerabilities in the memory cards used in a Diebold system installed in
11 Leon County, Florida. Diebold’s systems use memory cards to customize ballots for a
12 particular election and to store the voting results.

13 76. Using an actual Diebold AV-OS machine, Hursti performed several “exploits”
14 that allowed him to control vote totals and other aspects of voting machine performance,
15 without being detected in a later canvass, by manipulating the code on the Diebold memory
16 cards. Hursti documented these exploits in a report dated July 4, 2005. A true and correct
17 copy of Hursti’s report is included in the Appendix as Exhibit 9.

18 77. Hursti’s successful manipulation of the AV-OS was made possible by flaws in
19 the AccuBasic code that runs both the AV-OS and AV-TSx systems. As described below, a
20 later study by the California Secretary of State’s own experts revealed that Hursti’s
21 manipulation would work on the AV-TSx and that there were many other vulnerabilities in
22 the AccuBasic code.

23 78. As recently as August 23, 2005, Diebold denied the existence of the security
24 vulnerability discovered by Hursti. In an August 23, 2005, letter to Janice Brewer, Arizona
25 Secretary of State, Diebold insisted that the AV-OS “does not make use of a machine-
26 executable program stored, and implements no ability to execute any programs from a
27 memory card.” A true and correct copy of the August 23, 2005 letter is included in the
28 Appendix as Exhibit 10. In fact, as described below, a later study by the California

HOWARD
RICE
EMEROVSKI
CANADY
FALK
& RABKIN
Professional Corporation

1 Secretary of State’s own experts confirmed that the memory cards of both the AV-OS and
2 AV-TSx could be used to “seize control of the machine” and “replace the running code on
3 the machine . . . with code of the attacker’s choosing.”
4

5 **III. DIEBOLD’S RENEWED EFFORTS TO ACHIEVE**
6 **CERTIFICATION OF ITS VOTING SYSTEM.**

7 79. On March 18, 2005, Diebold applied for re-certification of a voting system that
8 included a reconfigured version of the AV-TSx.

9 80. Steve Freeman, the Secretary of State’s technical consultant, recommended
10 denial of certification on May 15, 2005.

11 81. Diebold later presented a different version of the AV-TSx, using firmware
12 version 4.6.3, for state certification.

13 82. Wyle Laboratories—one of three vendor-sponsored laboratories which has been
14 certified to test voting systems by the National Association of State Election Directors
15 (“NASED”)—recommended the AV-TSx with firmware version 4.6.3 for federal
16 “qualification” at some point before June 27, 2005.

17 83. On June 27, 2005, NASED deemed the AV-TSx with firmware version 4.6.3
18 “qualified” and assigned it system number N-1-06-22-22-001.

19 84. Despite the federal qualification, testing by the Secretary of State’s office
20 revealed serious problems with firmware version 4.6.3. For example, as described in an
21 October 11, 2005 report by the Secretary of State’s office, printer jams destroyed several
22 voting records. The system software was also defective, resulting in numerous shutdowns
23 and the potential for loss or corruption of voting records. A true and correct copy of the
24 October 11, 2005 report is included in the Appendix as Exhibit 11.

25 85. After examining AV-TSx with firmware version 4.6.3, the Secretary of State’s
26 own panel concluded that “any system with failure rates this high is not ready for use in an
27 election.” Ex. 11 at 5.

28 86. After discovering these problems in the NASED- and ITA-qualified system, the

1 Secretary of State suspended Diebold's application.

2 87. Diebold later presented firmware version 4.6.4 for state certification.

3
4 **A. Security Concerns Are Raised At The Public Hearing On Diebold**
5 **Certification.**

6 88. The Secretary of State held a public hearing on the AV-TSx, with firmware
7 version 4.6.4, on November 21, 2005. A true and correct copy of the transcript of the
8 hearing ("Nov. 21 Hearing Transcript") is included in the Appendix as Exhibit 12.

9 89. Several speakers at the hearing informed the Secretary of State that the AV-TSx
10 contained "executable code." *See, e.g.*, Ex. 12 at 33:10-13, 35:23-36:5, 42:1-17.

11 90. When asked whether the system contained executable code, the Secretary of
12 State's technical consultant, Steve Freeman, responded: "I'm advised I shouldn't answer
13 that." *Id.* at 42:14-17.

14 91. In fact, Freeman had already acknowledged that the AV-TSx contained
15 executable code in a November 11, 2005, report. *See* Secretary of State's November 11,
16 2005, consultant's report ("Freeman Report") at 7 ("[The AccuBasic report files] are
17 actually loaded into the memory cards for the AV-OS and AV-TS where their logic is
18 executed."). A true and correct copy of the Freeman report is included in the Appendix as
19 Exhibit 13.

20
21 **B. After Another Successful "Hack" By Hursti, The California Secretary Of**
22 **State Finds That Additional Testing Of The Diebold Voting System Is**
23 **Needed As A Prerequisite To Certification.**

24 92. On December 13, 2005, security expert Harri Hursti repeated his May 2005
25 "hack" showing that the presence of interpreted code in the Diebold voting system's
26 memory cards made it easy to manipulate election results. Hursti had been invited by the
27 Supervisor of Elections for Leon County, Florida, to test an AV-OS system under simulated
28 election conditions.

93. By using an off-the-shelf memory card, Hursti was able to manipulate the voting

1 results from an actual count of 6 “No” votes and 2 “Yes” votes to a reported, and inaccurate,
2 count of 7 “Yes” votes and 1 “No” vote.

3 94. On or about December 20, 2005, Secretary of State McPherson issued a press
4 release calling for additional testing of the Diebold Voting System. In the press release,
5 McPherson stated that “[d]uring a thorough review of the application for the Diebold system
6 currently pending certification, we have determined that there is sufficient cause for
7 additional federal evaluation.” A true and correct copy of the press release is included in the
8 Appendix as Exhibit 14.

9 95. On information and belief, the Secretary of State’s decision was based, in part, on
10 the flaws revealed by Hursti’s successful manipulation of the Diebold systems in Florida.

11 96. Also, on December 20, 2005, the Chief of the Secretary of State’s Elections
12 Division sent a letter to Diebold requesting that it submit source code contained on the
13 memory cards used with the AV-OS and AV-TSx for further federal testing due to security
14 concerns:

15 Unresolved significant security concerns exist with respect to the memory card
16 used to program and configure the AccuVote-OS and the AccuVote-TSX
17 components of this system because this component was not subject to federal
18 source code review and evaluation by the Independent Testing Authorities (ITA)
19 who examined your system for federal qualification. It is the Secretary of State’s
20 position that the source code for the Accubasic code on these cards, as well as for
21 the Accubasic interpreter that interprets this code, should have been federally
22 reviewed.

23 . . . Therefore we are requesting that you submit the source code relating to the
24 Accubasic code on the memory cards and the Accubasic interpreter to the ITA for
25 immediate evaluation.

26 *We require this additional review before proceeding with further consideration of*
27 *your application for certification in California.* Once we have received a report
28 from the federal ITA adequately analyzing this source code, in addition to the
technical and operational specifications relating to the memory card and
interpreter, we will expeditiously proceed with our comprehensive review of your
application. (emphasis added)

A true and correct copy of the December 20, 2005, letter is included in the Appendix as
Exhibit 15.

1 **C. The Secretary Of State Requests Review Of The Diebold Voting System’s**
2 **Memory Cards By Members Of His Voting Systems Technology Assessment**
3 **Advisory Board And Their Analysis Confirms The Existence Of Known**
4 **Security Flaws And Discovers Others.**

5 97. In or about this same period, the Secretary of State also asked members of the
6 Voting Systems Technology Assessment Advisory Board (“VSTAAB”), an expert panel the
7 Secretary of State’s office created to help assess voting technology, to perform additional
8 security testing of the Diebold Voting System’s memory cards.

9 98. The panel had access to the AV-TSx source code for a period of four weeks.

10 **1. The VSTAAB Security Analysis.**

11 99. On or about February 14, 2006, three computer scientist members of the
12 VSTAAB from the University of California issued a report entitled “Security Analysis of the
13 Diebold AccuBasic Interpreter” (the “VSTAAB Report”). A true and correct copy of the
14 VSTAAB Report is included in the Appendix as Exhibit 16.

15 100. The VSTAAB Report noted that the AV-TSx “had not been subjected to
16 thorough testing and review by” the national ITA which had approved the system in 2005.
17 Ex. 16 at 1.

18 101. The VSTAAB Report confirmed that the AV-TSx’s software architecture, in
19 particular its AccuBasic language and interpreter, contained “interpreted code” in violation
20 of the Federal Election Commission’s 2002 Voluntary Voting System Standards. *Id.* at 35.
21 Compliance with these standards is mandatory under California law. Elec. Code §§19250
22 (a-b), 19251(d).

23 102. The VSTAAB Report also confirmed Harri Hursti’s finding that the AccuBasic
24 script used in the memory cards of the AV-OS (and AV-TSx) can be replaced with
25 malicious script that would allow an attacker to tamper with vote counts and reports and then
26 conceal that the tampering had taken place. Ex. 16 at 18-19. The Report found that the AV-
27 TSx had the same vulnerabilities as the AV-OS. *See id.* at 2 (noting that “[a] majority of the
28 bugs” in the Diebold optical scan system were also present in the AV-TSx system), 19 (“The

1 AV-TSx also appears to be at risk for similar attacks.”). While the Report noted that the
2 AV-TSx contained a “potential” protection against hacking not present in the AV-OS, it also
3 noted that this protection was only “potential,” not actual, because the AV-TSx
4 cryptographic protection contains a “serious flaw.” *Id.* at 2-3.

5 103. The VSTAAB Report also described a number of previously undiscovered and/or
6 unreported “serious vulnerabilities” in the AccuBasic interpreters for both the AV-OS and
7 AV-TSx machines that could be exploited by an attacker with unsupervised access to a
8 memory card to modify vote totals, or otherwise compromise the integrity of an election. *Id.*
9 at 11-18. Critically, these bugs would not be detected by any amount of functionality
10 testing. *Id.* at 2.

11 104. The VSTAAB Report noted that the AccuBasic interpreter appears to have been
12 written with commercial standards of software development, rather than the high-assurance
13 standards that one would expect for an application where security was of utmost importance.
14 *Id.* at 23.

15
16 **2. The VSTAAB’s Recommended “Mitigation” Measures.**

17 105. After outlining the security vulnerabilities they discovered, the authors of the
18 VSTAAB Report recommended some possible mitigation measures. The authors divided
19 their discussion into two categories of mitigation strategy—short-term and long-term.

20 106. As a *short-term* mitigation strategy, the VSTAAB Report recommended
21 implementing procedural and physical safeguards to protect the Diebold machines and
22 memory cards from tampering. The suggested *short-term* safeguards included updating the
23 cryptographic keys on every AV-TSx machine, and certain physical security measures
24 including chain of custody control of memory cards and the use of tamper-evident seals
25 (ideally applied to seal the memory cards into voting system units at a central warehouse in
26 advance of the election and not removed until the units were back in the control of county
27 officials). The VSTAAB Report states that “[w]hile these strategies do not completely
28 eliminate all risk, we expect they would be capable of reducing the risk *to a level that is*

1 *manageable for local elections in the short term.*” Ex. 16 at 36 (emphasis added). The
2 recommended short-term strategies did not include any modification of source code, because
3 of the time it would take time to perform the additional coding and to secure federal
4 qualification and state certification of the code changes.

5 107. By contrast, according to the authors, “[i]n the longer term, or for statewide
6 elections, the risks of not fixing the vulnerabilities in the AccuBasic interpreter become more
7 pronounced. Larger elections, such as a statewide election, provide a greater incentive to
8 hack the election and heighten the stakes For statewide elections, or looking farther
9 into the future, it would be far preferable to fix the vulnerabilities discussed in this report.”
10 *Id.* at 36-37 (emphasis added).

11 108. The VSTAAB Report’s recommended long-term mitigation measures primarily
12 consisted of changing the Diebold machines’ software and or hardware including: (1)
13 revising the source code of the AccuBasic interpreter to fix the bugs identified in the Report
14 and to incorporate defensive programming practices, including the elimination of all “trust”
15 in the memory card (*i.e.* eliminate any implicit assumption that the memory card could not
16 be tampered with); (2) protecting the AccuBasic code from tampering by embedding it in
17 non-removable storage and/or protecting it with cryptography; (3) changing the architecture
18 of the AV-OS and AV-TSx so they do not store code on removable memory cards; and (4)
19 changing the architecture of the AV-OS and AV-TSx to eliminate all interpreted code and
20 bring them into compliance with the federal voluntary standards. *Id.* at 31-36.

21
22 **3. The VSTAAB Report Acknowledges Its Limited Scope And The**
23 **Existence Of Other Security Issues.**

24 109. The VSTAAB Report also made clear that the scope of the review the Board was
25 allowed to perform was very limited. For example, the VSTAAB investigators limited their
26 review to Diebold’s proprietary AccuBasic scripting language which Hursti had
27 demonstrated was problematic. Ex. 16 at 6. In addition, the VSTAAB Report did not
28 examine the source code for the GEMS election management system, even though the

1 investigators noted that “[i]t is widely acknowledged that a malicious person with
2 unsupervised access to GEMS, even without knowing the passwords, can compromise
3 GEMS and the election it controls.” *Id.*

4 110. The VSTAAB Report’s authors “did not have access to a genuine running
5 system.” *Id.* at 8. Their analysis was based only on a “stubbed-out version of the code,” but
6 even with this piece they were able to confirm that “one of the attacks we discovered (the
7 only one that we tried) actually works.” *Id.*

8 111. Finally, the VSTAAB Report assumed that the hypothetical person seeking to
9 alter ballot results did not have any inside confederates, or access to passwords or
10 cryptographic keys. *Id.* at 7. In short, the VSTAAB Report discovered numerous security
11 flaws in the very limited area of the Diebold Voting System software that it examined—the
12 system’s memory cards—but did not exclude the possibility, and in fact acknowledged the
13 likelihood, that significant additional security flaws existed in other parts of the Voting
14 System.

15
16 **D. The Diebold AV-TSx’s Paper Audit Trail System Has Not Been Shown To**
17 **Meet State Requirements.**

18 112. California law requires that DREs produce an “accessible voter verified paper
19 audit trail.” Elec. Code §19250(a-b). The Legislature imposed this requirement to protect
20 against programming error or fraud.

21 113. In an attempt to meet California’s requirement for a voter verified paper audit
22 trail, the current version of the AV-TSx comes with an attached printer, the AccuView
23 Printer Module. The printer module produces a record of the voter’s vote on a continuous
24 roll of thermal paper which fully-sighted voters are supposed to be able to view through a
25 small window and then accept or reject the record as correct. If the voter rejects the record
26 as incorrect, the printer is to make a mark on the paper roll at the bottom of the particular
27 entry, but the record is not removed from the roll. All paper records, including the rejected
28 votes and provisional votes, are spooled into a sealed canister inside the machine.

