

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION**

DONNA CURLING, *et al.*

Plaintiffs,

v.

BRAD RAFFENSPERGER, *et al.*,

Defendants.

CIVIL ACTION
NO. 1:17-CV-2989-AT

**DEFENDANTS' POST-TRIAL PROPOSED FINDINGS OF FACT
AND CONCLUSIONS OF LAW**

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I. Role of courts in elections.

1. The right to vote is one of our most sacred rights as Americans. Indeed, “[i]t would be difficult to overstate the importance of the right to vote.” *Curling v. Raffensperger*, 50 F.4th 1114, 1126 (11th Cir. 2022).

2. But the role of federal courts in voting cases is limited by the Constitution, which entrusts the regulation of elections primarily to the States. U.S. Const. Art. I, Section 4.

3. This Court and other federal courts do not “sit as a guarantor of a flawless election.” *Georgia Shift v. Gwinnett Cty.*, No.1:19-CV-01135-AT, 2020 WL 864938, at *6 (N.D. Ga. Feb. 12, 2020).

4. That is why, even if “Georgia’s election system is not perfect,” this Court cannot intervene if the particular policies challenged by Plaintiffs do not violate the Constitution. “As the Eleventh Circuit notes, federal courts are not “‘the arbiter[s] of disputes’ which arise in elections; it [is] not the federal court’s role to ‘oversee the administrative details of a local election.’” *Curry v. Baker*, 802 F.2d 1302, 1306 (11th Cir. 1986).” *Fair Fight Action, Inc. v. Raffensperger*, 634 F. Supp. 3d 1128, 1251 (N.D. Ga. 2022).

5. “To be clear from the start, the Court does not have the legal authority to grant the broadest relief that Plaintiffs request in this case without directly infringing on the state legislature’s vested power to enact legislation.” *Curling v. Raffensperger*, No. 1:17-cv-2989-AT, 2023 WL

7463462, at *2 (N.D. Ga. Nov. 10, 2023). As this Court has previously stated in this case, “the Court has the legal authority to identify constitutional deficiencies with the existing voting system, but it does not have the power to prescribe or mandate new voting systems (i.e., a paper ballot system) to replace the current, legislatively enacted system.” *Id.* (citing *Burdick v. Takushi*, 504 U.S. 428, 433–34 (1992); *Wood v. Raffensperger*, 501 F. Supp. 3d 1310, 1327–28 (N.D. Ga. 2020), *aff’d*, 981 F.3d 1307 (11th Cir. 2020)).

II. Plaintiffs’ Claims.

A. Curling Plaintiffs’ Claims.

6. Curling Plaintiffs’ remaining claims¹ are Counts III and IV of their Third Amended Complaint, both of which allege violations of the fundamental right to vote under the Fourteenth Amendment and 42 U.S.C. § 1983. [Doc. 627].

7. Specifically, Curling Plaintiffs claim in Count III their right to vote will be burdened by deploying an election system that fails to (1) provide “reasonable and adequate protection” against manipulation and intrusion by unauthorized third-parties; (2) ensure equipment cannot be operated without authorization; (3) secure against unauthorized tampering; (4) test, inspect,

¹ This Court granted State Defendants summary judgment on Curling Plaintiffs’ Counts I and II [Doc. 1705, p. 134] and dismissed Count V in its order on the motion to dismiss [Doc. 751, p. 30 n.18].

and seal equipment to ensure that “all properly cast votes are counted and that improperly cast votes are not counted;” and (5) “provide a reasonable and adequate method for voting by which Georgia electors’ votes will be accurately counted.” [Doc. 627, ¶ 116].

8. Curling Plaintiffs claim in Count IV that BMD “votes are unequally weighted, with greater weight given to those who vote by absentee paper ballot, whose votes can be verified as to voter intent, can be accurately recounted, and can have processing errors identified and corrected, while votes cast [by BMD], whose votes do not share those essential advantages.” [Doc. 627, ¶ 129].

9. Further, they claim that “Defendants failed ... to mitigate the security failures, and conduct an election on a system that could comply with the Georgia Election Code. Instead, they intend to rely on the [Dominion BMD System] knowing that this system is unsecured, could be breached and compromised, cannot be presumed to be safe, and is materially non-compliant with applicable Election Code statutes and governing regulations.” [Doc. 627, ¶ 127].

B. Coalition Plaintiffs' Claims.

10. Coalition Plaintiffs' remaining claims² are Counts I and II of their First Supplemental Complaint, both of which allege violations of the fundamental right to vote under the Fourteenth Amendment and 42 U.S.C. § 1983. [Doc. 628].

11. Specifically, Coalition Plaintiffs claim in Count I their right to vote will be burdened because (1) in-person voters will be unable to verify that their votes have been properly recorded in the QR code; (2) in-person voters will be deprived of the benefit of having their votes examined in RLAs; (3) violation of secret ballot due to timestamps; and (4) all voters, in-person and absentee, will be deprived of the right to participate in a trustworthy and verifiable election process. [Doc. 628, ¶ 223].

12. Further, Coalition Plaintiffs claim in Count II that the voting system will arbitrarily treat some voters differently because (1) voters who vote on BMDs will be deprived of state rights to have their votes audited; (2) voters who cast their votes on the Dominion BMD System will be differentially deprived of underlying substantive state statutory and

² This Court granted State Defendants summary judgment on Coalition Plaintiffs' Counts I and II of their Third Amended Complaint [Doc. 1705, p. 134] and dismissed Count III of their Third Amended Complaint on procedural due process in its order on the motion to dismiss [Doc. 751, pp. 45–51].

constitutional rights to vote by secret ballot; and (3) voters who instead cast their votes on mailed paper ballots will suffer none of the foregoing risks.

[Doc. 628, ¶ 231].

C. Plaintiff Ricardo Davis's Claims.

13. This Court allowed Plaintiff Ricardo Davis to have new counsel and replace his prior representation before the trial. [Doc. 1764]. Plaintiff Davis's claims are the same as the Coalition Plaintiffs because he did not attempt to enter a new complaint or otherwise amend his prior participation in those complaints.

LEGAL STANDARDS

III. Article III Standing.

14. As a threshold matter, this Court must determine whether, and which, Plaintiffs have standing to bring the claims asserted in this lawsuit. *See* U.S. Const. art. III, § 2. Standing must be established at each stage of a case, with the allegations in the complaint ultimately “supported adequately by the evidence adduced at trial.” *Gladstone Realtors v. Vill. of Bellwood*, 441 U.S. 91, 116 n.31 (1979); *see also Lujan v. Defs. of Wildlife*, 504 U.S. 555, 561 (1992) (elements of standing “are not mere pleading requirements but rather an indispensable part of the plaintiff’s case, each element must be supported in the same way as any other matter on which the plaintiff bears the burden

of proof, i.e., with the manner and degree of evidence required at the successive stages of the litigation”).

15. To establish standing to present a case or controversy, a litigant must prove: “(1) an injury in fact that (2) is fairly traceable to the challenged action of the defendant and (3) is likely to be redressed by a favorable decision.” *Jacobson v. Fla Sec’y of State*, 974 F.3d 1236, 1245 (11th Cir. 2020) (citing *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 560–61 (1992); *U.S. v. Amodeo*, 916 F.3d 967, 971 (11th Cir. 2019)).

16. The injury is measured as of the time that Plaintiffs filed their respective complaints. *A&M Gerber Chiropractic LLC v. Geico Gen. Ins. Co.*, 925 F.3d 1205, 1212 (11th Cir. 2019); *Arcia*, 772 F.3d at 1340; *Focus on the Family v. Pinellas Suncoast Transit Auth.*, 344 F.3d 1263, 1275 (11th Cir. 2003). A plaintiff without standing cannot acquire it later based on injuries occurring after the suit was filed. *Atlanta Gas Light Co. v. Aetna Cas. & Sur. Co.*, 68 F.3d 409, 414 (11th Cir. 1995).

17. Further, each plaintiff must be more than a mere “concerned bystander” who is interested in a problem; instead, the plaintiff must show that the injury is distinct to itself. *Gardner v. Mutz*, 962 F.3d 1329, 1343 (11th Cir. 2020) (no injury when only generalized interest in preserving history); *see also Arcia*, 772 F.3d at 1342 (“[A]bstract social interest[s]” cannot establish a concrete injury in fact); *Nat’l Treasury Emps. Union v. United*

States, 101 F.3d 1423, 1429 (D.C. Cir. 1996) (“abstract concern . . . does not impart standing.”).

18. “[A] mere ‘interest in a problem,’ no matter how longstanding the interest and no matter how qualified [an] organization is in evaluating the problem, is not sufficient by itself.” *Gardner*, 962 F.3d at 1341 (11th Cir. 2020) (quoting *Sierra Club v. Morton*, 405 U.S. 727, 739 (1972)).

A. Individual injury-in-fact.

19. In order to have standing an injury in a case involving voting, the individual must have more than their own vote being counted improperly.

“‘[N]o single voter is specifically disadvantaged’ if a vote is counted improperly, even if the error might have a ‘mathematical impact on the final tally and thus on the proportional effect of every vote.’ *Bognet v. Sec’y Commonwealth of Pa.*, 980 F.3d 336, 2020 U.S. App. LEXIS 35639, 2020 WL 6686120, at *12 (3d Cir. Nov. 13, 2020) (internal quotation marks omitted). Vote dilution in this context is a ‘paradigmatic generalized grievance that cannot support standing.’ *Id.* (internal quotation marks omitted).” *Wood v. Raffensperger*, 981 F.3d 1307, 1314-1315 (11th Cir. 2020); *see also Wood v. Raffensperger*, 501 F. Supp. 3d 1310, 1322 (N.D. Ga. 2020).

20. Further, different treatment of in-person and absentee voters is not the basis for an injury because it is a generalized grievance. “Even if we assume that absentee voters are favored over in-person voters, that harm

does not affect Wood as an individual—it is instead shared identically by the four million or so Georgians who voted in person this November. ‘[W]hen the asserted harm is . . . shared in substantially equal measure by . . . a large class of citizens,’ it is not a particularized injury. *Warth v. Seldin*, 422 U.S. 490, 499, 95 S. Ct. 2197, 45 L. Ed. 2d 343 (1975). And irregularities in the tabulation of election results do not affect Wood differently from any other person. His allegation, at bottom, remains ‘that the law . . . has not been followed.’ *Dillard v. Chilton Cnty. Comm’n*, 495 F.3d 1324, 1332 (11th Cir. 2007).” *Wood v. Raffensperger*, 981 F.3d 1307, 1315 (11th Cir. 2020).

B. Organizational injury-in-fact.

21. CGG is a corporate entity that lack a direct injury caused by the use of electronic voting equipment. Accordingly, principles of organizational standing apply, and those principles require CGG to demonstrate that the claims in the relevant complaint required diversion of either financial resources or its personnel’s time and energy. *Arcia v. Sec’y of Fla.*, 772 F.3d 1335, 1341 (11th Cir. 2014); *Common Cause of Ga. v. Billups*, 554 F.3d 1340, 1350 (11th Cir. 2009).

22. Plaintiffs’ diversions of resources must also be linked to the specific harms alleged. *See, e.g., Fla. State Conf. of N.A.A.C.P. v. Browning*, 522 F.3d 1153, 1165 (11th Cir. 2008) (“organization has standing to sue on its own behalf if the defendant’s illegal acts impair its ability to engage in its

projects by forcing the organization to divert resources to counteract **those illegal acts**)” (emphasis added). The injury must cause a perceptible impairment of organizational activities or daily operations, *Food & Water Watch, Inc. v. Vilsack*, 808 F.3d 905, 919–21 (D.C. Cir. 2015), or diverted resources “beyond those normally expended.” *Cigar Ass’n of Am. v. U.S.*, 323 F.R.D. 54, 63 (D.C. Dist. 2017); accord *Ga. Republican Party v. SEC*, 888 F.3d 1198, 1203 (11th Cir. 2018) (no evidence that plaintiff was forced to divert resources, “let alone that such diversion impairs the Party.”); *Ga. Latino Alliance for Human Rights v. Deal*, 691 F.3d 1250, 1260 (11th Cir. 2012) (challenged legislation “has strained [plaintiff’s] limited resources and will continue to do so”). For this reason, the diversion of resources cannot be to new initiatives; rather, Plaintiffs must identify what activities they must “divert resources away *from* in order to spend additional resources” combatting the specific policy or law at issue. *Jacobson*, 974 F.3d at 1250 (emphasis in original).

23. CGG must demonstrate a diversion of resources as to each claim to demonstrate an injury sufficient to establish this Court’s jurisdiction. See *Town of Chester v. Laroe Estates, Inc.*, 137 S. Ct. 1645, 1650 (2017).

24. Litigation expenses cannot be used to impart standing on an organization. *Nat’l Treasury Emps. Union v. U.S.*, 101 F.3d 1423, 1434 (D.C. Cir. 1996). Plaintiffs must also demonstrate a concrete injury, such as

perceptible impairment of organizational activities or daily operations, *Food & Water Watch, Inc. v. Vilsack*, 808 F.3d 905, 919–21 (D.C. Cir. 2015), or diverted resources “beyond those normally expended,” *Cigar Ass’n of Am. v. U.S.*, 323 F.R.D. 54, 63 (D.C. Dist. 2017); accord *Ga. Republican Party v. SEC*, 888 F.3d 1198, 1203 (11th Cir. 2018) (no evidence that plaintiff was forced to divert resources, “let alone that such diversion impairs the Party.”); *Ga. Latino Alliance for Human Rights v. Deal*, 691 F.3d 1250, 1260 (11th Cir. 2012) (challenged legislation “has strained [plaintiffs] limited resources and will continue to do so”).

25. Further, “[t]o prove injury in fact based on an organization’s diversion of resources to protect individuals from harm, the organizational plaintiff must prove both that it has diverted its resources and that the injury to the identifiable community that the organization seeks to protect is itself a legally cognizable Article III injury that is closely connected to the diversion. . . . The harm must be concrete and imminent.” *City of S. Miami v. Governor of Fla.*, 65 F.4th 631, 638-39 (11th Cir. 2023).

C. Traceability and Redressability.

26. As the Eleventh Circuit has explained, “[t]o satisfy the causation requirement of standing, a plaintiff’s injury must be ‘fairly traceable to the challenged action of the defendant, and not the result of the independent

action of some third party not before the court.” *Jacobson*, 974 F.3d at 1253 (quoting *Lujan*, 504 U.S. at 560).

27. Further, “it must be the effect of the court’s judgment on the defendant—not an absent third party—that redresses the plaintiff’s injury, whether directly or indirectly.” *Lewis v. Governor of Ala.*, 944 F.3d 1287, 1301 (11th Cir. 2019) (*en banc*) (internal quotations omitted); *see also Jacobson*, 974 F. 3d at 1254 (precluding judgment against absent parties on redressability grounds).

28. As applied here, those requirements mean that this Court may not bind any county election officials who are not part of the lawsuit; none would be “obliged . . . in any binding sense . . . to honor an incidental legal determination [this] suit produce[s].” *Lewis*, 944 F. 3d at 1302 (internal quotation marks omitted). Some counties might defer to Defendants’ directions as ordered by this Court, while others may continue to follow the law as it exists. *Jacobson*, 974 F. 3d at 1255; *see also Friedman v. Snipes*, 345 F. Supp. 2d 1356, 1381 (S.D. Fla. 2004).

29. “[F]ederal courts have no authority to erase a duly enacted law from the statute books.” *Jacobson*, 974 F. 3d at 1255. And even a “favorable declaratory judgment . . . cannot make [] an unconstitutional statute disappear.” *Steffel v. Thompson*, 415 U.S. 452, 469 (1974).

30. Thus, while this Court may “enjoin executive officials from taking steps to enforce a statute,” *Mitchell, supra* at 936, it may “exercise that power only when the officials who enforce the challenged statute are properly made parties to a suit,” *Jacobson*, 974 F. 3d at 1255.³ This is because “a federal court exercising its equitable authority may enjoin named defendants from taking specified unlawful actions. But under traditional equitable principles, no court may ‘lawfully enjoin the world at large,’” *Whole Woman’s Health v. Jackson*, 595 U.S. 30, 142 S. Ct. 522, 535 (2021), especially not “absent nonparties,” *Jacobson*, 974 F. 3d at 1254.

31. The principles of traceability and redressability are intertwined. “Redressability requires that the court be able to afford relief **through the exercise of its power**, not through the persuasive or even awe-inspiring effect of the opinion **explaining** the exercise of its power.” *Lewis v. Governor of Alabama*, 944 F.3d 1287, 1305 (11th Cir. 2019) (quoting *Franklin v. Massachusetts*, 505 U.S. 788, 825, 112 S. Ct. 2767 (1992) (Scalia, J. concurring in part and concurring in the judgment) (emphasis in original)).

³ Unlike Georgia law, the Florida law considered in *Jacobson* empowered its Secretary of State to redress the alleged harm required the Florida Secretary to “[o]btain and maintain uniformity in the interpretation and implementation of the election laws” and to “[p]rovide written direction and opinions to the supervisors of elections,” Fla. Stat. § 97.012, and the Eleventh Circuit found even that insufficient to establish traceability or redressability.

32. Finally, “it must be “likely,” as opposed to merely “speculative,” that the injury will be “redressed by a favorable decision” of the court.” *Ga. Ass’n of Latino Elected Offs., Inc. v. Gwinnett Cty. Bd. of Registration & Elections*, 36 F.4th 1100, 1116 (11th Cir. 2022).

IV. First and Fourteenth Amendment Right to Vote.

33. The Court evaluates all of Plaintiffs’ remaining claims under the *Anderson-Burdick* analysis. “Under *Anderson* and *Burdick*, courts must weigh the “character and magnitude of the burden the State’s rule imposes” on the right to vote “against the interests the State contends justify that burden, and consider the extent to which the State’s concerns make the burden necessary.” *Timmons v. Twin Cities Area New Party*, 520 U.S. 351, 358 (1997) (internal quotation marks omitted).

34. In conducting that analysis, this Court **first** must “**consider the character and magnitude** of the asserted injury to the rights protected by the First and Fourteenth Amendments that the plaintiff seeks to vindicate.” *Anderson v. Celebrezze*, 460 U.S. 780, 789 (1983) (emphasis added); [Doc. 1705 at 112].

35. “Ordinary and widespread burdens, such as those requiring nominal effort of everyone, are not severe.” *Crawford v. Marion Cty. Election Bd.*, 553 U.S. 181, 205 (2008) (Scalia, J., concurring)); *see also Duncan v.*

Poythress, 657 F.2d 691, 699 (5th Cir. 1981) (the Constitution provides no guarantee against innocent irregularities in the administration of elections).

36. The Supreme Court and Eleventh Circuit have provided guideposts for measuring an alleged burden on the right to vote given that all “election laws ‘invariably impose some burden upon individual voters.’” *New Georgia Project v. Raffensperger*, 976 F.3d 1278, 1280–81 (11th Cir. 2020) (quoting *Burdick*, 504 U.S. at 433).

37. On the one hand, “lesser burdens . . . trigger less exacting review.” *Timmons v. Twin Cities Area New Party*, 520 U.S. 351, 358 (1997)). Otherwise, states would find their hands tied “as they seek ‘order, rather than chaos’ in their elections.” *New Georgia Project* 976 F. 3d at 1280–81 (quoting *Burdick*, 504 U.S. at 433, 112 S.Ct. 2059). In *Timmons*, the court decided that a Minnesota law prohibiting fusion candidates did not impose a severe burden. 520 U.S. at 363. In *New Georgia Project*, the challenged policy, Georgia’s deadline to have absentee ballots returned to county election offices by the times polls close (7pm on Election Day), was deemed a lesser burden. 976 F.3d at 1280.

38. On the other hand, “[s]evere burdens under *Anderson-Burdick* are burdens imposed as a direct result of a state’s laws and policies, such as drastic limits on voting hours or restrictions on ballot access, not ‘burdens . . . arising from life’s vagaries.’” *Curling, et al. v. Raffensperger, et al.*, No. 20-

13730 (11th Circuit, April 1, 2021) (denying motion to lift stay) (Brasher, J.) (quoting *Crawford v. Marion Cty. Election Bd.*, 553 U.S. 181, 197 (2008)).

Severe burdens include onerous restrictions like requiring a political party to obtain petitions signed by qualified electors totaling 15% of number of ballots cast in a prior election to appear on the ballot for the next election, practically excluding them from the election entirely. *Williams v. Rhodes*, 393 U.S. 23, 31 (1968).

39. Second, after categorizing the level of the burden, this Court then “identif[ies] and evaluate[s] the **interests** put forward by the State as justification for the burden imposed by its rule.”⁴ *Crawford*, 553 U.S. at 190 (emphasis added).

40. “When the alleged burdens are not severe, a compelling state interest is not required.” *New Georgia Project*, 976 F. 3d at 1281–82. And “reasonable, nondiscriminatory restrictions that impose a minimal burden

⁴ It is important to recognize that the *Anderson-Burdick* analysis requires consideration of the burden first: it is not enough for plaintiffs to come to federal court and attack the State’s interest without first trying to quantify the burden to measure the interest against. *See, e.g., Cowen v. Georgia Sec’y of State*, 960 F.3d 1339, 1342 (11th Cir. 2020) (“**First**, the court must ‘consider the character and magnitude of the asserted injury to the rights protected by the First and Fourteenth Amendments that the plaintiff seeks to vindicate.’ **Second**, [i]t then must identify and evaluate the precise interests put forward by the State as justifications for the burden imposed by its rule.”) (quoting *Anderson*, 460 U.S. at 789) (alteration in original) (emphasis added).

may be warranted by the State’s important interests.” [Doc. 1705 at 111]; *citing Billups*, 554 F.3d at 1352; *see also Burdick v. Takushi*, 504 U.S. 428, 434 (1992)).

V. The Political Question Doctrine.

41. While this Court previously determined that the challenge to the BMD system was not a non-justiciable political question, [Doc. 1705, pp. 114–15], the evidence at trial discussed below raises significant questions about the application of that doctrine given the lack of meaningful standards provided by Plaintiffs in the evidence presented.

42. Thus, in addition to the legal standards governing Plaintiffs’ standing and their specific claims, this Court also finds it useful to set forth at the outset the applicable limitations of its review of the State’s adopted election procedures; namely, what matters constitute “political questions” that are left to the State’s best determination and are outside the scope of judicial review. This political question doctrine provides another meaningful guidepost for this Court’s analysis of Plaintiffs’ claims.

43. The United States Constitution authorizes states to set the “Times, Places and Manner of holding Elections for Senators and Representatives.” U.S. Const. art. I, § 4, cl. 1. And that power “is matched by state control over the election process for state offices.” *Clingman v. Beaver*, 544 U.S. 581, 586 (2005).

44. These constitutional powers are “broad.” *See Duncan v. Poythress*, 657 F.2d 691, 702 (5th Cir. 1981) (“[T]he constitution leaves to the states broad power to regulate the conduct of federal and state elections.”). “[C]ourts have no business interfering with them absent a compelling need to do so [and w]hen courts do interfere, they must tread carefully and provide the minimum (and least disruptive) relief necessary to redress the harm.” *Anderson v. Raffensperger*, 497 F. Supp. 3d 1300, 1330 (N.D. Ga. 2020).

45. The Eleventh Circuit reiterated this cautionary note against intruding on the State’s authority to manage its own affairs in *New Georgia Project*, 976 F.3d at 1283 (the Supreme Court’s “mantra” points “in one direction—allowing the States to run their own elections”).

46. Upon staying a district court’s decision to extend Georgia’s absentee ballot return deadline, finding that the plaintiffs had not shown a substantial likelihood of success on the merits, this Court concluded: “Federal judges can have a lot of power—especially when issuing injunctions. And sometimes we may even have a good idea or two. But the Constitution sets out our sphere of decisionmaking, and that sphere does not extend to second-guessing and interfering with a State’s reasonable, nondiscriminatory election rules.” *Id.* at 1284.

47. As the Eleventh Circuit previously explained, “[a]lthough federal courts closely scrutinize state laws whose very design infringes on the rights

of voters, federal courts will **not** intervene to . . . supervise the **administrative details** of a local election.” *Curry v. Baker*, 802 F.2d 1302, 1314 (11th Cir. 1986) (emphasis added); *see also Fair Fight Action, Inc. v. Raffensperger*, 634 F. Supp. 3d 1128, 1251 (N.D. Ga. 2022).

48. “If every state election irregularity were considered a federal constitutional deprivation, federal courts would adjudicate every state election dispute Section 1983 did not create a delictual action for the torts of state officials, and it did not authorize federal courts to be state election monitors.” *Gamza v. Aguirre*, 619 F.2d 449, 453 (5th Cir. 1980); *see also Shipley v. Chicago Bd. of Election Commissioners*, 947 F.3d 1056, 1062 (7th Cir. 2020) (“[A]llegations [of administrative misconduct] may state a claim for violation of the [state] Election Code. But that is a state law claim for a violation of state law, not a federal claim for a violation of constitutional rights.”).

49. In short, “it is not the place of federal courts to decide complex and subtle questions of election administration.” *Fair Fight Action*, 634 F. Supp. 3d at 1195.

50. To this end, this Court does not, and will not, attempt to resolve political questions. A political question is one that involves “[1] a textually demonstrable constitutional commitment of the issue to a coordinate political department” and/or “[2] a lack of judicially discoverable and manageable

standards for resolving it.” *McMahon v. Presidential Airways, Inc.*, 502 F.3d 1331, 1357 (11th Cir. 2007) (quoting *Baker v. Carr*, 369 U.S. 186 (1962)).

51. “There are no legal standards discernible in the Constitution for making such judgments.” *Rucho v. Common Cause*, 139 S. Ct. 2484, 2500 (2019). These issues are, at their core, political questions. *See Jacobson v. Fla. Sec’y of State*, 974 F.3d 1236, 1242 (11th Cir. 2020) (“[P]icking among the competing visions of fairness poses basic questions that are political, not legal.”); *see also Coalition for Good Governance, et al. v. Brad Raffensperger, et al.*, No. 1:20-CV-1677-TCB, 2020 WL 2509092, at *3–4 (N.D. Ga. May 14, 2020), *appeal dismissed sub nom. Coal. for Good Governance v. Raffensperger*, No. 20-12362-BB, 2020 WL 5753330 (11th Cir. Aug. 17, 2020) (dismissing claims as presenting nonjusticiable political questions and declining to “micromanage the State’s election process” where “there are no discernable and manageable standards to decide issues such as how early is too early to hold the election or how many safety measures are enough.”).

VI. Remedies.

52. For all of their claims, Plaintiffs are limited to prospective injunctive relief. *Pennhurst State Sch. & Hosp. v. Halderman*, 465 U.S. 89, 105–106 (1984); *Ex parte Young*, 209 U.S. 123 (1908).

53. Rule 65 requires the terms of an order for injunctive relief to be specific and describe with reasonable detail the act or acts restrained or

required. Fed. R. Civ. P. 65(d). And, “an injunction is to be narrowly tailored to remedy the specific action which gives rise to it.” *Valley v. Rapides Par. Sch. Bd.*, 646 F.2d 925, 942 (5th Cir.), *on reh’g*, 653 F.2d 941 (5th Cir. 1981); *see also Califano v. Yamasaki*, 442 U.S. 682, 702 (1979) (“[I]njunctive relief should be no more burdensome to the defendant than necessary to provide complete relief to the plaintiffs.”).

54. Moreover, injunctions that do little more than order a party to “obey the law” do not meet these requirements. *S.E.C. v. Goble*, 682 F.3d 934, 949 (11th Cir. 2012). Such “obey the law” injunctions are problematic for what they fail to do: they are too broad and non-specific to give the restrained party fair notice of conduct that risks contempt. *See Hughey v. JMS Dev. Corp.*, 78 F.3d 1523, 1531 (11th Cir. 1996); *see also Payne v. Travenol Lab’ys, Inc.*, 565 F.2d 895, 897 (5th Cir. 1978) (“This command of specificity is a reflection of the seriousness of the consequences which may flow from a violation of an injunctive order. The word ‘discriminating’ ... is too general. [...] Such ‘obey the law’ injunctions cannot be sustained.”).

55. Viable remedies are a necessary part of Plaintiffs’ case. “Even if the Court were to find that *Anderson-Burdick* applied and that Plaintiffs satisfied their burden in establishing a First and Fourteenth Amendment violation, Plaintiffs have not proposed viable remedies. “The absence of an available remedy is not only relevant at the remedial stage of the litigation,

but also precludes, under the totality of the circumstances inquiry, a finding of liability.’ *Nipper v. Smith*, 39 F.3d 1494, 1533 (11th Cir. 1994).” *Fair Fight Action*, 634 F. Supp. 3d at 1206.

56. The Eleventh Circuit has repeatedly cautioned that “federal courts must be chary of hearing challenges to a state’s duly enacted election procedures.” *New Georgia Project*, 976 F.3d at 1285 (J. Lagoa, concurring); see also *Eu v. San Francisco Cty. Democratic Cent. Comm.*, 489 U.S. 214, 231 (1989) (“A State indisputably has a compelling interest in preserving the integrity of its election process.”).

57. Accordingly, and as other courts in this district have noted, “[w]hen courts do interfere, they must tread carefully and provide the minimum (and least disruptive) relief necessary to redress the harm.” *Anderson v. Raffensperger*, 497 F. Supp. 3d 1300, 1330 (N.D. Ga. 2020); see also *Georgia Shift v. Gwinnett Cty.*, No. 1:19-CV-01135-AT, 2020 WL 864938, at *5 (N.D. Ga. Feb. 12, 2020) (“A federal court should not be ‘the arbiter of disputes’ which arise in elections; it is not the federal court’s role to ‘oversee the administrative details of a local election.’”) (quoting *Curry v. Baker*, 802 F.2d at 1315).

58. Finally, “[t]he law does not impose constitutional liability for governments because they do not *exceed* their statutory obligations.” *Fair Fight Action, Inc. v. Raffensperger*, No. 1:18-CV-5391-SCJ, 2021 U.S. Dist.

LEXIS 261571, at *31 (N.D. Ga. Mar. 31, 2021) (emphasis in original); see also *Gwinnett Cty. NAACP v. Gwinnett Cty. Bd. of Registration & Elections*, 2020 WL 1031897, at *6–7.

59. Applying these principles, this Court finds that it was not only Plaintiffs’ burden to show that constitutional violations exist and that they have been harmed thereby, but also to present remedies are the “minimum (and least disruptive) relief necessary to redress the harm.” *Anderson v. Raffensperger*, 497 F. Supp. 3d 1300, 1330 (N.D. Ga. 2020); see also *Georgia Shift v. Gwinnett Cty.*, No. 1:19-CV-01135-AT, 2020 WL 864938, at *6 (N.D. Ga. Feb. 12, 2020) (when election officials “fail to constitutionally carry out their duties to properly conduct and administer the . . . elections, an action can be brought to seek a tailored remedy of an actual injury by affected voters or advocacy groups[.]”).

60. As such, this Court reviews Plaintiffs’ claims in light of the remedies Plaintiffs proposed at trial. This Court also declines to attempt independently to develop alternative remedies or implement its own preferred policies for how Georgia’s elections implemented. Doing so simply is not the role of this Court. See, e.g., *Ohio Democratic Party v. Husted*, 834 F.3d 620, 633 (6th Cir. 2016) (“[O]ur task (especially with respect to minimally burdensome laws) is neither to craft the ‘best’ approach, nor to impose our own idea of democracy upon the [] state legislature.”); *Rockford League of*

Women Voters v. U.S. Nuclear Regulatory Comm’n, 679 F.2d 1218, 1222 (7th Cir. 1982) (“Government agencies have limited resources to perform their appointed tasks. The courts cannot tell them how to allocate those resources so as to get the most value out of them. That calls for a managerial judgment.”).

FINDINGS OF FACT

I. Facts regarding Plaintiffs’ injuries.

61. For the first time in this proceeding, each Plaintiff testified at trial regarding their injuries. This Court will first analyze each of the Plaintiffs and the evidence they offered regarding injuries related to the Dominion BMD system.

A. Curling Plaintiffs

1. *Donna Curling*

62. Donna Curling is a registered voter in Georgia. Tr. Vol. V 7:23–24 (Curling).

63. Ms. Curling has previously voted on a BMD voting machine. Tr. Vol. V 9:14–15 (Curling).

64. Ms. Curling does not feel that Georgia has a secure enough voting system for her vote to be counted as cast. Tr. Vol. V 9:1–10 (Curling).

65. However, Ms. Curling has no knowledge that any vote cast using a BMD voting system was not counted as cast. Tr. Vol. V 14:1–3 (Curling).

66. Ms. Curling has also voted by absentee ballot. Tr. Vol. V 9:25–10:1 (Curling).

67. Ms. Curling stated that she will more than likely opt to vote by absentee ballot in future elections if Georgia continues to use the BMD voting system. Tr. Vol. V 12:1–7 (Curling).

68. However, Ms. Curling agrees that as absentee ballots are run through a scanner, she ultimately has no way of knowing if her ballot is counted as cast. Tr. Vol. V 13:19–25 (Curling).

69. Ms. Curling mentioned that she learned that an absentee ballot she cast in 2020 was not counted, but she acknowledged that the counties are the entities that administer the absentee-ballot process. Tr. Vol. V 14:4–15 (Curling).

70. Ms. Curling agrees that no election is flawless. Tr. Vol. V 13:12–15 (Curling).

71. Ms. Curling further agrees that there are real risks in any way that an individual chooses to vote. Tr. Vol. V 13:16–18 (Curling).

2. Donna Price

72. Donna Price is a Georgia registered voter. Tr. Vol. II 10:17–18. Since moving back to Georgia, she has been voting in Georgia elections since 1992. Tr. Vol. II 11:3–12 (Price).

73. Ms. Price has voted on both the DRE and BMD voting systems in Georgia. Tr. Vol. II 11:13–17 (Price). Ms. Price has also voted using absentee ballots in Georgia. Tr. Vol. II 11:18–20 (Price).

74. Ms. Price founded Georgians for Verified Voting in 2004 or 2005. Tr. Vol. II 13:3–8 (Price).

75. Ms. Price believes the BMD voting system is not transparent, and not voter verified because it uses QR codes. Tr. Vol. II 16:21–17:7 (Price).

76. Additionally, Ms. Price is concerned about the security of the BMD system. Ms. Price believes the system is “very complex” and contains “multiple software systems and people behind the scenes, proprietary software” for which the voter has to hand a ballot “to someone behind a screen who just says trust me.” Tr. Vol. II 17:8–16 (Price).

77. However, Ms. Price agreed that when she mailed in an absentee ballot, she also didn’t know what is going on behind the scenes, the same as with voting on a BMD system. Tr. Vol. II 31:10–16 (Price).

78. Ms. Price voted on a BMD voting machine in November 2023. Tr. Vol. II 17:14–18:2 (Price).

79. When voting on a BMD in November 2023, Ms. Price made the selections on the BMD screen, had a ballot printed out, and could see the ballot had human readable text. Tr. Vol. II 18:9–19:4 (Price).

80. When asked whether she was able to review her selections on the BMD screen before printing her ballot, Ms. Price testified, “yes, I was able to review those things and determine that probably I had voted what I intended.” Tr. Vol. II 18:9–20 (Price).

81. Despite having the opportunity to review her printed ballot, Ms. Price stated that she forgot to review it and she could not provide an explanation why she forgot. Tr. Vol. II 19:5–10 (Price).

82. Ms. Price stated that even if she had remembered to review her printed ballot, she does not believe she would have been able to cast a verified ballot, because her votes are communicated to the scanner through a barcode. Tr. Vol. II 20:2–6 (Price). Ms. Price does not trust that process. Tr. Vol. II 20:7–10 (Price).

83. Ms. Price stated that she wished she could have hand-marked a ballot that she could review. Tr. Vol. II 20:13–24 (Price). However, she did not review her printed ballot from the BMD when she had the opportunity to, and did not have an explanation for why she did not review it. Tr. Vol. II 19:5–10 (Price).

84. Ms. Price also does not have confidence in voting by absentee ballot because of what she has heard experts say and because she believes that the State thinks that voting by absentee ballot is subject to fraud. Tr. Vol. II 22:1–18 (Price).

85. Ms. Price has concerns that her vote was not counted when voting by absentee ballot. Tr. Vol. II 24:1–3 (Price). Ms. Price states that when voting by absentee ballot she has to “trust, but [she] can’t verify.” Tr. Vol. II 24:3–12 (Price).

86. Ms. Price does not believe BMD voting machines produce voter verified ballots because she cannot read the QR code on the printed ballot. Tr. Vol. II 29:16–30:13 (Price).

87. Ms. Price does not have any evidence that her vote was not properly counted when she voted on a BMD machine. Tr. Vol. II 32:25–33:3 (Price).

88. As with voting on a BMD machine, Ms. Price does not have any evidence that her vote hasn’t been counted when voting by absentee ballot. Tr. Vol. II 33:4–7 (Price).

89. Ms. Price does not know if her vote was accurately counted when voting on a BMD machine. Tr. Vol. II 35:16–17 (Price).

90. Likewise, Ms. Price does not if when she has voted by absentee ballot, her vote has been accurately counted. Tr. Vol. II 35:18–20 (Price).

91. When asked what remedy she is seeking from this lawsuit, Ms. Price did not have a specific remedy, but stated that she would have confidence in the Georgia voting system if it was “based on the principles and

knowledge of experts in the field of elections and technology.” Tr. Vol. II 35:21–36:11 (Price).

92. Despite Ms. Price believing her ballot is voter verified when she completes her ballot by hand and votes absentee, ultimately, she is not sure that when she votes by either absentee ballot or by using the BMD voting system that the vote she marked is counted as she intended. Tr. Vol. II 37:17–21; 38:16–39:6 (Price).

3. *Jeffrey Schoenberg*

93. Mr. Schoenberg moved to Atlanta in 1973 and has lived in Georgia ever since. Tr. Vol. I 67:4–6 (Schoenberg). He currently lives in Dunwoody and is a retired attorney and real estate developer. Tr. Vol. I 66:14–15, 67:4, 21–23 (Schoenberg)

94. Mr. Schoenberg is registered to vote in DeKalb County. Tr. Vol. I 68:9–12 (Schoenberg).

95. Mr. Schoenberg prefers to vote in person so he can engage with his community and thank poll workers. Tr. Vol. I 70:6–14 (Schoenberg).

96. Mr. Schoenberg has voted on BMDs in past elections. Tr. Vol. I 72:2–4 (Schoenberg).

97. When asked whether he reviews his BMD selections on his printed ballot, Mr. Schoenberg testified, “[a]s it turns out, not every time . . . I

know that I did sometimes. And I also realize that when I voted this last election in November that I didn't." Tr. Vol. I 88:15–21 (Schoenberg).

98. Mr. Schoenberg tried voting by absentee ballot, did not receive his ballot and ended up voting on a BMD. Tr. Vol. I 73:9–15 (Schoenberg). Mr. Schoenberg is aware that county election officials process absentee-ballot applications and send out absentee ballots. Tr. Vol. I 91:19–92:5 (Schoenberg).

99. Mr. Schoenberg agrees that there is a risk that hand-marked ballots may not be counted as cast by scanner. Tr. Vol. I 108:15–21 (Schoenberg).

100. Mr. Schoenberg has no evidence that any vote cast on a BMD in Georgia was not correctly counted. Tr. Vol. I 90:2–5 (Schoenberg).

101. Mr. Schoenberg has no evidence that any Georgia BMD used in an election was hacked or subjected to malware in an election. Tr. Vol. I 90:2–5, 92:25–93:5 (Schoenberg).

102. Mr. Schoenberg's concern with BMDs is that, when he votes, he has no evidence that his intention is being recorded, scanned, and read properly. He does not want a guarantee of those facts but wants a "reasonable level" of confidence from the operation of the system. Tr. Vol. I 94:9–13 (Schoenberg).

103. The only voting system that would give Mr. Schoenberg confidence that votes are counted as cast is a hand-marked paper ballot system. Tr. Vol. I 73:1–6 (Schoenberg)

104. While Mr. Schoenberg says he believes Georgia election results are in question because he cannot know with reasonable reliability whether the votes that are counted reflect what the voters intended, Tr. Vol. I 107:14–108:1, he also says he does not dispute the outcome of any election in Georgia. Tr. Vol. I 74:22–25 (Schoenberg).

105. Mr. Schoenberg agreed that with hand-marked paper ballots, the voter's intent is not necessarily clear on the face of the ballot. Tr. Vol. I 91:12–15 (Schoenberg).

106. Mr. Schoenberg believes that BMD-printed ballots are records of votes but do not necessarily record a voter's intended vote. Tr. Vol. I 104:9–19 (Schoenberg).

B. Coalition Plaintiffs

1. Coalition for Good Governance

107. The Coalition is a membership organization, but cannot identify its members. Tr. Vol. I 131:6–24 (Martin).

108. Marilyn Marks is the Executive Director of the Coalition. Tr. Vol. XV 11:8–10 (Marks).

109. Ms. Marks has never voted on a Dominion BMD election system in Georgia. Tr. Vol. XV 9:2–6 (Marks).

110. Ms. Marks believes that “South Carolina is like Georgia. We can never, ever know who won in South Carolina or Georgia because of the use of these [BMD] machines in the polling places.” Tr. Vol. XV 55:12–22 (Marks).

111. The Coalition changed its name from the Rocky Mountain Foundation in 2017 because it expanded its mission and also started operating in states other than Colorado, including Georgia. Tr. Vol. I 115:1–11 (Martin).

112. The Coalition “is registered as a foreign charity for fundraising purposes in the state of Georgia.” Tr. Vol. I 115:14–15 (Martin).

113. The Coalition has engaged in direct lobbying by advocating for or against legislation at the Georgia General Assembly. Tr. Vol. XV 15:14–23 (Marks).

114. An example of this occurred in 2019 when the Coalition advocated to either repeal or otherwise amend House Bill 316 and specifically BMDs. Tr. Vol. XV 23:12–24:7 (Marks).

115. Further, the Coalition, through this lawsuit, attempted to reverse House Bill 316, as they saw it as an inappropriate decision. Tr. Vol. XV 23:12–24:7 (Marks).

116. The Coalition has engaged in advocacy for or against policies of local boards of elections in Georgia. Tr. Vol. XV 16:15–18 (Marks).

117. The Coalition has members who are plaintiffs in this case. Tr. Vol. I, 129:22–23 (Martin).

118. The Coalition does not have members in every county in Georgia. Tr. Vol. XV 12:9–11 (Marks).

119. People become members of the Coalition by showing an interest in the organization, and there are no dues or other requirements for members. Tr. Vol. I 124:25–125:4 (Martin).

120. The only diversions of resources the Coalition could identify were based on the time and effort spent on this litigation. Tr. Vol. I 120:15–121:9 (Martin).

121. The Coalition claims that it has had to turn down requests for speaking engagements and requests to write out bids, including a request from Coffee County to do “more town halls to help educate the voters there about the breach that occurred,” as a result of this litigation. Tr. Vol. I 123:17–22 (Martin).

122. In addition to focusing primarily on this litigation, the Coalition has “spent a fair amount of time monitoring the activities of the State Election Board here in Georgia specifically relevant to ballot-marking issues,

and [it] proposed specific rules to the State Election Board having to do with the use of ballot-marking devices.” Tr. Vol. I 124:1–6 (Martin).

123. The Coalition has “spent an inordinate amount of time filing formal petitions for rule changes with the State Election Board.” Tr. Vol. XV 162:20–23 (Marks).

124. The Coalition’s primary expense over the last three years has been this litigation. Tr. Vol. I 129:7–11, 117:9–18 (Martin).

125. Spending money on this litigation is what has caused the Coalition’s reduction in other activities. Tr. Vol. I 130:16–23, 120:9–121:5 (Martin).

126. However, donors choose to support the Coalition’s activities based on this lawsuit. Tr. Vol. I 131:1–2 (Martin).

127. Even during this litigation, the Coalition has been monitoring SEB activities and proposing rules, which is consistent with its educational mission. Tr. Vol. I 123:24–124:7, 129:12–21 (Martin).

128. The relief the Coalition is seeking in this case is an injunction prohibiting the State of Georgia from requiring the use of BMDs for in-person voting, but “[i]f people choose to use BMDs because they have a disability or for whatever reason, you know, that is fine.” Tr. Vol. I 126:4–5; 132:13–14. (Martin).

129. According to Coalition board member Rhonda Martin, “it is the BMDs that we’re objecting to.” Tr. Vol. I 133:4–5 (Martin).

130. The Coalition is concerned with BMD machines generally, not just with the Dominion voting machines as currently configured in Georgia. Tr. Vol. XV 56:16–22 (Marks).

131. The Coalition would object to any time a voter is required to select their vote on a touch screen. Tr. Vol. XV 58:4–6 (Marks).

132. The Coalition has not taken a position on whether BMDs are currently operating as they are intended to. “Operating as intended” meaning that a voter selects the candidates they want, the voter can verify their selection on the human-readable portion, and when scanned the vote is counted as intended. Tr. Vol. XV 37:7–18 (Marks).

133. The Coalition agrees that there is no way to determine whether a voter’s vote is counted as intended, either when voting by hand-marked paper absentee ballot or through the BMD system, once the ballot is scanned. Tr. Vol. XV 36:21–37:2; 37:7–18 (Marks).

134. The Coalition agrees that a BMD printed ballot and a hand-marked paper absentee ballot are both permanent records. Tr. Vol. XV 38:4–16 (Marks).

135. The Coalition agrees that nothing prevents a voter from reviewing the text that is below the QR code on a BMD printed ballot. Tr. Vol. XV 51:15–18 (Marks).

136. To the extent that small print is an issue with a voter reviewing their selections, they can use glasses or a magnifying glass. Such magnifying glasses should be provided by the Counties, as they administer elections. Tr. Vol. XV 52:1–17 (Marks); *see* Ga. Comp. R. & Regs. r. 183-1-12-.11(8) (magnifying devices available to assist in review of ballot).

137. Ms. Marks, on behalf of the Coalition, agrees that no specific injury occurs if a voter's ballot is counted as intended. Tr. Vol. XV 33:14–17 (Marks).

138. Ms. Marks clarified that the Coalition is not suing about the accurate tabulation of ballots as cast and properly recorded. Tr. Vol. XV 33:22–25 (Marks).

139. When asked how the Coalition expects the State to conduct elections if BMDs are enjoined, Coalition board member Rhonda Martin testified, “Well, we trust that the Secretary of State and the State Election Board could work with the Georgia legislature or actually look at existing law to ascertain what the available methods are for voting when the use of a BMD is either impracticable or impossible.” Tr. Vol. I 126:6–13 (Martin).

140. Although the Coalition would like an injunction prohibiting the requirement to use BMDs for in-person voting, the Coalition would like the existing scanners to continue to be used. Tr. Vol. I 126:24 (Martin).

141. Ms. Marks does not believe that a risk-limiting audit can confirm the election results of an election run primarily using BMDs. Tr. Vol. XV 191:1–10 (Marks).

142. The Coalition agrees that as the law currently stands, any voter in Georgia can request and receive a hand-marked paper absentee ballot. Tr. Vol. XV 64:1–8 (Marks).

143. The Coalition believes that it is a burden for a voter to incur postage or transportation costs to deliver an absentee ballot. Tr. Vol. XV 64:18–23 (Marks).

2. *Laura Digges*

144. Laura Digges is a Georgia voter who resides in Cobb County. Tr. Vol. I 199:15–17; Tr. Vol. I 204:3–7 (L. Digges).

145. Ms. Digges votes using absentee-by-mail ballots because she doesn't trust the Dominion BMDs used for in-person voting in Georgia. Tr. Vol. I 201:3–4 (L. Digges).

146. Ms. Digges would prefer to vote in person. Tr. Vol. I 200:25–201:2; Tr. Vol. I 201:10–22 (L. Digges).

147. Ms. Digges has never voted on a BMD and has no plans to do so in the future, but has never been prevented from voting on a BMD. Tr. Vol. I 205:9–20 (L. Digges).

148. Ms. Digges agrees that with her preferred method of hand-marked paper ballots, she cannot know whether her vote was counted as cast, but assumes it was being counted correctly. Tr. Vol. I 208:14–24 (L. Digges).

149. Ms. Digges has more faith in hand-marked paper ballots than in BMDs. Tr. Vol. I 210:12–14 (L. Digges).

150. Ms. Digges will continue to vote using no-excuse absentee-by-mail until such time as she can vote a hand-marked paper ballot in person. Tr. Vol. I 203:1–4 (L. Digges).

3. William Digges

151. Mr. Digges is a member of the Coalition for Good Governance. Tr. Vol. II 40:6–7 (W. Digges).

152. Mr. Digges has been living in Georgia since 1996 and is a Georgia voter. Tr. Vol. II 40:10–17 (W. Digges).

153. Mr. Digges generally votes by absentee ballot because he doesn't trust voting on BMD machines. Tr. Vol. II 40:23–41:2 (W. Digges).

154. Mr. Digges agrees that by voting on either a BMD machine or by absentee ballot, that there is a possibility that his vote would not be counted

as he intended. However, he believes there is a permanent record if he votes by absentee ballot. Tr. Vol. II 40:3–9 (W. Digges).

155. Mr. Digges does not believe that a ballot produced by a BMD voting machine is a permanent record. Tr. Vol. II 43:18–20 (W. Digges).

156. If voting by absentee ballot, Mr. Digges did not know if a ballot could be tampered with after it was mailed. Tr. Vol. II 43:21–25 (W. Digges).

157. Mr. Digges believes that by voting by absentee ballot, that an audit trail exists which can be audited. Tr. Vol. II 41:10–17 (W. Digges).

158. Mr. Digges states that he does not believe that ballots produced by a BMD voting system can be effectively audited. However, Mr. Digges did not know what a risk-limiting audit was. Tr. Vol. II 44:9–14 (W. Digges).

159. Mr. Digges has previously voted on a BMD voting machine. Tr. Vol. II 41:1–19 (W. Digges).

160. When he voted on a BMD voting machine, Mr. Digges does not have any evidence that his vote was not counted as he intended. Tr. Vol. II 45:16–46:2 (W. Digges).

161. In future elections, Mr. Digges plans to vote by absentee ballot. Tr. Vol. II 42:20–23 (W. Digges).

162. The remedy Mr. Digges is seeking in this case is to switch the current voting system in Georgia from BMDs to hand-marked paper ballots,

and for the BMD machines to not be an option when voting. Tr. Vol. II 42:24–43:2; 46:3–10 (W. Digges).

163. When asked about the relief Mr. Digges is seeking, he testified, “I want to have the BMDs not be an option. I want hand-marked paper ballots.” Tr. Vol. II 42:24–43:2 (W. Digges).

4. *Megan Missett*

164. Ms. Missett has lived in Georgia since 1996. Tr. Vol. VIII 153:12–13 (Missett).

165. Ms. Missett is registered and votes in Fulton County, Georgia. Tr. Vol. VIII 159:6–8 (Missett).

166. Ms. Missett has no evidence that any vote cast on a BMD in Georgia in an election was not correctly counted. Tr. Vol. VIII 161:4–7 (Missett).

167. Ms. Missett has no evidence that any vote she cast in Georgia was ever changed. Tr. Vol. VIII 161:8–11 (Missett).

168. Ms. Missett has no evidence that any Georgia BMD used in an election was hacked or subjected to malware in an election. Tr. Vol. VIII 162:7–11 (Missett).

169. Ms. Missett has voted by hand-marked paper absentee ballot and on BMDs. Tr. Vol. VIII 1162:16–25 (Missett).

170. While Ms. Missett has problems with absentee ballots in the past, she is aware that the county processes absentee ballot-applications and sends out absentee ballots, and agreed that her problems receiving absentee ballots were not caused by State officials. Tr. Vol. VIII 163:18–164:8 (Missett).

171. Ms. Missett always carefully checks her ballots when voting on BMDs and has never found anything incorrect in the human-readable text of her ballots. Tr. Vol. VIII 165:14–23, 166:18–23 (Missett).

172. Ms. Missett is not able to verify that her hand-marked absentee ballot was counted as cast and agreed there is a risk that hand-marked ballots may not be counted as cast by the scanner. Tr. Vol. VIII 167:3–5, 167:13–168:4 (Missett).

173. Ms. Missett agreed that with both absentee ballots and BMD ballots, she cannot know if either is counted as cast because it is tabulated inside the scanner. Tr. Vol. VIII 167:9–23 (Missett).

174. Ms. Missett agreed that the decision on where to place election equipment at the precinct is made by the county. Tr. Vol. VIII 169:2–5 (Missett).

C. Ricardo Davis.

175. Ricardo Davis currently resides in Cherokee County, Georgia. Tr. Vol. II 147:3–6 (Davis).

176. Mr. Davis is a Plaintiff in the current lawsuit. Tr. Vol. II 149:15–17 (Davis).

177. Mr. Davis has never served in a poll manager or assistant poll manager capacity. Tr. Vol. II 149:22–24 (Davis).

178. Mr. Davis has never personally observed a situation where a voter has had difficulty using the Dominion ballot-marking device system. Tr. Vol. II 151:17–19 (Davis).

179. When training poll watchers, Mr. Davis would tell poll watchers to not look at voters' screens. He also told poll watchers what to do if they saw a machine malfunction. Tr. Vol. II 182:8–18 (Davis).

180. In 2022, Mr. Davis voted on a BMD for the first time. He did not have to wait in a line to vote in his precinct. Tr. Vol. II 184:9–13 (Davis).

181. When Mr. Davis voted on a BMD in 2022, there was no delay on the screen and there were no visual glitches with the BMD. Tr. Vol. II 184:21–25 (Davis).

182. Mr. Davis reviewed his ballot when he voted on a BMD in 2022 after it was printed. Tr. Vol. II 185:16–18 (Davis).

183. Mr. Davis has never personally seen counterfeit ballots in Georgia. Tr. Vol. II 186:16–17 (Davis).

184. Mr. Davis has never investigated an incident where a voter claimed that the BMD printout had a ballot selection summary that was

different than what the voter actually created. Tr. Vol. II 189:24–190:10 (Davis).

185. Mr. Davis's policy preference is that Georgia voters use hand-marked paper ballots. Tr. Vol. II 191:21–22 (Davis).

186. Mr. Davis agrees that a scanned hand-marked paper ballot gets converted into data that most voters cannot read. Tr. Vol. II 193:11–22 (Davis).

187. Mr. Davis has no evidence of any widespread voter fraud in Georgia in connection with the November 2020 election. Tr. Vol. II 194:25–195:6 (Davis).

188. Mr. Davis has no evidence of any malfunctions of any component of the election system that impacted the 2020 presidential election. Tr. Vol. II 195:7–13 (Davis).

189. Mr. Davis has no evidence of any malfunction of any component of the election system that impacted the outcome of any other elections held in the 2020 election cycle. Tr. Vol. II 195:14–20 (Davis).

190. Mr. Davis signed a recall application to recall Secretary Raffensperger. Tr. Vol. II 199:5–7 (Davis).

191. Mr. Davis was not sure if he was still a member of the Coalition for Good Governance. Tr. Vol. II 188:20–189:1 (Davis).

192. Mr. Davis believes that his interests in this case are the same as those asserted by the Curling Plaintiffs and the Coalition for Good Governance. Tr. Vol. XIV 121:8–13; 122:16–18 (Davis).

193. The relief Mr. Davis seeks at trial is the same relief that the Court “find, just as she found with the [Diebold] DREs, that [the Court] would do the same with the current Dominion BMD systems.” Tr. Vol. II 153:13–17 (Davis).

II. Defendants and role of election officials in Georgia.

A. Secretary of State Brad Raffensperger.

194. The Secretary of State is a constitutional officer elected by Georgia voters every four years. Ga. Const. Art. 5, Sec. 3, Par. 1. In addition to other duties and obligations, the General Assembly designated the Secretary as the State’s “chief election official” pursuant to the Help America Vote Act of 2002 (“HAVA”). O.C.G.A. § 21-2-50.2(a).

195. The Secretary provides forms, builds ballot, and conducts training for county election superintendents. O.C.G.A. § 21-2-50.

196. The Secretary determines the uniform voting system “of electronic ballot markers and ballot scanners . . . certified by the [US Election Assistance Commission.” O.C.G.A. § 21-2-300.

197. The Secretary can authorize movement of voting system equipment. Ga. Comp. R. & Regs. r. 183-1-12-.06.

198. The Secretary's Election Division has 23 full-time employees. Tr. Vol. XV 241:16–19 (Sterling).

B. Members of the State Election Board.

199. The General Assembly created the State Election Board ("SEB") in O.C.G.A. § 21-2-30(a). It consists of five members, including a representative of each of the two major political parties. O.C.G.A. § 21-2-30(c). Rebecca Sullivan and Matthew Mashburn served as acting chairs of the State Election Board at different points and both testified at trial. Tr. Vol. VI 40:18–41:12 (Mashburn); Tr. Vol. III 213:13–14 (Sullivan).

200. The General Assembly imposed ten statutory duties on the State Elections Board, which range from the promulgation of rules and regulations to making recommendations to the General Assembly. O.C.G.A. § 21-2-31.

201. The current members of the SEB are: Chair John Fervier, Sara Tindall Ghazal, Edward Lindsey, Dr. Janice Johnston, and Rick Jeffares.

202. As described more fully below, this Court heard testimony from two former members of the SEB—Rebecca Sullivan and Matthew Mashburn—and testimony from two current members, Sara Tindall Ghazal and Dr. Janice Johnston.

203. The Chair of the SEB sets the agenda and makes rulings during meetings. Tr. Vol. VI 42:15–43:3 (Mashburn). The Chair also gives most of the press interviews on behalf of the SEB. Tr. Vol. VI 43:4–5 (Mashburn).

204. SEB members take an oath to perform their work with their greatest care and ability and take that role very seriously, including review of relevant documents and research of applicable case law, rules, and regulations. Tr. Vol. III 213:22–214:19 (Sullivan);. Tr. Vol. VIII 195:14–20 (Johnston).

205. The SEB is not a policy making board. Tr. Vol. III 205:5–9 (Ghazal).

206. The SEB creates rules and regulations within the boundaries of the laws passed by the General Assembly. Tr. Vol. III 205:5–9 (Ghazal); , Tr. Vol. III 208:24–209:1 (Sullivan); Tr. Vol. VIII 179:7–10 (Johnston).

207. It is important for SEB members to remain impartial until the evidence is presented by the investigators and the board has had an opportunity to ask questions. Tr. Vol. IX 209:25–210:3 (Johnston).

208. The SEB holds hearings regarding alleged violations of election laws and rules, Tr. Vol. III 209:5–7 (Sullivan), and has power to issue orders requiring compliance with election laws. Tr. Vol. VI 56:22–24 (Mashburn).

209. The SEB has power to require parties to cease and desist from violating election laws. Tr. Vol. VI 56:25–57:2 (Mashburn).

210. In cases of violation of election laws, the SEB can assess civil penalties, issue public reprimands, require payment of restitution, require training, and assess investigative costs. Tr. Vol. VI 57:3–14 (Mashburn).

211. The SEB has power to subpoena witnesses. Tr. Vol. VI 57:23–25 (Mashburn).

C. Counties.

212. County governments hire county elections officials and not the Secretary of State or SEB. Vol. XIII 125:24–126:6 (Kirk).

213. County election superintendents train and appoint poll officers and poll workers, and purchase and make available election supplies. O.C.G.A. §§ 21-2-70, 21-2-99.

214. County officials are responsible for training poll workers in their jurisdiction. Tr. Vol. XIII 133:2–7 (Kirk).

215. County election superintendents administer absentee ballot, advance voting, and Election Day voting in Georgia. O.C.G.A. §§ 21-2-380 *et seq.*, 21-2-400 *et seq.*; Ga. Comp. R. & Regs. r. 183-1-14-.11.

216. Absentee-ballot applications go to the counties and are processed by the counties. County officials send out absentee ballots, not state officials. Tr. Vol. I 92:2–5 (Schoenberg).

217. County election superintendents are responsible for securely storing election devices and equipment. O.C.G.A. § 21-2-379.26.

218. County election officials confirm acceptance testing of voting equipment. Ga. Comp. R. & Regs. r. 183-1-12-.03.

219. County election officials are responsible for maintaining the security of the election management server, including locks and passwords.

Ga. Comp. R. & Regs. r. 183-1-12-.05.

220. County election officials are responsible for maintaining the security of election equipment and polling places. Ga. Comp. R. & Regs. r. 183-1-12-.04.

221. County election officials must administer oaths and perform audits of election equipment. Ga. Comp. R. & Regs. r. 183-1-12-.06.

222. County election officials must review ballots prior to an election. Ga. Comp. R. & Regs. r. 183-1-12-.07.

223. County election officials are responsible for conducting logic and accuracy testing before elections. Ga. Comp. R. & Regs. r. 183-1-12-.08.

224. County election officials are responsible for securely transporting voting equipment to polling locations. Ga. Comp. R. & Regs. r. 183-1-12-.09.

225. County election officials have numerous responsibilities related to the administration of polling places before, during and after election day.

Ga. Comp. R. & Regs. r. 183-1-12-.10, -.11, -.12.

226. County election officials are responsible for storing ballot images. Ga. Comp. R. & Regs. r. 183-1-12-.13.

227. County election officials must maintain all components of the election system and report “any malfunction or problem” to the Secretary. Ga. Comp. R. & Regs. r. 183-1-12-.14.

228. County election officials are responsible for providing emergency paper ballots to polling places. Ga. Comp. R. & Regs. r. 183-1-12-.20.

III. Georgia’s election system.

229. This case is about the Dominion election system, consisting of ballot-marking devices (BMDs), ballot scanners, and other equipment, adopted in 2019 in Georgia and used in the 2020 and 2022 election cycles and remaining in use to the present. Prior to the adoption of the Dominion system, this case was about the touchscreen system, referred to as DREs, adopted in 2002.

A. System prior to 2019.

230. During the use of the DRE system, Georgia utilized touchscreens located at polling locations for all in-person votes. The machines recorded votes electronically and did not create paper audit trails. *Curling v. Raffensperger*, 403 F. Supp. 3d 1311, 1319 (N.D. Ga. 2019).

1. *The SAFE Commission.*

231. In spring of 2018, the Secretary of State's office began considering a new voting system to replace the aging DRE system. Tr. Vol. X(A) 100:25–101:22 (Germany).

232. Then-Secretary of State Brian Kemp established the SAFE Commission to explore options for a new voting system in Georgia. Tr. Vol. X(A) 101:7–22 (Germany).

233. The SAFE Commission did not decide on a new voting system but made recommendations to the legislature. Tr. Vol. X(A) 105:18–106:4 (Germany).

234. The SAFE Commission consisted of 15–18 members that included local election officials, legislators, a disability expert, a cybersecurity expert, and election law experts from both political parties. Tr. Vol. X(A) 105:2–15 (Germany).

235. There were many factors that went into the SAFE Commission's recommendation and consideration. Tr. Vol. X(A) 106:7–21, 108:1–14 (Germany); DX 856.

236. During the meetings of the SAFE Commission, the disability community expressed concerns about hand-marked paper ballots because (1) “othering” disabled voters who would be forced to use a machine different from what everyone else was using, (2) election workers would not be as

familiar with the machines and it could lead to problems in implementation, (3) ballot secrecy issues because the ballots would be very different from hand-marked paper ballots. Tr. Vol. X(A) 116:18–117:10, 118:12–19, 122:19–123:20 (Germany).

237. These concerns were especially acute in a state like Georgia that had been using a unified voting system where voters with disabilities and voters without disabilities voted on the same equipment for 20 years. Tr. Vol. X(A) 125:18–126:10 (Germany).

238. Local election officials also raised concerns about hand-marked paper ballots and having to provide every single ballot combination in a county during early voting, which creates risks that voters receive the wrong ballots. Tr. Vol. X(A) 127:24–129:3 (Germany).

239. Before issuing its report, the SAFE Commission considered, then accepted and rejected various amendments, including those from Dr. Wenke Lee, a cybersecurity expert on the Commission. Tr. Vol. X(A) 130:14–23 (Germany).

240. The SAFE Commission issued a final report and recommendation, including appendices, with only three members voting against the final report. Tr. Vol. X(A) 102:8–10 (Germany); DX 856; DX 1224.

241. The final report included the concerns expressed by the disability community, the local election officials, and cybersecurity experts, including in

the minority report which was included in the appendices. Tr. Vol. X(A) 131:9–17, 132:9–22 (Germany).

242. The final report was transmitted to the legislature for its consideration in the 2019 legislative session. Tr. Vol. X(A) 132:13–22 (Germany).

2. House Bill 316 (2019).

243. After consideration of the SAFE Commission report and election legislation during the 2019 session, the Georgia General Assembly passed House Bill 316. Tr. Vol. V 233:24–234:1 (Sterling). On April 2, 2019, Governor Kemp signed House Bill 316 into law. 2019 Ga. Laws Act 24.

244. While that bill made a number of changes to Georgia law regarding elections, it also required that Georgia move to the use of ballot-marking devices for all in-person voters “[a]s soon as possible, once such equipment is certified by the Secretary of State as safe and practicable for use.” O.C.G.A. § 21-2-300(a)(2).

3. Procurement process in 2019.

245. From January 14, 2019 and leading up to the passage of HB 316, the SOS office, in conjunction with the Georgia Department of Administrative Services (“DOAS”), worked to put together a Request for Proposals (“RFP”) process for a new election system pursuant to Georgia procurement law. Tr. Vol. V 234:1–4 (Sterling).

246. As part of the procurement process, the Secretary's office assembled a team of experts to assist in the evaluation of the written proposal submitted in response to the RFP. That team of experts included large and small county election administrators, individuals from the Georgia Department of Behavioral Health and Developmental Disabilities, the Georgia Technology Authority, and a local probate judge. Tr. Vol. V 234:6–12 (Sterling).

247. According to Georgia procurement law, the team was tasked with evaluating the responses based on the written proposals and demonstrations by the three active bidders. Tr. Vol. V 234:14–18 (Sterling).

248. All three original bidders included the use of QR codes or barcodes in their proposals and no other responsive bidder offered any other technology. Tr. Vol. V 236:3–4 (Sterling).

249. In the initial round of the procurement, the procurement team determined that two bidders, Dominion and ES&S, met all the requirements of the RFP and asked them to submit their best and final offers. Tr. Vol. V 235:1–2 (Sterling). Both Dominion and ES&S used QR codes or barcodes in their proposals. Tr. Vol. V 236:3–4 (Sterling).

250. ES&S's cost proposal was approximately \$122 million while Dominion's cost proposal was approximately \$98 million. Tr. Vol. V 234:21–25 (Sterling).

251. Based upon Georgia procurement law and DOAS regulations, the procurement team declared Dominion the winner and there were no bid protests filed to the procurement. Tr. Vol. V 235:16–21 (Sterling).

B. Dominion system (2019-present).

252. Following the procurement process, Georgia utilized the Dominion system for all elections beginning in the 2020 election cycle. This section covers the components of that system and the processes used by state and county officials regarding preparation and implementation of elections using the Dominion system.

1. Components of system.

253. There are components of the election system that are held by various entities in Georgia. As discussed below, the EMS, ICCs, ICX BMDs, and ICPs are housed and maintained by county election officials. Tr. Vol. XII 14:4–7 (M. Barnes).

(a) Components located in counties.

254. County election officials are responsible for maintaining and protecting the Dominion voting equipment located in their county. Tr. Vol. V 110:1–3 (Beaver).

255. Each county has an election management server (EMS), which is the computer that holds an elections project and is used to create election media. Tr. Vol. XII 9:11–10:4 (M. Barnes).

256. Election media are used to transfer election information from the EMS to the other components of the election system. *Id.*

257. The EMS is not connected to the Internet and information has to be physically loaded onto it. Tr. Vol. XII 10:5–10 (M. Barnes).

258. The Dominion central count scanner is commonly referred to as the ICC and is a document scanner that is connected to a computer called the ICC workstation. Tr. Vol. XII 10:11–25 (M. Barnes).

259. The ICC workstation directs the scanner in the scanning of ballots. *Id.*

260. The ICC is directly connected to the EMS and obtains information about each election from the EMS to be transferred to the ICC workstation. Tr. Vol. XII 11:1–14 (M. Barnes).

261. The Dominion ballot-marking device is referred to as an ICX. Tr. Vol. XII 11:15–22 (M. Barnes).

262. The ICX is the touch-screen device that Georgia voters interact with in a polling place when they vote in person. *Id.*

263. Election information is loaded onto each ICX manually using information created from the EMS using a USB jump drive. Tr. Vol. XII 11:23–12:2 (M. Barnes).

264. After voters check in at their precinct, they receive a voter access card, which contains a signature key for that election and a ballot activation code. Tr. Vol. XII 12:3–15 (M. Barnes).

265. No information about how a voter votes is retained on the ICX after a ballot is printed out. The ICX maintains logs of its activities regarding when voter access cards are inserted and how many ballots are printed. Tr. Vol. XII 12:18–13:2 (M. Barnes).

266. The Dominion precinct scanner, or ICP, is the device in a polling place that tabulates the ballots. Tr. Vol. XII 13:3–8 (M. Barnes).

267. The ICP and the ICC create a digital image of the front and back pages of the ballot and then appends a third page showing how the scanner interpreted the information on the first two pages. Tr. Vol. XII 13:4–24 (M. Barnes).

268. Ballot images and their audit pages can be requested under the Open Records Act in Georgia. Tr. Vol. XII 13:25–14:3 (M. Barnes).

(b) Components located in the Secretary of State's Office.

269. The Secretary's office build ballots for Georgia election using a computer system in the Secretary's office. Tr. Vol. XII 17:7–12; Tr. Vol. XIII

135:3–4 (M. Barnes). No outside vendors are used to build ballots for Georgia elections. Tr. Vol. XII 17:21–23, 18:2–4 (M. Barnes).

270. The ballot building system is not connected to the Internet and exists in an office with security. Tr. Vol. XII 17:13–20 (M. Barnes).

271. To move information from the ballot-building system to a computer for distribution to counties, the Secretary's office has a standalone device that formats brand-new USB drives, removing anything that might exist on the new drive. Tr. Vol. XII 18:7–23 (M. Barnes).

272. The formatted USB drive is then allowed access to the ballot-building environment to allow the transfer of files from the ballot-building environment to another computer for distribution to counties. Tr. Vol. XII 18:22–19:8 (M. Barnes).

273. This process of using formatted USB drives only applies to proofing documents, not to election project files. Tr. Vol. XII 19:9–18 (M. Barnes).

2. Building ballots.

274. The Secretary's office builds election project files for use in Georgia elections. Election project files contain significant amounts of information. Tr. Vol. XII 14:10–12; 17:10–12 (M. Barnes).

275. Election project files contain information about jurisdictions executing the election, including political districts from Congressional

districts, legislative districts, county commission districts, school board districts, and municipal districts. Tr. Vol. XII 14:13–15:3 (M. Barnes).

276. Election project files contain information about precincts (which are a division of voters, not necessarily a particular polling location), including subdivisions of voters in particular precincts that are referred to as district combinations. Tr. Vol. XII 15:4–16:2 (M. Barnes).

277. Election project files contain the contests, which are the individual races that voters see on their ballots. Tr. Vol. XII 16:3–11 (M. Barnes).

278. Election project files contain candidate names for each candidate who qualifies for a particular office. Tr. Vol. XII 16:13–17 (M. Barnes).

279. Election project files contain headers, including instructions to voters and information about the election. Tr. Vol. XII 16:18–23 (M. Barnes).

280. Election project files contain information about the physical polling places and the equipment assigned to those polling places. Tr. Vol. XII 16:24–17:6 (M. Barnes).

281. Once an election project file is built, it must be proofed by county election officials to ensure the information included is accurate. Tr. Vol. XII 19:23–20:14 (M. Barnes).

282. Once the county provides corrections or approves the election project file, it is ready to be finalized. *Id.*

283. A final election project file does not include just a single ballot in the file, but rather there are four separate ballot items included: an audio ballot, an optical-scan ballot for use in absentee-by-mail and provisional voting, a ballot for display on the BMD touchscreen, and a ballot printout for the BMD printer. Tr. Vol. XII 21:24–22:17 (M. Barnes).

284. Before distributing a finalized election project file to counties, Secretary personnel proof the display of the various ballots in a final election project file on a BMD to verify each component displays and behaves as it should, including that it includes correct information. Tr. Vol. XII 22:18–23:16 (M. Barnes). This is a different test from logic and accuracy testing conducting by counties. Tr. Vol. XII 23:17–25 (M. Barnes).

285. When the election project is finalized, the Secretary's office creates a zipped election project file that includes a signature file. The zipped file is placed into a password-protected folder, which is then burned onto a CD or DVD. Tr. Vol. XII 24:1–17 (M. Barnes). All of the passwords are then checked. Tr. Vol. XII 24:18–22 (M. Barnes).

286. The password for election project files, which is referred to as the extraction code, is unique for each county in Georgia. Tr. Vol. XII 24:23–25 (M. Barnes).

287. The CD or DVD is then placed into a canvas bag with a keyed physical lock, which is then locked. Each county has a unique physical key

that only unlocks that particular county's canvas bag. Tr. Vol. XII 25:1–9, 18–25 (M. Barnes).

288. When a county receives their bag containing the election project file, they use their physical key to unlock the bag and remove the CD or DVD to be placed in the EMS. Tr. Vol. XII 27:10–22 (M. Barnes).

289. The county official then moves the single folder on the media to the EMS, which then requires the county official to enter an extraction code. Tr. Vol. XII 28:2–12 (M. Barnes).

290. In order to obtain the extraction code, counties have to call the Secretary's office and provide the correct access code. Once that access code is confirmed, the Secretary's office provides the unique extraction code for that county by phone. Tr. Vol. XII 28:11–29:15 (M. Barnes).

291. In order for the county to access the election project file to create election media, they have to utilize the election event designer (EED) application within Dominion Democracy Suite. Tr. Vol. XII 29:17–30:12 (M. Barnes).

292. In order for EED to function correctly, the project signature key must be present in the folder. Tr. Vol. XII 29:17–30:18 (M. Barnes).

293. Once the EED has transferred the information, the county can begin to interact with the election project file. *Id.*

294. This process must be followed for each election. Tr. Vol. XII 31:6–8 (M. Barnes).

295. Information from county systems is never placed back into the ballot-building system at the Secretary's office. Tr. Vol. XII 37:12–19 (M. Barnes).

3. Creation of election media.

296. Once the election project file is loaded into the EMS, the information about that particular election then has to be distributed to the various components of the voting system. Tr. Vol. XII 31:9–15 (M. Barnes).

297. To load the information about the election onto the ICP, a county election official must use the EMS to physically create two CompactFlash cards for each ICP, along with creation of a physical security key. Tr. Vol. XII 31:16–24 (M. Barnes).

298. The ICP physical security key is referred to as an iButton. After the CompactFlash cards are loaded into the ICP, the ICP prompts for a security key. The county elections official then must place the iButton key on the ICP and enter the eight-digit code associated with that election project, which is unique for each county. Tr. Vol. XII 32:1–33:11 (M. Barnes).

299. Election Day ICPs are only loaded with information for the particular polling location where they will be operating. Advance voting ICPs

may have all county ballot styles included. Tr. Vol. XII 35:18–36:11 (M. Barnes).

300. To load information about the election onto the ICX BMD, the county election officials use the EMS to create UBS drives that contain the BMD tabulator file, which includes all ballot images for that jurisdiction for that election. Tr. Vol. XII 34:3–15 (M. Barnes).

301. The county election official must also create a series of poll worker and technician cards for use on the BMD from the EMS. *Id.*

302. Once the county election officials have the USB drives and the various cards, they insert a technician card into the BMD, enter the eight-digit code that is unique for that county and that election, and then load the election information onto that particular BMD. Tr. Vol. XII 34:16–23 (M. Barnes).

303. Once the election information is loaded onto that particular BMD, the county election official inserts a pollworker card and enters the eight-digit code, which then decrypts and loads the election information onto the BMD, but leaves it in a “closed poll” state, and can then remove the USB drive. Tr. Vol. XII 34:24–35:16 (M. Barnes).

4. Pre-election logic and accuracy (L&A) testing.

304. Once the election information has been loaded onto each piece of equipment, a county can begin conducting logic and accuracy testing. Tr. Vol. XII 36:12–22 (M. Barnes).

305. Logic and accuracy testing is a public process the counties perform to check all of their voting equipment to make sure that there are no surprises on election morning or the start of advance voting. Tr. Vol. XIII 138:14–17 (Kirk). Counties incur the costs of logic and accuracy testing. Tr. Vol. XVI 96:10–12 (Sterling).

306. Counties have a vendor print the ballots and those paper ballots are tested along with the ballots printed by the BMDs during logic and accuracy testing. Tr. Vol. XIII 136:12–21 (Kirk).

307. Counties perform logic and accuracy testing to ensure that “the hardware operates properly, tabulates accurately, and makes sure that the results get reported accurately in the State’s ENR system or election night reporting system works” and then “everything is sealed up until it is used in the actual polling place.” Tr. Vol. XIII 135:5–12 (Kirk).

308. In order to conduct logic and accuracy testing, a county begins by setting up the equipment, turning it on, and making sure that the right ballots are displayed. Tr. Vol. XIII 138:18–22 (Kirk).

309. A candidate name is then marked on the BMD for each ballot style for each precinct and printed out, and that test deck of ballots is scanned to make sure the scanners tabulate the ballots properly. Tr. Vol. XIII 138:23–139:7 (Kirk).

310. The counties also scan a test deck of certain prefilled ballots and at least one ballot from pre-printed ballots to check for accuracy. Tr. Vol. XIII 139:13–16 (Kirk).

311. Once all steps of L&A testing are completed, all the results are exported for that system and uploaded to the State's election night reporting system to be sure the transfer happens properly. Tr. Vol. XIII 139:17–19 (Kirk).

312. During L&A testing, the county places seals on key areas of the equipment, one of which has to be removed when the poll worker turns on the equipment. Tr. Vol. XIII 143:18–23 (Kirk).

313. There are seals on BMDs placed by the State which are not removed by the counties. Tr. Vol. XIII 143:19–21 (Kirk).

314. On the scanners, the county seals the memory card compartments during L&A testing and a State seal is on the accessories compartment and then the entire scanner is sealed up with a big lid so it cannot be accessed without breaking the seal on the ballot box. Tr. Vol. XIII 143:24–144:5 (Kirk).

315. If a particular device malfunctions during pre-election testing, it should not be used in an election and malfunctioning devices should be returned to Dominion for repairs. Tr. Vol. XII 38:8–39:8 (M. Barnes); Tr. Vol. XI 163:23–164:2 (Evans) (if a BMD malfunctions, the poll worker notifies the county official, and the BMD is taken out of service).

5. During-election operations and parallel testing.

316. When the polls open, every single seal must be verified before any are unsealed. Tr. Vol. III 144:6–9 (M. Barnes).

317. On BMDs, when the polls open, the poll workers break the seal on the power cover and the machine is turned on and resealed. That seal is not broken again unless there is a need to reboot the machine. Tr. Vol. XIII 144:10–14 (Kirk).

318. On the scanners, only the seal on the lid is broken when the polls open and the seal on the scanner itself is not broken until the end of the day. Tr. Vol. XIII 144:15–17 (Kirk).

319. The seal numbers are then recorded on a form and are checked and initialed to show the numbers were verified. Tr. Vol. XIII 144:21–145:3 (Kirk).

320. During election day and early voting, the Secretary's office now undertakes parallel testing with test decks to check if BMDs are functioning properly. Tr. Vol. V 197:12–198:22, 248:1–16 (Sterling).

321. When voters complete voting, they take their ballots to the scanner, where a poll worker should prompt them to check their ballot before scanning. Tr. Vol. XI 168:21–24 (Evans); Ga. Comp. R. & Regs. r. 183-1-12-.11(8).

6. *Post-election auditing.*

322. Once the polls are closed, county officials compare the number of voters who checked in and how many were issued a ballot. Tr. Vol. XIII 148:1–5 (Kirk).

323. While the elections director in Bartow County who testified uses his own forms for this part of the process, the unrebutted testimony showed that his forms reflects the practice required by statute statewide. Tr. Vol. XIII 148:6–9 (Kirk).

324. For post-election risk-limiting audits (RLAs), the Secretary selects the race to be audited and a software system called Arlo selects the number of batches to be audited. Tr. Vol. XIII 152:2–13 (Kirk).

325. Once the batches selected for RLAs are audited, the Bartow County director also hand counts all the ballots to compare with the machine totals. This RLA “on steroids” is used in Bartow County and will likely be used in other counties. Tr. Vol. XIII 151:16–152:25 (Kirk).

326. Based on Mr. Kirk's experience in elections and post-election audit procedures, only a small number of batches need to be audited to achieve confidence in the results. Tr. Vol. XIII 154:1–6 (Kirk).

327. Mr. Kirk finds that the voters in his community more easily understand the process if all ballots are audited by hand rather than an explanation of the mathematical formulas underlying risk limiting audits. Tr. Vol. XIII 151:24–25, 156:12–17 (Kirk).

328. In sharp contrast to the auditing regime used by Georgia, Plaintiffs and their experts believe that any votes cast on Dominion BMDs are inherently unauditable. Tr. Vol. I 188:21–25 (Martin); Tr. Vol. I 90:6–8 (Schoenberg); Tr. Vol. VIII 14:25–15:3, 15:5–8, 26:19–19 (Halderman).

329. Beginning in the summer of 2023, the Secretary's office performed "health checks" on Dominion equipment to determine if it was functioning as intended. Tr. Vol. XII 57:5–22 (M. Barnes).

330. The health checks did not rely on the self-reported Dominion hash value in the software. Tr. Vol. XII 58:18–25 (M. Barnes).

331. Staff from the Secretary's office were given tasks to pull random BMD and ICP units and perform hash comparisons on those components,

along with performing an acceptance test on the EMS. Tr. Vol. XII 72:21–73:8 (M. Barnes).⁵

7. Challenges to the Dominion system

332. The 2020 elections brought a host of challenges to the Georgia election system, including challenges that made claims about Dominion voting equipment. *See, e.g., Wood v. Raffensperger*, 981 F.3d 1307 (11th Cir. 2020); *Wood v. Raffensperger*, 501 F. Supp. 3d 1310 (N.D. Ga. 2020); *Pearson v. Kemp*, No. 1:20-cv-4809-TCB, 2020 U.S. Dist. LEXIS 226348 (N.D. Ga. Nov. 29, 2020); *Pearson v. Kemp*, 831 F. App'x 467 (11th Cir. 2020); *Wood v. Raffensperger*, No. 1:20-cv-5155-TCB, 2020 U.S. Dist. LEXIS 244731 (N.D. Ga. Dec. 28, 2020).

333. Those cases were primarily dismissed on jurisdictional grounds because challenges to the voting system were generalized grievances.

334. Many of the claims in this case were used to support a variety of attacks on the 2020 election. *See, e.g.,* [Doc. 1270-1] (draft executive order) regarding voting equipment.

8. Issuance of Halderman Report in 2021.

335. Meanwhile, this case continued with discovery and expert reports. Dr. Halderman provided his report on July 1, 2021. Per the Court's

⁵ The Court did not strike this testimony after a motion from Plaintiffs. Tr. Vol. XII 73:9–74:19.

earlier orders, the report was designated Attorneys' Eyes Only under the protective order. [Doc. 858 at 5]. Five days later, State Defendants requested that Plaintiffs consent to allowing Dominion to access the report but Coalition Plaintiffs objected. [Doc. 1130, p. 2]. The Court held a teleconference to discuss those issues and took the issues related to disclosing the report to Dominion under advisement and said the report needed to be treated as AEO. [Doc. 1143 at 58:15–18, 59:19–22, 64:10–17].

336. At the August 23, 2021 teleconference, Plaintiffs acknowledged the continuing limitations on the report, that only State Defendants' counsel and not the Secretary's office, had access to the Halderman Report. [Doc. 1160 at 59:18–60:3, 82:3–20].

337. At that same conference, Plaintiffs requested permission to share Dr. Halderman's report with the U.S. Cybersecurity and Infrastructure Security Agency (CISA). [Doc. 1160 at 83:5–84:8].

338. Following a letter from CISA, [Doc. 1269-1], this Court authorized the sharing of an unredacted copy of the Halderman report with CISA in February 2022 under the Coordinated Vulnerability Disclosure process. [Docs. 1314, 1315].

9. CISA recommendations in 2022.

339. On June 3, 2022, CISA issued an advisory regarding vulnerabilities in the Dominion Democracy Suite system. PX 90.

340. That advisory identified nine vulnerabilities and provided a list of mitigations. The advisory stated “CISA recommends election officials continue to take and further enhance defensive measures to reduce the risk of exploitation of these vulnerabilities,” recognizing that some of these mitigations were already in place. PX 90.

341. CISA also made specific recommendations: (1) Contact Dominion Voting Systems to determine which software and/or firmware updates need to be applied; (2) Ensure all affected devices are physically protected before, during, and after voting; (3) Ensure compliance with chain of custody procedures throughout the election cycle; (4) Ensure that ImageCast X and the Election Management System (EMS) are not connected to any external (i.e., Internet accessible) networks; (5) Ensure carefully selected protective and detective physical security measures (for example, locks and tamper-evident seals) are implemented on all affected devices, including on connected devices such as printers and connecting cables; (6) Close any background application windows on each ImageCast X device; (7) Use read-only media to update software or install files onto ImageCast X devices; (8) Use separate, unique passcodes for each poll worker card; (9) Ensure all ImageCast X devices are subjected to rigorous pre- and post-election testing; (10) Disable the “Unify Tabulator Security Keys” feature on the election management system and ensure new cryptographic keys are used for each election; (11) As

recommended by Dominion Voting Systems, use the supplemental method to validate hashes on applications, audit log exports, and application exports; (12) Encourage voters to verify the human-readable votes on printout; (13) Conduct rigorous post-election tabulation audits of the human-readable portions of physical ballots and paper records, to include reviewing ballot chain of custody and conducting voter/ballot reconciliation procedures. PX 90.

342. The evidence at trial demonstrated that the State of Georgia either already had many of these specific mitigations in place, has implemented them, or has considered and decided against their use.

343. Regarding the first recommendation on contacting Dominion, the Secretary's office has studied the steps necessary to upgrade all existing software to a new version of the software. Installing a new version of Dominion software required a significant amount of time for each component and would require each component to be upgraded. Tr. Vol. XII 54:9–56:2 (M. Barnes).⁶

344. Regarding the second recommendation on physical security, Georgia law requires county officials and others to protect physical security of voting equipment. Ga. Comp. R. & Regs. r. 183-1-12-.04–.06; Ga. Comp. R. & Regs. r. 182-1-12-.09–.14. Secretary employees explained the training on

⁶ Testimony about the length of time to install the new version was admitted over objections. Tr. Vol. XII 60:20–61:13; 78:1–80:6.

these points for county officials and analyses conducted by the U.S.

Department of Homeland Security and the Georgia Emergency Management Agency. Tr. Vol. XI 20:15–21, 79:21–80:13 (Evans); Tr. Vol. XVI 62:18–63:3, 66:8–22 (Sterling).

345. Regarding the third recommendation on chain of custody, the Secretary's office provides forms for use by county officials on ensuring chain of custody and has implemented the use of chain of custody forms for voting equipment in additional contexts. Ga. Comp. R. & Regs. r. 183-1-12-.06; DX 1242 at 17; Tr. Vol. XIII 147:2–9 (Kirk); Tr. Vol. III 143:25–144:9 (Barnes).

346. Regarding the fourth recommendation on not connecting equipment to the Internet, Georgia law already prohibits the connection of any Dominion equipment to the Internet. Ga. Comp. R. & Regs. r. 183-1-12-.05.

347. Regarding the fifth recommendation on using locks and seals, counties are required by Georgia law to maintain equipment seals. Ga. Comp. R. & Regs. r. 183-1-12-.04–.05. Further, training for election officials explains the importance and use of seals on equipment. DX 1242; Tr. Vol. XI, 79:21–80:13 (Evans); Tr. Vol. XIII 64:12–73:25 (Evans). Issues regarding problems with the use of seals are investigated by Secretary investigators. DX 100; Tr. Vol. XIII 84:2–6 (Evans).

348. Regarding the seventh recommendation to use read-only media, Georgia began using CDs and DVDs, which are write-once read-only media, to distribute election project files at the end of 2023. Tr. Vol. XII 26:6–19 (M. Barnes).

349. Regarding the eighth recommendation to use separate, unique passcodes for each poll worker card, the Secretary analyzed this recommendation and had concerns about election administration by requiring unique passcodes for every card, so it utilizes a unique code for each county. Tr. Vol. XIII 56:16–57:11, 59:18–60:9, 60:23–61:7 (Evans); Tr. Vol. XII 36:25–37:11 (M. Barnes). Further, the concerns about double voting are addressed by recap sheets and poll worker oversight. Tr. Vol. XIII 76:20–79:25 (Evans).

350. Regarding the ninth recommendation on rigorous pre- and post-election audits, as discussed above, Georgia has a rigorous system of pre-election testing and post-election audits. This is also a county obligation regarding testing and audits. Ga. Comp. R. & Regs. r. 183-1-12-.03, -.08. The un rebutted testimony is that Georgia is among nationwide leaders on post-election audits and has strong interests in increasing voter confidence through the use of audits. Tr. Vol. XVI 25:24–26:14 (Sterling); Tr. Vol. XII 153:12–154:03 (Adida).

351. Regarding the tenth recommendation to unify tabulator security keys, Georgia chose not to unify tabulator security keys to ensure poll

workers and election officials were successful in opening equipment for the election. Tr. Vol. XI 216:10–218:8 (Evans); Tr. Vol. XIII 56:16–57:11, 59:18–60:9, 60:23–61:7 (Evans); Tr. Vol. XII 36:25–37:11 (M. Barnes). As discussed below, not opening equipment in time could lead to lines for voters.

352. Regarding the eleventh recommendation to use supplemental methods to conduct hash verifications, Georgia has carried out health checks that did not rely on self-reported hash values for checks on equipment. Tr. Vol. XII 57:11–22, 58:18–25 (M. Barnes).

353. Regarding the twelfth recommendation to encourage voters to verify the human-readable portion, Georgia already requires prompting of voters and signage in polling places about verifying ballots. Ga. Comp. R. & Regs. r. 183-1-12-.11(2)(b); DX 1245; Tr. Vol. XIII 162:12–163:3 (Kirk); PX 51 at 4, 8; Tr. Vol. XVI 114:2–115:15 (Sterling).

354. Regarding the thirteenth recommendation on conducting audits of the human-readable portion of the physical ballots, Georgia already requires extensive risk-limiting audits that review the human-readable portion. O.C.G.A. §§ 21-2-31, 21-2-498; Ga. Comp. R. & Regs. r. 183-1-15-.04(1)(1) and (3); Tr. Vol. XIII 134:10–16 (Evans); Tr. Vol. XII 153:12–154:03 (Adida).

355. Further, the evidence showed that eliminating QR codes is not feasible for the 2024 elections. The current version of Dominion software in

Georgia does not allow BMDs to create ballots without QR codes and it would require a new set of applications to allow BMDs to print ballots without QR codes. Tr. Vol. XII 48:1–9 (M. Barnes).

356. In order to print ballots from BMDs without QR codes, Georgia would also have to purchase new printers. Tr. Vol. XII 56:3–16 (M. Barnes).

357. Thus, the evidence showed that Georgia has carefully considered and utilizes the specific recommendations from CISA regarding the vulnerabilities identified in the Halderman Report.

C. Other election items.

358. The evidence at trial also showed that election administrators have to take far more into account than just cybersecurity when considering how elections operate. Those considerations are critically important to the proper functioning of elections.

1. Considerations of election administrators beyond cybersecurity.

359. When considering election security, the Secretary's office considers more than just cybersecurity. Other issues that the Secretary's office considers related to election security include physical security, chain of custody, transport of ballot paper, inspecting facilities with election equipment in them, and training around cybersecurity. Tr. Vol. XV 228:2–21 (Sterling).

360. After the 2020 elections, the Secretary's office took steps to address election security concerns by conducting physical inspections, upgrading the voter registration system, and training. Tr. Vol. XV 231:17–234:6 (Sterling).

361. The Secretary's office would never limits its review of election policy to cybersecurity alone. Tr. Vol. XV 240:11–14 (Sterling).

362. When deciding questions of election policy, the Secretary's office considers the law, feasibility, usability by voters, usability by county election officials, repeatability, ease of use. Tr. Vol. XV 240:18–241:15 (Sterling).

363. Georgia was ranked number one in the country for election administration, tied with Colorado, by the Bipartisan Policy Center. Tr. Vol. XV 241:20–242:14 (Sterling).

364. The Secretary's office has not received any reports of a BMD malfunctioning and incorrectly marking a ballot. Tr. Vol. XII 39:9–12 (M. Barnes).

365. Humans make mistakes in the administration of elections. Tr. Vol. XII 39:13–15 (M. Barnes).

366. During a county commission race in DeKalb County in 2022, a human error in programming led to the scanners incorrectly tabulating ballots from BMDs. Tr. Vol. XII 39:16–43:7 (M. Barnes).

367. DeKalb County was able to determine the correct vote count for the commission race in 2022 because it counted the physical ballots using the human-readable portion of the paper ballots. Tr. Vol. XII 43:8–13, 43:19–45:25 (M. Barnes).

2. Hand-marked paper ballots (HMPBs) as an alternative election system.

368. Voters using hand-marked paper ballot systems often make mismarks and mistakes when marking their ballots that prevent them from being read by ballot scanners. Tr. Vol. XI 16:3–17:2 (Evans); Tr. Vol. II 123:9–12, 124:5–12 (Nakamura); Tr. Vol. IX 185:10–17 (Stark).

369. Using hand-marked paper ballots with Georgia's vote-center model for early voting risks voters receiving the wrong ballot style, which is a risk that is not present with the new cellular Poll Pads when used with the Dominion BMDs. Tr. Vol. XVI 7:22–8:17 (Sterling).

370. The evidence showed that other states that used vote centers for early voting relied on Ballot-on-Demand printers that would print ballots for each voter. Tr. Vol. XIII 15:19–15:10 (Evans).

371. Georgia does not have Ballot-on-Demand printers sufficiently available to use in early voting. Tr. Vol. XVI 18:12–23:21 (Sterling).

3. Impact of attempted and actual access to voting equipment in 2020.

372. The evidence at trial also focused on a variety of attempted and actual access to voting equipment after the 2020 general election. This section discusses the evidence about each potential or actual breach.

373. Initially, the evidence demonstrates that the Secretary's office responds quickly when it was aware of potential or actual problems. *See* PX 607, 608, 609; Tr. Vol. XIII 84:19–86:16, 87:24–89:6, 91:23–92:24 (Evans).

(a) Coffee County.

374. The initial investigation of Coffee County in December, 2020 consisted of a meeting with county officials in response to the County's report that they were having difficulty in verifying their election results. Tr. Vol. VII 80:5–9 (Watson).

375. SOS Macon Supervisor Pam Jones, SOS Chief Investigator Frances Watson, and SOS Investigator Josh Blanchard (all sworn law enforcement officers⁷) attended the December 2020 meeting to discuss with

⁷ Former Chief Investigator Watson and Investigator Blanchard both testified during the trial. The Court observed their demeanor and their forthright answers to questions and finds them highly credible. In addition, both have served decades as sworn law enforcement officers and have been consistent in their work, including when Chief Investigator Watson received a call from the then-President of the United States in 2020 urging her to take action she refused to take. Tr. Vol. VI 265:9–12 (Blanchard); Tr. Vol. VII 79:2–11, 22–24, 83:8–12, 84:25–85:5 (Watson).

Coffee County how they were conducting the recount and if they were following procedures. Tr. Vol. VI 265:9–12 (Blanchard); Tr. Vol. VII 79:22–24, 80:10–20, 82:21–23 (Watson).

376. The investigators determined that Coffee County elections director was not following the correct procedures by jamming the scanners and not keeping the ballots in batches preventing the County from going back and identifying which batch was causing the trouble. Tr. Vol. VII 80:24–81:7 (Watson).

377. The hand recount of all ballots during the December 2020 meeting confirmed that the machine count for Coffee County was accurate and correct. Tr. Vol. VII 81:8–9, 82:2–6 (Watson).

378. At the Dec. 2020 meeting, the investigators also discussed a video Misty Hampton had posted online. Ms. Hampton confirmed that she had not manipulated the machine the way she claimed it could be manipulated in the video and that her doing so would have been a violation of law. Tr. Vol. VII 82:7–15 (Watson).

379. When he visited Coffee County in January 2021, Investigator Blanchard had no reason to believe that the man coming out of Misty Hampton's office as seen on surveillance video was not authorized to be there. Tr. Vol. VI 241:21–242:1 (Blanchard).

380. The investigation concerning the Cyber Ninja business card found in the Coffee County elections offices in May 2021 was assigned to Supervisor Jones and Investigator Blanchard and Chief Investigator Watson had no concerns about their ability to handle the investigation. Vol. VII 82:18–23, 83:4–12 (Watson); *see* PX 145.

381. There was nothing in Chris Harvey's email or the fact that a Cyber Ninja business card was found that alerted the investigators that there had been unauthorized access to the Coffee County election equipment. PX 145; Tr. Vol. VI 266:5–10 (Blanchard); Tr. Vol. VII 83:13–18 (Watson); Tr. Vol. III 258:10–15 (Germany).

382. Based on their combined decades of experience in investigations, the presence of a business card from Cyber Ninjas did not indicate to the Secretary of State investigators that any unauthorized access to the election equipment had been attempted. Tr. Vol. VI 266:11–15 (Blanchard); Tr. Vol. VII 83:13–18 (Watson).

383. Based on his initial follow up contact with the county about the business card, nothing in his professional experience and training indicated to Investigator Blanchard that any further investigation was warranted. Tr. Vol. VI 266:16–21 (Blanchard).

384. Taking the additional step of pulling security footage is not typically done in investigations like the one involving the Cyber Ninja card. Tr. Vol. VI 267:2–5 (Blanchard).

385. Investigators would have wanted to know if someone knew about unauthorized access to election equipment in Coffee County and reported it to the SOS. Tr. Vol. VI 268:13–16 (Blanchard).

386. If he had learned of the unauthorized access earlier, Investigator Blanchard would certainly have followed up and reported it to his supervisor. Tr. Vol. VI 268:25–269:3 (Blanchard).

387. Investigator Blanchard understood that the SOS office had removed the Coffee County server from the elections office and were looking at it. Tr. Vol. VI 268:7–8 (Blanchard).

388. The Secretary's office replaced in the Coffee County EMS in the spring or summer of 2021. Tr. Vol. XII 37:20–22 (M. Barnes).

389. The Secretary's office requested Dominion assist with accessing the server and Dominion was not able to access the server. Tr. Vol. XII 37:23–38:3 (M. Barnes).

390. SullivanStrickler did not go to Coffee County in January 2021 on behalf of the Secretary of State and was never requested by the Secretary's office to do any work in Coffee County. Tr. Vol. VI 218:21–219:1 (Maggio).

391. Scott Hall called Ms. Marks on March 7, 2021 and Ms. Marks recorded the phone call. Tr. Vol. XV 110:6–23 (Marks).

392. It was during the March 7, 2021 call with Scott Hall that Ms. Marks learned about allegations of unauthorized access into Coffee County election equipment. Tr. Vol. XV 117:10–22 (Marks).

393. Ms. Marks did not believe that Mr. Hall's statements about the unauthorized access into Coffee County were credible during the March 7, 2021 call. Tr. Vol. XV 118:3–5 (Marks).

394. Ms. Marks did not contact the Secretary of State's office, the GBI, the FBI, or any other state, federal, or county law enforcement after she learned about the unauthorized access at Coffee County during the March 7, 2021 call. Tr. Vol. XV 118:10–21; 122:5–10 (Marks).

395. Ms. Marks believed Mr. Hall's statement on the call "might be just one more bogus allegation." Tr. Vol. XV 125:2–11 (Marks).

396. Ms. Marks recognized that, at least in 2021, there were a lot of allegations about Georgia elections that lacked credibility. Tr. Vol. XV 125:12–15 (Marks).

397. Ms. Marks did not contact SullivanStrickler after finding out about the January 2021 incident. Tr. Vol. VI 223:22–224:8 (Marks).

398. Ms. Marks' recorded phone call with Scott Hall was first provided to Defendants on February 24, 2022 during the deposition of Gabriel Sterling. Tr. Vol. XV 124:6–19 (Marks).

399. Before the phone call was provided to the Secretary's office, it had no knowledge of the Coffee County breach by SullivanStrickler. Tr. Vol. III 252:2–4 (Germany).

400. No one informed Investigator Blanchard of a phone call regarding the breaches of Coffee County equipment before April 2022. Tr. Vol. VI 269:8–11 (Blanchard).

401. The Secretary's office did not consider Scott Hall to be credible. Tr. Vol. III 279:11–280:1 (Germany); Tr. Vol. IV 62:8–18, 44:17–21 (Germany).

402. Dr. Halderman's analysis of the images taken by SullivanStrickler did not show any malware was installed. Tr. Vol. VIII 85:15–87:8 (Halderman).

403. While claiming that the Coffee County breach increased the risk to Georgia elections, Dr. Halderman could not quantify that additional risk. Tr. Vol. VIII 87:10–19 (Halderman).

404. Dr. Halderman also believes that no inspection would ever conclusively show if malware was installed in Coffee County. Tr. Vol. VIII 87:25–88:3 (Halderman).

405. All Coffee County equipment that was imaged by SullivanStrickler has been replaced. Tr. Vol. XI 84:14–19 (Evans).

(b) Spalding County.

406. The Spalding County Election Board reached out to the Secretary's office in 2021 after removing their prior elections director and requested assistance. Tr. Vol. XII 47:6–15 (M. Barnes).

407. The Secretary's office initially performed an acceptance test but then decided to replace the EMS. Tr. Vol. XII 47:16–25 (M. Barnes).

408. The issues in Spalding County were resolved short of opening a formal investigation. Tr. Vol. XVI 112:23–113:21 (Sterling).

(c) Ware County.

409. Plaintiffs attempted to introduce, through cross-examination of Messrs. Kirk and Sterling allegations of unauthorized access in Ware County. Tr. Vol. XIII 189:08–190:14 (Kirk); Vol. XVI 53:04–54:23 (Sterling).

410. Mr. Kirk professed no knowledge of the matter and testified that he did not report the matter to the IIRC (purportedly a federal agency which does not exist). Tr. Vol. XIII 189:08–190:14 (Kirk).

411. Mr. Sterling explained that he recalled an allegation that equipment had been taken and removed from the Ware County elections office but that the Secretary's Office was informed all equipment was

accounted for at the county and determined the allegation to be unfounded. Tr. Vol. XVI 53:04–53:23 (Sterling).

412. The Court finds that it lacks direct evidence of this allegation pertaining to Ware County or even any concrete circumstantial evidence on the matter. Nonetheless, the only evidence adduced at trial showed the allegation to be unfounded.

(d) Butts County.

413. In rebuttal, Plaintiffs offered an exhibit purporting to indicate unauthorized access being sought in Butts County. Tr. Vol. XVI 164:16–167:03; PX 632. However, the Court cannot accept for its truth the allegation made in PX 632 and Plaintiffs failed to present any testimony on this matter at trial. As such, the exhibit and allegation are not substantive evidence the Court is considering in this order.

(e) Halderman testimony about breaches.

414. Finally, it is significant to note that Plaintiffs' experts did not initially rely on breaches of the election system for their claims about the existence of vulnerabilities. Dr. Halderman testified that information needed to hack the BMD was available prior to the breach of Coffee County's election system. Tr. Vol. VIII 43:3–9 (Halderman).

415. Further, the Coffee County breach did not significantly change the landscape of threats because the Dominion software was released in other

contexts from other states as well. Tr. Vol. VIII 43:10–45:25 (Halderman). That included a release of Antrim County, Michigan software where Dr. Halderman previously found no basis to question the election results. *Id.*

IV. Expert witness testimony.

416. Each side presented multiple expert witnesses in support of their position.

A. Ben Adida, Ph.D.

417. Dr. Ben Adida is the co-founder and executive director of VotingWorks, a 501(c)(3) nonprofit which is a vendor of voting equipment and election auditing software and support. Dr. Adida, through VotingWorks, presently works with jurisdictions in Mississippi and New Hampshire with respect to voting machine technology, and nine states—including Georgia—with respect to election auditing. Tr. Vol. XII 138:04–139:07 (Adida); DX 1244. All of VotingWorks’ software and voting equipment is open source, meaning that the source code of VotingWorks’ BMDs, scanners, election management servers, and audit software is publicly available, and available at no charge to those accessing it. Tr. Vol. XII 206:12–19; 207:04–09; 274:04–05; 138:20–139:07 (Adida). VotingWorks is, however, compensated by jurisdictions who use their support for the implementation of audits. *Id.* at 206:24–207:02 (Adida).

418. Dr. Adida holds a Bachelor of Science and Master of Engineering in computer science from the Massachusetts Institute of Technology and a Ph.D., also from MIT, in Cryptography and Information Security where his studies primarily focused on election security. After obtaining his Ph.D., Dr. Adida was a Post-Doctoral Fellow at Harvard University where he developed a web-based, cryptographic voting system, and later became a member of the research faculty at Harvard Medical School focused on privacy and security of health records. Tr. Vol. XII 141:08–141:21 (Adida); DX 1244.

419. Following his academic studies and subsequent related work on the faculty at Harvard Medical School, Dr. Adida was the Director of Engineering at Mozilla, the nonprofit organization which produces the Firefox web browser, and Square, an international payment-processing and financial services company, then the V.P. of Engineering at Clever, an education technology company. In all of these roles, Dr. Adida's work and responsibilities focused on data privacy and security. Tr. Vol. XII 142:04–19 (Adida); DX 1244. During this time as well, Dr. Adida continued to be involved in the advancement and study of voting technology. Tr. Vol. XII 143:02–21 (Adida).

420. In 2018, Dr. Adida left private industry and co-founded VotingWorks, becoming its Executive Director. Tr. Vol. XII 143:02–21 (Adida); DX 1244. VotingWorks' development of its Arlo software—utilized to

support risk-limiting audits—was supported by and funded, in part, by the Department of Homeland Security’s Cybersecurity and Infrastructure Agency (CISA). Tr. Vol. XII 139:23–140:08 (Adida). In the auditing space, nearly every jurisdiction presently conducting risk-limiting audits. Tr. Vol. XII 153:03–04. Georgia is one of those jurisdictions, having engaged Dr. Adida and VotingWorks since 2019, in the lead up to the 2020 election cycle. Tr. Vol. XII 140:12–19 (Adida).

421. Throughout his academic career and time in private industry, Dr. Adida has published academic research on voting systems and voting security, and participated in or given numerous academic talks, presentations, and conferences concerning election auditing and security. Tr. Vol. XII 143:25–144:13 (Adida).

422. While not specifically retained or compensated for the purpose of litigation, Tr. Vol. XII 140:24–141:07 (Adida), Dr. Adida testified as both a fact witness—concerning his work and the conduct of election audits in Georgia—and as an expert witness in the field of election audits, their implementation, and their relation to election systems security. Tr. Vol. XII 145:06–14 (Adida). At trial, Plaintiffs objected to testimony from Dr. Adida concerning election system security and the relation of audits thereto, *id.* at 145:15–146:04 (Adida), but the Court finds Plaintiffs’ cross-examination of Dr. Adida elicited testimony on that very same matter without any motion to

strike such testimony. As such, to the extent testimony on matters to which Plaintiffs objected under Federal Rule of Civil Procedure 26 was elicited in the course of Plaintiffs' cross-examination, Plaintiffs have opened the door to the testimony and thus waived their objection to that testimony. In any event, the Court credits Dr. Adida's testimony as follows.

423. A risk-limiting audit (RLA) is a statistical procedure which allows for the sampling of ballots cast in an election to confirm the outcome of that election as reported by the scanners and tabulators. Tr. Vol. XII 150:25–151:17 (Adida). It does so by comparing a manual count of the human-readable portion of the statistical sample of ballots against the outcome reported by the scanners and tabulators. Tr. Vol. XII 152:13–21 (Adida).

424. RLAs can detect misconfiguration or malfunction of scanners or even a malicious attack on a scanner. Tr. Vol. XII 152:13–18 (Adida).

425. In Dr. Adida's opinion, an RLA can and should be conducted on any election utilizing a voting system with voter-verifiable paper ballots, i.e. whether utilizing a hand-marked ballot or a ballot printed from a BMD. Tr. Vol. XII 151:22–152:09 (Adida). Contrary to Dr. Stark, Dr. Adida testified that the use of BMDs in an election does not discount the value of an RLA which, pertinent to those conducted in Georgia, always rely upon the human-readable text of the ballot. *Id.* at 155:08–12 (Adida).

426. In 2017, Colorado became the first state in the country to conduct an RLA on a statewide basis. Tr. Vol. XII 153:12–14 (Adida). 2020 was the first year any state other than Colorado carried out a statewide RLA, and that state was Georgia. *Id.* at 153:12–16 (Adida).

427. Dr. Adida testified that presently, he anticipates some or all jurisdictions in ten states will conduct an RLA, and that Georgia will be one of only six states that are expected to carry out a statewide RLA in the 2024 election cycle. Tr. Vol. XII 153:17–154:03 (Adida). Dr. Adida further testified that, practically, conducting an RLA in an all vote-by-mail state, like Colorado, is a lot easier than conducting an RLA in a state like Georgia with more of a mix of mail and in-person voting. *Id.* at 154:11–17 (Adida).

428. Dr. Adida testified that there are three primary forms an RLA can take: ballot polling, batch comparison, and ballot comparison audits. Tr. Vol. XII 155:22–24 (Adida). These audits range in the degree of their complexity and the number of ballots required to be audited according to the statistical formula. The simplest audit to run, though requiring the review of more ballots, is the ballot polling audit which directly compares the overall outcome to the ballots selected in the sample. *Id.* at 156:02–11 (Adida).

429. Ballot comparison audits, on the other hand, compare the digital record of the ballot from the scanner (*i.e.*, how the scanner counted that particular ballot) with review of the human-readable text on that same

individual ballot. Tr. Vol. XII 156:16–22 (Adida). These are the most statistically powerful audits in that it requires review of a smaller number of ballots by a one-to-one comparison. *Id.* at 157:18–21 (Adida). In order to conduct these types of audits, the voting system must be capable of imprinting identifying numbers after the ballot has been scanned. *Id.* at 156:23–157:03 (Adida). Practically speaking, however, in Dr. Adida’s experience ballot comparison audits can only be carried out in all-vote-by-mail states because central scanning of all ballots permits the imprint of the necessary identifying numbers without subsequently re-shuffling or mixing the order of the ballots when they are stored. *Id.* at 157:04–17 (Adida).

430. Dr. Adida testified that batch comparison audits form a middle ground of auditing: they require the review of fewer ballots than the ballot polling audit, but do not require the imprint of unique identifiers nor the same level of organization and tracking as required in ballot comparison audits. Tr. Vol. XII 158:08–13 (Adida). Rather, to conduct these audits a jurisdiction must identify batches of groups of ballots, and the audit then conducts a one-to-one comparison of batch counts rather than a one-to-one comparison of individual ballots. *Id.* at 158:01–07 (Adida). These audits are still more challenging to operationalize than ballot polling audits, but are also more statistically powerful, enabling the review of fewer total ballots. *Id.* at 158:10–18 (Adida). He testified that in his experience through

VotingWorks, these batch comparison audits are the best-in-class audit that also can practically be run today. *Id.* at 158:25–159:02 (Adida).⁸

431. Dr. Adida testified that in 2020, Georgia had prepared and intended to conduct a ballot polling audit with a risk limit of 10%. Tr. Vol. XII 171:10–16 (Adida). With the Secretary’s selection of the 2020 Presidential Election for the audit, and the tightness of the margin in that contest, a risk-limit of 10% would have required review a random selection of 1.7 million ballots of the 5 million ballots cast, a process which would likely lead to errors. *Id.* at 171:17–172:04 (Adida). To minimize errors, the Secretary instead preemptively determined the audit should review *all* ballots cast, which reflects a risk-limit of zero and the state carried out that audit. *Id.* at 172:05–173:07 (Adida).

432. By 2022, however, Dr. Adida testified that improvements in ballot management processes seen throughout the state enabled the state to move to batch comparison audits. Tr. Vol. XII 176:22–24; 177:15–19; 178:13–180:02 (Adida). Moving forward into 2024, two additional things have changed in addition to the use of batch comparison audits: (1) the

⁸ Regardless of the type of audit run, all ballots (whether cast in person or by mail) form the basis of the RLA, the form of casting the ballot only relates to the central receiving point for the purpose of individually stamping and then identifying a ballot in a ballot comparison audit. Tr. Vol. XII 160:05–17 (Adida).

requirement that *all* counties participate in the audit by identifying additional batches in each county to ensure a batch is selected when that county may otherwise be missed by the statistical sample, *id.* at 180:13–181:01 (Adida); and (2) a publicly available and verifiable hash function which verifies the data selected for auditing by the Arlo software, *id.* at 181:02–24 (Adida).

433. On cross-examination, counsel for the Coalition Plaintiffs claimed that a change in the law “remove[d] the Secretary” from the process of selecting a race to audit and that each individual county would “get to choose which race to audit every year.” Tr. Vol. XII 232:25–233:10 (Adida); *see also* 176:25–177:10 (Adida). However, Dr. Adida was unaware of this change—at least in the form the change was presented to him by Plaintiffs’ counsel—and Dr. Adida testified that he anticipated a statewide RLA would, in fact, be carried out in Georgia in 2024. Tr. XII 153:25–154:03 (Adida). The Court thus cannot find as a matter of fact that any change in Georgia law will substantively change this process. Indeed, the relevant code section, O.C.G.A. § 21-2-498 (as amended in 2023), still provides that “[l]ocal election superintendents shall conduct precertification tabulation or risk-limiting audits ... in accordance with requirements set forth by rule or regulation of the State Election Board.” And the corollary rule, which was presented to Dr. Adida at trial, Ga. Comp. R. & Regs. r. 183-1-15-.04, itself has not changed at

all, requiring “each county [to] participate in a statewide risk-limiting audit” as instructed by the Secretary.

434. As to the purpose and function of RLAs in relation to election security, Dr. Adida testified that the RLA is “critical” to checking the tallying process in a way that is not dependent on the software itself and that every state should be running an RLA. Tr. Vol. XII 182:19–183:8 (Adida). Relatedly, Dr. Adida noted that the paper ballots on which an RLA is conducted must be voter-verifiable and that the BMD ballots utilized in Georgia are voter-verifiable given the presence of the human-readable text on the ballot. Tr. Vol. XII 199:18–200:13 (Adida). In this vein, Dr. Adida strenuously disagrees with Dr. Stark’s opinion that auditing BMD-based elections do not meaningfully increase confidence in the outcome explaining that most voters are capable of verifying their ballots in Georgia, making the RLA worthwhile and meaningful. *Id.* at 202:20–203:4 (Adida).

435. Dr. Adida further noted that the RLA will catch a mismatch between the human-readable text and the QR Code. Tr. Vol. XII 200:22–201:10; 208:22–25; 210:07–16 (Adida). While Dr. Adida acknowledged that this is the case only as it pertains to the race that is being audited, *id.* at 201:13–15 (Adida), he also noted that all voting systems in the country suffer from the practical difficulty of auditing more than one election and that

Colorado is the only state in the country which routinely audits more than one contest, *id.* at 201:20–202:10 (Adida).

436. On cross-examination, Plaintiffs elicited convincing testimony from Dr. Adida as to why auditing of a single election can provide confidence in other elections on the same ballot. First, Dr. Adida explained that, from a practical perspective, the confidence instilled by confirming the correct tabulation in one contest lends itself to confidence in the tabulation in other contests because, more often than not, tabulation errors are typically the result of, for example, configuration errors or dirt on the scanner, which would mean the errors are linked and would appear in multiple contests. Tr. Vol. XII 213:22–214:20 (Adida). Second, Dr. Adida noted that in the instance of malware targeting one election, as a practitioner in the field, the more likely target of such malware is at the top of the ticket, *id.* at 214:23–215:06 (Adida), which is consistent with at least one factor the Secretary is directed to consider in determining the race to select for auditing. Ga. Comp. R. & Regs. r. 183-1-15-.04(1)(3)(b). Dr. Adida further noted that even if the hypothetically tampered-with election was not audited, an “indelible record” remains which can be audited at any point to reveal a mismatch in the human-readable text and QR Code. *Id.* at 214:23–215:06 (Adida).

437. Dr. Adida further provided persuasive testimony as to voters' review of their ballots to protect against a hack which alters the human-readable text, again on cross-examination.

438. First, Dr. Adida testified regarding the findings of Bernhard and Halderman with respect to the rate of voters' verification of ballots, explaining that while study participants in a mock election did not effectively review their ballots in the absence of any intervention, by prompting voters to review their ballots, posting signage, and educating the public, that rate of review increased significantly such that 85% of voters detected problems with their BMD ballots. Tr. Vol. XII 224:05–225:02 (Adida). Dr. Adida further noted that he understood the State does in fact have processes in place requiring those prompts and Plaintiffs presented no contrary evidence. *Id.* at 281:05–18; 237:11–17 (Adida). And he testified that these prompts for review are similar in kind to the instructions to voters completing hand-marked ballots as to the manner in which they fill out their ballots. *Id.* at 218:15–22 (Adida).

439. Second, Dr. Adida noted the situation in Northampton, Pennsylvania, a jurisdiction he—through VotingWorks—works with on election auditing, where voters noticed errors in the printed text on their BMD ballots, on a down-ballot yes-or-no judicial contest, within fifteen minutes of polls opening. Tr. Vol. XII 217:18–218:06; 256:25–257:05; 268:15–

270:03 (Adida). Dr. Adida noted that this was “real-world confirmation that voters are really checking their ballots,” even on a BMD system that “has probably one of the worst ballots for voter verification on the market.” *Id.* at 217:18–218:06 (Adida). In light of this real-world confirmation, Dr. Adida testified that he was even more confident that voters can and do check their ballots printed on a BMD. *Id.* at 256:25–257:05 (Adida).

440. Third, Dr. Adida responded on cross-examination to the idea that a malicious hack altering the printed text may not affect every ballot, as was the case with the error in Northampton. When asked by counsel for Curling Plaintiffs whether a hack altering only one in every 500 or 1,000 votes, for example, Dr. Adida explained that such a hack could, at most, sway a 0.1 or 0.2 percent margin in an election, which would require the hacker’s advance knowledge of the tightness of that particular contest, and an assumption that even if only half of voters are checking their ballots, their votes would not be affected or they would not notice. Likewise, Dr. Adida found it unrealistic that such a sophisticated hacker would risk targeting a low-interest, down-ballot race as counsel hypothesized. Nonetheless, as Dr. Adida stated, a more realistic scenario would be an attempt to swing an election by modifying one, two, or three percent of the vote, which—assuming the rate of review in the UGA study—would mean that 0.5% to 1% of voters (approximately 25,000 to

50,000 voters in a presidential general election) would notice and report the issue, as was the case in Northampton. Tr. Vol. XII 258:18–259:15 (Adida).

441. In sum, Dr. Adida convincingly testified that the proper inquiry into voter verifiability to support the conduct of RLAs was not whether every single voter checked their ballot, but rather that enough voters do so to give higher confidence that the machines are behaving properly. Tr. Vol. XII 229:06–17 (Adida). Indeed, as the Bernhard-Halderman studied shows, even if only half of voters are checking their ballots, the “chance that a BMD would get away with cheating drops precipitously.” *Id.* It is in this manner that the State’s conduct of RLAs relates to the question of malware (or even just misconfigurations): that RLAs represent the “final safety net of a good voting system,” one where the “voter[s] are checking their ballot, and ... the RLA [is] checking the tabulation.” *Id.* at 285:24–286:05 (Adida).

442. In the same vein, Dr. Adida testified to the problems he has seen in his role with a primarily hand-marked ballot system, where the BMD may be ignored and not maintained, such that voters with disabilities necessitating their use do not get a real opportunity to vote. Tr. Vol. XII 231:23–232:02 (Adida). In this situation too, the voters who must use the BMD are also deprived of the protection afforded to them in a scenario where BMDs are used by all: that the more conscientious voters reviewing their ballots are helping to protect the less conscientious voters—or, in this case,

the voters less-able to independently verify their ballots. *Id.* at 236:04–06 (Adida).

443. The Plaintiffs sought to impeach the credibility of Dr. Adida by probing his bias on the basis of (1) VotingWorks’ status as a contractor with the State and (2) VotingWorks making BMDs. The Court finds this unconvincing. While VotingWorks has been paid by the State for their assistance and expertise in auditing, they hold no contract with respect to the voting machines and, in fact, Dominion—the State’s vendor for election equipment—is a competitor with VotingWorks. In any event, Dr. Adida, without equivocation, stated that his opinions were in no way swayed by either fact and that in his view and that of his company, “wherever we think that we are defending truth in elections, even if that benefits a competitor, we’re going to do it.” Tr. Vol. XII 274:01–14 (Adida).

444. The Court notes one last area of inquiry by Plaintiffs into a purportedly inconsistent statement of Dr. Adida: that Dr. Adida tweeted that he “always recommends [an election system of] hand-marked paper ballots.” Tr. Vol. XII at 277:23–278:01 (Adida). The Court finds first of all that Dr. Adida’s professional recommendation of voting systems is not at issue in this case, rather the inquiry is whether the existing Dominion BMD System utilized in Georgia—one selected prior to Dr. Adida’s engagement—is constitutionally deficient. In any event, the Court further notes the peculiar

circumstances surrounding this matter: that counsel for Curling Plaintiffs, practicing before this court *pro hac vice*, publicly accused Dr. Adida of corruption in social media which, understandably, caused him to become rattled. Not only did Dr. Adida credibly testify on this issue and others in his testimony, the Court also finds that such conduct is unbecoming of counsel practicing before this Court and will not condone the baiting of witnesses on social media in an attempt to generate fodder for cross-examination. Finally, the social media post at issue was shown to Dr. Adida without the context of the comment from the “lawyer” he was responding to and the State moved to submit the entire thread. *Id.* at 276:18–277:08 (Adida). While Plaintiffs’ counsel stated, on the record, he was happy to put up anything counsel wanted, *id.* at 277:14–17 (Adida), he declined to do so though he confirmed that Plaintiffs “have no objection to the entire tweet thread being submitted.” *Id.* at 279:04–05 (Adida). That being the case, the Court accepts Defendants’ submission the following trial day of DX 1249, notwithstanding Plaintiffs’ counsel’s subsequent change-of-heart. Tr. Vol. XIII 06:19–09:08 (Adida).

B. Juan Gilbert, Ph.D.

445. Dr. Juan Gilbert holds a Bachelor of Science degree in Systems Analysis from Miami University along with a Master of Science and Doctor of Philosophy in Computer Science from the University of Cincinnati. DX 1254 at 3, Tr. Vol. XIV(A) 6:06–08 (Gilbert).

446. Dr. Gilbert began his academic career at Auburn University as an Assistant Professor in 2000, later obtaining the ranks of Associate Professor and full Professor of Computer Science over the course of nine years there. DX 1254 at 77, Tr. Vol. XIV(A) 6:11–13 (Gilbert).

447. Dr. Gilbert then held the position of Professor of Computer Science at Clemson University and was Chair of the Division of Human-Centered Computing within Clemson's School of Computing from 2009 until 2014. DX 1254 at 77, Tr. Vol. XIV(A) 6:14–16 (Gilbert).

448. Following his time at Clemson, Dr. Gilbert joined the University of Florida as an endowed Associate Chair and full Professor and then endowed Professor and Department Chair of the Computer & Information Science & Engineering Department. DX 1254 at 77, Tr. Vol. XIV(A) 6:17–20 (Gilbert).

449. Dr. Gilbert's research and study has a particular focus in the field of Human-Computer Interaction ("HCI"), which pertains to the design and evaluation of technologies relevant to the humans interacting with those technologies. Tr. Vol. XIV(A) 7:08–15 (Gilbert).

450. At the University of Florida, Dr. Gilbert directs the Computing for Social Good Lab which has active projects in the fields of HCI and artificial intelligence, with the lab's longest-running project being voting technology research and development. Tr. Vol. XIV(A) 6:23–7:04 (Gilbert).

451. During Dr. Gilbert's academic career, he developed an open-source voting system called Prime III, the first universally designed voting system which has been used in federal, state, and local elections. Tr. Vol. XIV(A) 7:19–8:17 (Gilbert).

452. Dr. Gilbert has authored or co-authored numerous published, peer-reviewed articles in the field of voting systems and HCI with respect to voting systems, *see, e.g.*, DX 1254 at 10–15 (nos. 76, 41, 35, 31, 25, 23, 18), and has delivered numerous invited lectures, keynote presentations, and participated in peer-reviewed conference proceedings in the same field, *see, e.g.*, DX 1254 at 18–70.

453. Dr. Gilbert has been recognized by two Presidents of the United States for his accomplishments, receiving the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring in 2011 and the National Medal of Technology and Innovation in 2023. Tr. Vol. XIV(A) 11:12–16 (Gilbert).

454. Dr. Gilbert has provided expert testimony concerning voting systems technology to Congress, DX 1254 at 46 (no. 293), 62 (no. 105), the Presidential Commission on Election Administration, DX 1254 at 53 (no. 214), the U.S. Election Assistance Commission, DX 1254 at 45 (no. 298), 51 (no. 234), 54 (no. 197), 58 (no. 155), 60 (no. 129), and has previously been qualified and provided expert testimony in the field of “secure voting

systems” before the United States District Court for the District of Maryland, *Nat’l Fed. of the Blind, Inc., et al. v. Lamone, et al.*, No. 1:14-cv-01631-RDB, ECF No. 44 at 112:15–149:05 (Aug. 18 2014) (bench trial testimony).

455. Dr. Gilbert was identified and selected as a subject-matter expert by the National Academies of Science, Engineering, and Medicine to serve on its Committee on the Future of Voting: Accessible, Reliable, and Verifiable Technology, Tr. Vol. XIV(A) 12:02–15:02 (Gilbert), DX 728 at 6–7 (v–vi), which was created to: (1) document the current state of play in terms of technology, standards, and resources for voting technologies; (2) examine the challenges arising out of the 2016 federal election; (3) evaluate advances in technology currently and soon-to-be available that can improve voting; and (4) offer recommendations that provide a vision of voting that is easier, accessible, reliable, and verifiable. DX 728 at 25 (4).

456. The Committee produced the report “Securing the Vote: Protecting American Democracy” (the “NASEM Report”), a Consensus Study Report which “document[s] the evidence-based consensus[,] ... has been subjected to a rigorous and independent peer-review process, and [] represents the position of the National Academies on the statement of task.” DX 728 at 5.

457. Defendants offered Dr. Gilbert’s testimony at trial as rebuttal expert testimony in the fields of Voting System Technology and Security, and

Human-Computer Interaction. Tr. Vol. XIV(A) 19:04–07 (Gilbert). Plaintiffs offered no objection to Dr. Gilbert’s testimony in the realm of HCI but objected to the extent that Voting System Technology and Security encompassed cybersecurity, specifically. *Id.* at 19:08–10 (Gilbert). The Court recognizes Dr. Gilbert possesses expertise in elections systems technology and security, having developed, studied, and placed into operation voting technology, but also notes that neither Defendants, no Dr. Gilbert himself, assert he holds expertise in cybersecurity specifically. *Id.* at 31:14–33:16 (Gilbert). The Court thus permitted Dr. Gilbert’s testimony in the realm of HCI (for which no objection was offered), and voting systems and security, with the caveat that specific cybersecurity testimony which may overlap with those qualifications would not be permitted, *id.* at 33:13–22 (Gilbert), and credits the following testimony of Dr. Gilbert.

458. Dr. Gilbert testified that the NASEM Report accurately states the scientific consensus concerning the use of voting systems relevant to this case, and further testified that he was unaware of any similar consensus report which differs in its conclusions. Tr. Vol. XIV(A) 38:16–18; 39:06–08 (Gilbert).

459. Specifically, Dr. Gilbert testified to the NASEM Report’s recommendation that “Elections should be conducted with human-readable paper ballots. These may be marked by hand or by machine (using a ballot-

marking device); they may be counted by hand or by machine (using an optical scanner). Recounts and audits should be conducted by human inspection of the human-readable portion of the paper ballots. Voting machines that do not provide the capacity for independent auditing (e.g., machines that do not produce a voter-verifiable paper audit trail) should be removed from service as soon as possible.” DX 728 at 27–28 (6–7); Tr. Vol. XIV(A) 38:02–24 (Gilbert). The Court notes that no party disputes that Georgia’s BMD System conforms with this recommendation.

460. Dr. Gilbert further testified to the concept of software independence, *i.e.*, that an undetected change in voting system software cannot cause an undetectable change in the outcome of an election run on that voting system, and the interrelation of that concept with the NASEM Report. Tr. Vol. XIV(A) 57:07–58:03 (Gilbert). In Dr. Gilbert’s opinion the Georgia BMD System is software independent. *Id.*

461. Dr. Gilbert further provided extensive testimony regarding voter verification of ballots on the Georgia BMD System in rebuttal to the opinions of Plaintiffs’ experts.

462. Specifically, Dr. Gilbert testified that in his opinion, studies like the one conducted by Halderman and Bernhard are not reflective of real-world outcomes for two primary and interrelated reasons: the Hawthorne

effect in relation to study participants and the human condition as it concerns a real-world election.

463. On the Hawthorne effect, Dr. Gilbert described this concept generally as being where individuals who are participating in a study can and will behave differently when they know that they are being studied. Tr. Vol. XIV(A) 59:15–25 (Gilbert).

464. As it relates to vote-flipping studies conducted with voting technology, Dr. Gilbert noted his recent experience with the Hawthorne effect performing a similar study on his new transparent BMD technology: that he observed 41% of participants in his study that, when asked afterward, demonstrated awareness that one of their votes was flipped but did not speak up or affirmatively offer that a vote was flipped until they were specifically prompted. *Id.* at 59:11–61:09 (Gilbert). This 41% was in addition to the 35.6% of participants who affirmatively raised on their own that vote-flipping had occurred. *Id.* at 100:08–25 (Gilbert).

465. Thus, Dr. Gilbert concludes, the 6% of study participants in the Bernhard and Halderman study who affirmatively raised their vote(s) having been flipped does not account for the number of participants who noticed their vote(s) had been flipped but did not speak up because the participants' behavior was affected by their knowledge that they were participating in a

study, and the number of such participants there is unknown because the question was not asked of participants. Tr. Vol. XIV(A) 59:11–60:10 (Gilbert).

466. As the only expert qualified in the field of HCI, Dr. Gilbert also provided persuasive testimony as to the impact of the human condition on an attempt to flip votes in a real election; what he referred to as “the power of one.” The power of one, has he described it, refers to the idea that it only takes one person to notice their vote being flipped (whether maliciously or inadvertently by, for example, mis-programming) and inform officials to detect the error. Tr. Vol. XIV(A) 61:16–62:05 (Gilbert).

467. Dr. Gilbert pointed to an issue in Northampton, Pennsylvania, which demonstrated this concept in the real world. There, due to an error in programming, voters’ selections on the BMDs utilized in that jurisdiction were flipped on the ballot summary for a down-ballot contest. In that instance, the issue was noticed by a voter and reported very early on in voting. Tr. Vol. XIV(A) 61:16–62:05 (Gilbert). Dr. Gilbert opined that this instance is akin to Dr. Halderman’s theoretical hack in which both the QR Code and human-readable summary are flipped to something different than the voter’s selection. *Id.* at 63:02–06 (Gilbert). In light of this, Dr. Gilbert opines that there is no minimum percentage of voters reviewing their ballots necessary to protect against this variety of hack, since in a real election only

one voter need notice to alert election officials and—oftentimes—voters are quite vocal about this. *Id.* at 63:04–09 (Gilbert).

468. Dr. Gilbert further testified about the second variety of hacking a BMD ballot—in which only the QR Code, but not the printed text is altered. Dr. Gilbert opined that if the QR code contains the wrong vote information, a risk-limiting audit can detect that issue though it will not detect the aforementioned hack switching both the QR Code and the printed text. Tr. Vol. XIV(A) 62:17–62:23 (Gilbert). Dr. Gilbert further noted that the Dominion BMD System provides some additional advantage in relation to this theoretical hack: that evidence of the hack will be written in stone on the ballot and susceptible to revelation in an investigation. *Id.* at 62:20–23 (Gilbert).

469. Dr. Gilbert further demonstrated the ease with which a paper ballot can be hacked with a sharpie in two different ways: an overvote hack (in which a malicious actor adds an additional vote to an already voted contest to cause that vote to not be counted) and an undervote hack (in which a malicious actor adds a vote to a contest that the voter skipped—whether intentionally or not—to give his preferred candidate a vote). Tr. Vol. XIV(A) 65:05–65:16; 75:22–79:07 (Gilbert). Neither of these hacks can occur on the Dominion BMD System utilized in Georgia. *Id.* at 65:18–66:06 (Gilbert).

470. While Dr. Halderman acknowledged such hacks could occur after a voter has cast their ballot, he opined that the scanned ballot images would prevent the attack from being effective. Tr. Vol. VIII 101:13–102:09 (Gilbert). As Dr. Gilbert pointed out, however, relying on the scanned image as the ballot of record would violate the principles of the NASEM Report, essentially reverting to the same scenario as with DRE voting machines. Tr. Vol. XIV(A) 79:08–22 (Gilbert).

471. In any event, Dr. Gilbert pointed out that Dr. Halderman claimed to have successfully decrypted the ballot images stored on media within the scanner, in which case a sophisticated hacker could alter those files. Tr. Vol. XIV(A) 80:22–81:04 (Gilbert). He further noted that even an unsophisticated hacker could simply delete the files and encryption would do nothing to protect those files; what he described as the “chaotic scenario.” *Id.* at 81:03–16 (Gilbert). In such an instance, hand-marked ballots could be altered and an election hacked by anyone with access to the system files and a sharpie. *Id.* at 81:17–82:01 (Gilbert).

472. While Dr. Gilbert testified that he was not offering an opinion that hand-marked paper ballots cannot be utilized due to security concerns, Tr. Vol. XIV(A) 82:02–82:06 (Gilbert), he did note issues with such a system that, in his opinion, raised security or policy concerns.

473. Specifically, Dr. Gilbert noted that in a scenario where hand-marked ballots are the primary method of voting, with BMDs utilized primarily by disabled voters, disabled voters—who may be unable to review their physical ballot or otherwise require additional assistance—become an easier target for a malicious actor. Tr. Vol. XIV(A) 64:20–23 (Gilbert).

474. Further, Dr. Gilbert noted that hand-marked ballots are not free from error themselves, and generally the research he reviewed concluded that 11% of hand-marked paper ballots cast in real elections contain an error. Tr. Vol. XIV(A) 66:11–16 (Gilbert). Specific to Georgia, Dr. Gilbert noted that the 21st Century Report on voting technology found a disproportionate rate of undervotes in precincts with substantial minority populations. *Id.* at 67:23–25 (Gilbert). And due to voter secrecy concerns, programming a precinct scanner to reject undervotes is impractical because they may, in fact, be legitimate undervotes. *Id.* at 69:12–20 (Gilbert).

475. Finally, as to the purported injury in this case, Dr. Gilbert testified that he was not aware of any voting system which both preserves ballot secrecy and also confirms the counting and casting of individual votes. Tr. Vol. XIV(A) 113:05–113:16 (Gilbert). Instead, Dr. Gilbert pointed the Court to the statistical auditing methods like risk-limiting audits. *Id.* No witness of Plaintiffs' has identified a voting system which confirms both

confirms ballot secrecy and confirms that individual votes are counted and cast as the voter intended.

C. Alex Halderman, Ph.D.

476. Dr. J. Alex Halderman is a Professor of Computer Science and Engineering at the University of Michigan, describing “[his] work [a]s about computer security and privacy.” Tr. Vol. VII 107:23–24, 108:1 (Halderman).

477. Over Defendants’ objection, the Court allowed Dr. Halderman to testify about whether the Dominion ICX BMD utilized in Georgia’s elections systems had vulnerabilities. *See* Tr. Vol. VII 112:1–127:7 (Halderman).

478. Specifically, while Defendants’ (i) “request[ed] what the boundaries of what Dr. Halderman is being offered as an expert in,” Tr. Vol. VII 112:20–22 (Halderman), (ii) confirmed Dr. Halderman did not have any specialized training in the analysis of risks outside of the context of cybersecurity, and confirmed that “[his] training” was limited to “cybersecurity,” Tr. Vol. VII 116:25–117:2 (Halderman); and (iii) “object[ed] to any expert testimony regarding the administration of elections in Georgia,” Tr. Vol. VII 117:19–22 (Halderman), the Court, among other things, (i) directly asked Dr. Halderman “[i]s there anything else within that, Dr. Halderman, that you think you should specifically flag for purposes of clarity?” 115:8-10 (Halderman); (ii) further implored it “didn’t know if there was something else within that...[Dr Halderman] considered as embraced

within [his expertise] or that needed to be specifically identified that they agree with, obviously,” *see* Tr. Vol. VII 117:17–19 (Halderman); and finally confirmed (iii) “[w]ell, [Dr Halderman’s] going to be testifying about the malware” inserted directly into a Dominion ICX BMD to provide the Court evidence on the vulnerabilities in Georgia’s elections systems, *see* Tr. Vol. VII 124:11–12 (Halderman).

479. Dr. Halderman has a long history of advocating for his preferred election system of hand-marked paper ballots and continued that advocacy on the stand.

480. Dr. Halderman has also taken contrary positions depending on the results of elections. He testified he has recommended campaigns seek recounts in the past following close elections. Tr. Vol. VII 232:20–22 (Halderman).

481. But just days after the November 2020 election, he helped draft a letter signed by numerous experts saying there was no basis to question the results of that election. DX 67.

482. Dr. Halderman agrees that “merely citing the existence of technical flaws does not establish that an attack occurred, much less that it altered an election outcome. It is simply speculation.” Tr. Vol. VII 234:5–13 (Halderman); *see* DX 67.

483. Just as he did in the letter he authored and issued on November 16, 2020 in connection with the credibility and results of the November 2020 general election, Dr. Halderman “[a]bsolutely” agrees today “the presence of security weaknesses in election infrastructure does not by itself tell us that any election has actually been compromised.” Tr. Vol. VII 234:16–23 (Halderman); *see* DX 67.

484. In the letter he authored and issued on November 16, 2020, Dr. Halderman “refer[red] people looking for facts about election security to the National Academy of Sciences study Securing the Vote,” which “recommend[ed] paper-based systems for elections, including ballot-marking devices.” Tr. Vol. VII 234:24–235:5 (Halderman).

485. Dr. Halderman confirmed the National Academy of Sciences, Engineering, and Medicine has not published an additional paper study regarding election equipment since the time that Dr. Halderman recommended the Securing the Vote study referenced in the letter he authored and issued on November 16, 2020. Tr. Vol. VII 235:16–20 (Halderman).

486. Dr. Halderman testified he “d[idn’t] recall” if the National Academy of Sciences study identified “the most significant threat to American elections come from efforts to undermine the credibility of election results.” Tr. Vol. VII 235:21–23, 236:2 (Halderman).

487. Dr. Halderman also lacks credibility because he has offered different opinions depending on election outcomes. While testifying that he cannot trust the results of Georgia elections in this case, after the 2020 election, he found that vulnerabilities were not enough to question the results of an election.

488. When providing a report in connection with an incident in Antrim County, Michigan, during the 2020 general election, where a voter alleged election irregularities resulted from fraud in connection with the same Dominion software run in Georgia, Dr. Halderman issued a report concluding that to “[p]erform[] similar steps on the real EMS would require physical access to the computer or the hard drive, and [he was] informed that Antrim County applies physical controls to limit such access to authorized personnel.” Tr. Vol. VII 236:4–239:10 (Halderman); DX 1225 at 10.

489. Just as in Coffee County, the election equipment in Antrim County was accessed by the same third-party, SullivanStrickler, in the context of a lawsuit Dr. Halderman participated in for the purposes of providing his report. Tr. Vol. VII 239:24–240:5 (Halderman).

490. Similar to Dr. Halderman’s conclusion in this case, his report in Antrim County noted the EMS component of the Antrim election equipment was correct was missing important Windows security updates. Tr. Vol. VII 241:4–7 (Halderman); DX 1225 at 45.

491. Dr. Halderman's Antrim County report concluded, among other things, that missing software updates are frequently an unfortunate consequence of the federal certification process under which voting system vendors must obtain EAC approval for any changes to election system software, including Windows updates. Tr. Vol. VII 241:8–15 (Halderman); DX 1225 at 45.

492. Dr. Halderman's Antrim County report did not conclude that a lack of Windows updates on the EMS called the election results into question. Tr. Vol. VII 241:16–19 (Halderman); DX 1225 at 45.

493. Dr. Halderman's Antrim County report concluded that installing unapproved updates, even for critical vulnerabilities, would potentially violate the system's certification. Tr. Vol. VII 242:1–4 (Halderman); DX 1225 at 45. He agreed with that conclusion at the time of his testimony. Tr. Vol. VII 242:5–6 (Halderman).

494. Dr. Halderman agreed that sometimes federal regulatory interests would be a reason for not installing updates to election systems equipment. Tr. Vol. VII 242:15–17 (Halderman).

495. Although Dr. Halderman's Antrim County report relied on the log files in the Dominion EMS to reach the conclusion that it did not appear that the EMS had ever been connected to the internet, Dr. Halderman's testimony

confirmed this did not raise any issues that the log files could have been altered. Tr. Vol. VII 242:24–243:6 (Halderman).

496. Just as in Georgia, Antrim County election workers almost exclusively used a single Windows account that had full administrative privileges over the computer. Tr. Vol. VII 243:18–21 (Halderman).

497. Similar to his expert opinions offered in this case, Dr. Halderman concluded, and still believes today, that Antrim County had “serious vulnerabilities that should be mitigated on a priority basis, but there is no evidence that any of these problems was ever exploited in Antrim County.” 245:8–16. Just as in Georgia, “despite the presence of vulnerabilities” in Antrim County, Dr. Halderman “ha[d] no evidence that they were exploited.” Tr. Vol. VII 245:18–22 (Halderman).

498. In sharp contrast to his opinions about the 2020 election in Michigan, Dr. Halderman testified it his belief that every Georgia voter has a substantial reason to doubt their vote is going to be counted correctly when it is cast in an ICX. Tr. Vol. VII 98:9–12 (Halderman).

499. In the past, other federal courts have determine that Dr. Halderman took similar positions, saying he had no evidence of hacking but was raising concerns about possible hacking. *Stein v. Cortés*, 223 F. Supp. 3d 423, 441 (E.D. Pa. 2016).

500. This Court reaches the same conclusion: that Dr. Halderman's contradictory testimony based on the political outcome of elections removes credibility from his claims. While, as discussed below, Dr. Halderman identified potential vulnerabilities, he had no evidence any vulnerability had even been exploited. Further, while claiming after the November 2020 election that vulnerabilities cannot be the basis to question elections, Dr. Halderman himself questions every Georgia election conducted on Dominion BMDs based on vulnerabilities.

501. The Court further had the opportunity to observe Dr. Halderman's demeanor during his testimony and found him to be hesitant when asked questions about his work, including his view of elections. It is clear that Dr. Halderman is an advocate for hand-marked paper ballots, which he believes is a superior election system. But that advocacy interfered with his opinions in this case and renders his testimony singularly unhelpful to the Court. The Court assigns little weight to Dr. Halderman's opinion and testimony.

502. Dr. Halderman only was able to obtain access to the Dominion BMD and election package files analyzed with a court order. Tr. Vol. VII 53:23–54:3, 54:8–10 (Halderman).

503. Dr. Halderman spent roughly nine months, or 12 weeks, studying the equipment in connection with the opinions provided, and demonstrations performed, during the trial. Tr. Vol. VII 54:11–13 (Halderman).

504. Dr. Halderman spent additional time working on the malware demonstrated during trial after he issued his report in July 2021. Tr. Vol. VII 54:17–19 (Halderman).

505. In preparing his opinions, Dr. Halderman never personally evaluated the physical security of Dominion equipment in a county facility in Georgia, and further that any information he relied upon in this case was not a quantifiable representation of the physical security of Dominion equipment in a county facility in Georgia. Tr. Vol. VII 17:19–22, 19:6–15 (Halderman).

506. Dr. Halderman has not conducted an analysis of any Georgia county's current practices regarding CISA recommendations. Tr. Vol. VII 20:14–17 (Halderman).

507. Dr. Halderman has not personally observed Georgia voters voting on election day or any other time. Tr. Vol. VII 53:8–9 (Halderman).

508. Dr. Halderman showed two possible attacks on Dominion BMDs in Court, but only one of them involved malware—the “Bash Bunny” attack he demonstrated. Tr. Vol. VII 34:17–21 (Halderman).

509. Dr. Halderman's testimony confirmed that the non-malware demonstration he performed during trial that altered the ballot definition file

(one that swapped votes between George Washington and Benedict Arnold) would affect every ballot that was issued from that ballot-marking device after that particular attack and alter both the human-readable and QR code portions of the ballot. Tr. Vol. VII 50:6–10 (Halderman).

510. Dr. Halderman confirmed in his testimony that the vulnerability he identified in his report of placing a hardware unit between the ballot-marking device and the printer, was not a vulnerability that was part of CISA's ten listed recommendations. Tr. Vol. VII 58:13–19 (Halderman).

511. Dr. Halderman testified he has not seen malware that is self-propagating across multiple elections that would affect a Dominion BMD. Tr. Vol. VII 60:9–13 (Halderman).

512. Dr. Halderman has never designed malware that would run on both an AccuVote TSX (DRE) platform and a Dominion BMD. Tr. Vol. VII 60:19–23 (Halderman).

513. Dr. Halderman testified that if his demonstration device was plugged into a real Georgia BMD with some different election file loaded, it is not going to have a direct effect. Tr. Vol. VII 66:11–14 (Halderman).

514. Dr. Halderman testified that if he was required to compile code without access to the election libraries that were provided to him pursuant to Court order, the code would not compile with the Bash Bunny device. Tr. Vol. VII 67:2–4 (Halderman).

515. Despite performing his demonstrations and testifying to vulnerabilities in the Dominion equipment, Dr. Halderman had no evidence of hacking or manipulation of Dominion BMDs in an actual election. Tr. Vol. VII 98:2–4 (Halderman).

516. Dr. Halderman has no evidence that any vulnerability in a DRE has been exploited to alter election results in an actual election. Tr. Vol. VII 224:11-22 (Halderman).

517. Dr. Halderman did not offer any opinions that any vulnerability in the State's prior voter registration system, referred to as eNet, has been exploited to alter information in an actual election. Tr. Vol. VII 227:9–13 (Halderman).

518. Dr. Halderman has no evidence that any vulnerability in the State's prior voter registration system, eNet, has been exploited to alter information in an actual election. Tr. Vol. VII 227:13–17 (Halderman).

519. Dr. Halderman has no evidence that any malware was ever installed on eNet. Tr. Vol. VII 227:18–22 (Halderman).

520. Dr. Halderman did not offer an opinion that any vulnerability in a Dominion ICX BMD has been exploited to alter election results in an actual election. Tr. Vol. VII 227:23–228:2 (Halderman).

521. Dr. Halderman has no evidence that any vulnerability in a Dominion ICX BMD has been exploited to alter election results in an actual election. Tr. Vol. VII 228:3–229:1 (Halderman).

522. Dr. Halderman has no evidence that any vulnerability in a Dominion election management server has ever been exploited to alter election results in an actual election. Tr. Vol. VII 229:3–6 (Halderman).

523. Dr. Halderman has no evidence that any vulnerability in the State's current voter registration system, GARViS, has been exploited to alter information in an actual election. Tr. Vol. VII 229:7–11 (Halderman).

524. Dr. Halderman has no evidence that any malware has ever been installed on GARViS. Tr. Vol. VII 229:11–14 (Halderman).

525. Dr. Halderman has no evidence any vulnerability identified in his reports in this case have been exploited to alter election results in an actual election. Tr. Vol. VII 229:15–19 (Halderman).

526. Dr. Halderman has no evidence that any malware was ever installed on any Coffee County equipment. Tr. Vol. VII 229:23–230:3 (Halderman).

527. Dr. Halderman agrees that: (i) the time necessary to successfully achieve an attack is part of whether an attack is feasible; (ii) the ease with which an attacker can evade discovery through observation or audit is part of considering feasibility of an attack; and (iii) the measurement of an ability to

attack to affect enough ballots to impact the outcome of an election is part of considering feasibility. Tr. Vol. VIII 77:6–16 (Halderman).

528. Dr. Halderman testified his report does not consider how to affect or determine the number of ballots an attacker would need to alter to change the outcome of a specific election. Tr. Vol. VIII 77:20–78:1 (Halderman).

529. Dr. Halderman repeatedly affirmed during the course of his testimony that the opinion he was offering in this matter concerned “the risk going forward.” *See, e.g.*, Tr. Vol. VII 228:1–2 (Halderman).

530. Dr. Halderman testified that the presence of vulnerabilities does not mean that an election has been compromised. Tr. Vol. VII 231:24–232:1 (Halderman).

531. Neither Dr. Halderman’s report nor his testimony quantify what the level of reduction of risk would be for Georgia if all ten vulnerabilities on the list from CISA were remediated. Tr. Vol. VIII 13:10–14 (Halderman).

532. Dr. Halderman agree that risks exist everywhere: he could not even be sure if unauthorized nation-state attackers accessed information in his laboratory when the University of Michigan network suffered a period of unauthorized access for four days in August 2023. Tr. Vol. VIII 16:20–17:9 (Halderman).

533. Dr. Halderman testified he has not quantified the risks of the Dominion BMD system as compared with other election systems, only “degrees.” Tr. Vol. VIII 32:14–33:5 (Halderman).

534. Dr. Halderman didn't quantify the term “sufficient security” in his report or testimony. Tr. Vol. VIII 41:1–3, 41:8–11, 41:14–16 (Halderman).

535. Dr. Halderman is not aware of a ballot-marking device that is going to produce public evidence sufficient for people to confirm the outcome is correct. Tr. Vol. VIII 41:18–24 (Halderman).

536. Dr. Halderman agreed that even if the Secretary had inspected the equipment in Coffee County, it would not necessarily show if malware was installed because the malware could have deleted itself. Tr. Vol. VIII 87:25–88:3 (Halderman).

537. Dr. Halderman agrees that, “[o]f course,” hand-marked paper ballot systems face cybersecurity risks even if they are different than other systems. Tr. Vol. VII 231:16–19 (Halderman).

538. Dr. Halderman agreed that every computer system has vulnerabilities. Tr. Vol. VIII 7:24–8:1 (Halderman).

539. Dr. Halderman agreed that even if you had full access to every component of Dominion equipment in Georgia you could not rule out the possibility that malware was installed on that equipment. Tr. Vol. VIII 15:13–17 (Halderman).

540. Dr. Halderman testified that there are no physical security measures that Georgia counties could undertake that would completely avoid the risks from potential hackers to the ICXs. Tr. Vol. VIII 16:21–25 (Halderman).

541. Dr. Halderman believes that no county facility can ever be safe from a nation-state attacker. Tr. Vol. VIII 16:2–5 (Halderman).

542. Dr. Halderman believes that no Secretary of State facility can ever be safe from a nation-state attacker. Tr. Vol. VIII 16:6–9 (Halderman).

543. Dr. Halderman testified to his belief that there are no ballot-marking devices on the market today that can be used for all in-person voters in an election system that produces reliable results. Tr. Vol. VIII 27:15–28:12 (Halderman).

544. Dr. Halderman agrees threats to elections exist regardless of whether Georgia uses ballot-marking devices or hand-marked paper ballots. Tr. Vol. VIII 46:4–9 (Halderman).

545. Dr. Halderman testified to his belief that any election system that does not present affirmative evidence of correctness is not a secure system. Tr. Vol. VIII 55:3–7 (Halderman).

546. Dr. Halderman testified Dominion EMSs would “presumably” still be used if Georgia used his preferred hand-marked paper ballot system. Tr. Vol. VIII 74:3–5 (Halderman).

547. Dr. Halderman agreed that that an attacker with access to a county's EMS could also affect elections conducted using only hand-marked paper ballots. Tr. Vol. VIII 74:21–75:13 (Halderman).

548. Dr. Halderman testified that if Georgia used a hand-marked paper ballot system, the vulnerability of the scanner accepting photocopied ballots would still apply. Tr. Vol. VIII 81:8–11(Halderman).

549. Dr. Halderman testified if Georgia used a hand-marked paper ballot system with Dominion ICP scanners, the vulnerability would still exist, and that it is possible that a bad actor could install malware on a Dominion ICP scanner to make it incorrectly count hand-marked paper ballots. Tr. Vol. VIII 81:17–82:3 (Halderman).

550. Dr. Halderman testified that once an absentee ballot is received, it can be modified before it is fed into a scanner by an insider. Tr. Vol. VIII 101:21–23 (Halderman). Dr. Halderman confirmed this kind of hacking could be done with a pen. Tr. Vol. VIII 101:24–25 (Halderman).

551. Dr. Halderman testified that if Georgia was to place a QR code reader in each precinct, that would not address his concerns about the use of QR codes. Tr. Vol. VIII 68:1–3 (Halderman).

552. Dr. Halderman testified that if Georgia BMDs printed full-face traditional ballots instead of QR codes, that would not fully address his concerns about the use of BMDs. Tr. Vol. VIII 71:15–25 (Halderman).

553. Dr. Halderman testified that if Georgia remediated every vulnerability identified by CISA, it would still leave vulnerabilities untouched and would not eliminate the risks he identified to Georgia elections. Tr. Vol. VIII 12:12–13:9 (Halderman).

554. Dr. Halderman testified it would require EAC approval to install additional security updates on the EMS and have the system remain certified. Tr. Vol. VIII 88:13–16 (Halderman).

555. Dr. Halderman testified it was his opinion that no logic and accuracy testing could be conducted in Georgia that would always detect malware in a BMD that uses barcodes. Tr. Vol. VIII 14:2–5 (Halderman).

556. Dr. Halderman testified it was his opinion that Georgia cannot conduct an actual risk-limiting audit as long as it is using BMDs with QR codes. Tr. Vol. VIII 14:25–15:3 (Halderman).

557. Dr. Halderman testified it was his opinion there is no type of audit Georgia could conduct that can address the vulnerabilities in the Dominion ICXs that you identified. Tr. Vol. VIII 15:5–8 (Halderman).

558. Dr. Halderman testified he is not aware of any state that currently uses a risk-limiting audit that would always detect attacks that only alter the QR codes. Tr. Vol. VIII 47:25–48:3 (Halderman).

559. Dr. Halderman testified there is no type of audit that would sufficiently ensure that no malware was installed on Dominion ICXs. Tr. Vol. VIII 26:16–19 (Halderman).

D. Mr. Kevin Skoglund.

560. Mr. Kevin Skoglund testified that he is not an expert on election administration. Tr. Vol. IX 20:14–15 (Skoglund). Mr. Skoglund was not tendered by Plaintiffs as an expert in election administration, and the Court ruled that it “will not consider [Mr. Skoglund’s] testimony to the extent that it is sheerly about administrative matters to be deemed expert testimony.” Tr. Vol. IX 18:21–22; 19:7–10 (Skoglund).

561. According to Mr. Skoglund, in the field of cybersecurity, “the analysis that you do is a risk analysis where you look at the threats and the things that could do harm to whatever you are trying to protect. In this case, parts of the voting system. And then you look at the potential that those threats would be realized.” Tr. Vol. IX 86:12–16 (Skoglund). Mr. Skoglund went on to state that “you then have to weigh them against each other to decide the priority in which you want to focus on them.” Tr. Vol. IX 86:19–21 (Skoglund).

562. But when asked about his risk analysis for Georgia’s voting system, Mr. Skoglund testified, “that is not something that I have been asked to do.” Tr. Vol. IX 87:20-21 (Skoglund).

563. Mr. Skoglund believes that the ballot-marking devices, when equipped with the accessibility kit, are “a terrific and appropriate use of technology.” Tr. Vol. IX 115:2–10 (Skoglund).

564. According to Mr. Skoglund, “the North Star of cybersecurity is managing risks.” Tr. Vol. IX 35:14–15 (Skoglund). Mr. Skoglund testified that an expert has to assess “who is out there that wants to affect elections,” and “what is the likelihood they could actually do it[.]” Tr. Vol. IX 36:5–8 (Skoglund). In Mr. Skoglund’s opinion, the risk mitigations recommended by cybersecurity experts would be the same regardless of whether Georgia had a hand-marked paper ballot system. Tr. Vol. IX 113:12–19 (Skoglund); PX 471, ¶ 204.

565. According to Mr. Skoglund, insider threats are a common security challenge. Tr. Vol. IX 94:12–14 (Skoglund).

566. In regard to his testimony about the breach of Coffee County election equipment, Mr. Skoglund reviewed data captured by SullivanStrickler on January 7, 2021, security video from Coffee County’s election office, emails and text messages produced by witnesses, emails from the Defendants, and forensic copies of the Coffee County EMS and ICC. Tr. Vol. IX 21:7–17 (Skoglund).

567. Mr. Skoglund did not review any evidence of the Secretary of State’s Office authorizing the access in Coffee County, and he concluded that

there was no authorized access in Coffee County, including by the Secretary of State. Tr. Vol. IX 95:17–24 (Skoglund).

568. Mr. Skoglund did not examine the equipment in Coffee County and did not know whether any manipulation or damage occurred to the Coffee County systems during the access in January 2021. Tr. Vol. IX 100:4–6 (Skoglund). Mr. Skoglund further testified, “I did not review the Coffee County’s hardware and software directly, correct.” Tr. Vol. IX 100:20–21 (Skoglund).

569. Mr. Skoglund testified that he was not aware of any malfunctioning equipment in Coffee County after the EMS was replaced. Tr. Vol. IX 107:14–18 (Skoglund).

570. Mr. Skoglund believes that disinformation campaigns have been realized as a result of the Coffee County incident, and he has observed the Coffee County incident “used for other purposes to suggest that it is evidence of manipulated votes, vote totals, secret algorithms, a wide variety of claims.” Tr. Vol. IX 108:12–20 (Skoglund). However, Mr. Skoglund has not seen any evidence that the Coffee County incident has prevented anyone from voting. Tr. Vol. IX 114:8–13 (Skoglund).

571. Mr. Skoglund was confused about which forensic images he reviewed from Coffee County and who created the forensic images. Mr. Skoglund initially testified that he received two images of the Coffee County

EMS and the ICC, and that he could determine “quite a bit” from his review of the logs. Tr. Vol. IX 50:13–51:2 (Skoglund). Mr. Skoglund testified that he was unable to access the forensic image created by Mr. Persinger because the image had BitLocker on it. Tr. Vol. IX 81:9–21 (Skoglund). Mr. Skoglund then changed his testimony and stated that the hard drive he claimed to be from Mr. Persinger was in reality created by RDT, a vendor for Plaintiffs, according to Plaintiffs’ counsel’s representation to him. Tr. Vol. IX 85:16–20 (Skoglund).

572. Mr. Skoglund was also confused about the number of forensic images he received. Mr. Skoglund initially testified that he received two images from Mr. Persinger and could not open one of the images. Tr. Vol. IX 83:11–18 (Skoglund). However, Mr. Skoglund subsequently changed his testimony and stated that his recollection was incorrect, and that both images taken by Mr. Persinger were on a single hard drive. Tr. Vol. IX 85:5–12 (Skoglund).

573. Mr. Skoglund initially testified that he was able to determine whether Mr. Persinger lost or destroyed files on the forensic image of the Coffee County EMS. Tr. Vol. IX 74:19–23 (Skoglund). Mr. Skoglund testified that he believed it was hundreds of files that were destroyed. Tr. Vol. IX 76:8–10 (Skoglund). Mr. Skoglund even testified that he determined that files from the forensic image showed “files being added, files being removed, and

files being changed.” Tr. Vol. IX 77:24–25 (Skoglund). However, Mr. Skoglund later testified that he did not know who created the copy of the Coffee County EMS and ICC that he initially received. Tr. Vol. IX 83:4–8 (Skoglund). Mr. Skoglund eventually admitted that he did not receive any forensic image directly from Mr. Persinger. Tr. Vol. IX 85:21–23 (Skoglund). The copy of the Coffee County EMS and ICC that Mr. Skoglund eventually reviewed was sent to him by Dr. Halderman over the internet. Tr. Vol. IX 82:6–83:3 (Skoglund).

574. Mr. Skoglund testified that Doug Logan or Jeffrey Lenberg altered the dates on the Coffee County scanner on January 18 and 19, 2021, and they repeatedly ran ballots through it to see if there were differences in the tally. Tr. Vol. IX 29:7–13 (Skoglund). In Mr. Skoglund’s opinion, had the State not picked up the equipment, it could not have performed correctly in an election after the settings had been altered. Tr. Vol. IX 30:7–13 (Skoglund). This would have mostly affected mail-in ballots according to Mr. Skoglund. Tr. Vol. IX 30:7–13 (Skoglund).

575. Mr. Skoglund testified that he observed in the evidence that approximately 12 people received the Coffee County election software images, and he is “not aware of other evidence that it has been spread to other people.” Tr. Vol. IX 92:14–17 (Skoglund).

576. Mr. Skoglund’s opinion is that rigorous logic and accuracy testing, even if conducted “perfectly,” would not protect BMDs from malware

or programming errors. Tr. Vol. IX 43:15–18 (Skoglund). Mr. Skoglund testified:

It is not a security test directly. It is only a security test in the sense that if the functionality has been changed and becomes apparent during your testing, that it might alert you there's some underlying issue. But if it doesn't alter the functionality during the test, then no, you would not detect it.

Tr. Vol. IX 43:24–44:4 (Skoglund).

577. Mr. Skoglund testified that he viewed Dr. Halderman's in-court demonstration and that "maybe all, if not many of the things [Dr. Halderman] showed, would all take place after logic and accuracy testing was done." Tr. Vol. IX 44:5–14 (Skoglund). In particular, "[t]he demonstration with the pen, the poll worker card, the technician card, those kind of things are all things that are introduced to the system long after logic and accuracy testing is complete." Tr. Vol. IX 44:15–18 (Skoglund).

578. When asked about malware that could evade logic and accuracy testing, Mr. Skoglund gave the example of "Dieselgate" instead, which involved software in some Volkswagen cars that could evade emissions tests. Tr. Vol. IX 44:19–45:8 (Skoglund). Without anything more, Mr. Skoglund concluded that malware "could detect that it was logic and accuracy testing

perhaps by the date on the clock to know it wasn't election day." Tr. Vol. IX 45:9–11 (Skoglund).

579. Mr. Skoglund understood that the reason given by Michael Barnes why the EMS and ICC in Coffee County were replaced in June 2021 was that the password was unknown to the Coffee County staff and "that it didn't match what the Secretary of State's office had on file and that there was an imminent election." Tr. Vol. IX 49:20–22 (Skoglund).

580. Mr. Skoglund was able to access a forensic image of the EMS by converting it into a virtual machine and testing various passwords that he viewed in data produced by SullivanStrickler. Tr. Vol. IX 51:7–24 (Skoglund).

581. Mr. Skoglund did know what information the Secretary of State's Office had access to when the Coffee County EMS and ICC were replaced, and he agreed that the Secretary of State's Office might not have had access to the SullivanStickler data where he obtained the password. Tr. Vol. IX 51:24–52:5 (Skoglund).

582. Mr. Skoglund testified that the Coffee County EMS was not logged into after the Secretary of State's Office retrieved it from Coffee County. Tr. Vol. IX 54:19–22 (Skoglund). Mr. Skoglund stated that "there is no indication that they did know the password." Tr. Vol. IX 54:21–22 (Skoglund).

583. Mr. Skoglund did not analyze whether the scope of Georgia law regarding physical security of voting equipment is the right scope. Tr. Vol. IX 94:7–11 (Skoglund).

584. Mr. Skoglund disputes the facts about a ballot error in Northampton, Pennsylvania and whether it was successfully resolved, but Mr. Skoglund admits that the error with the BMD ballot on a downballot race in Northampton, Pennsylvania was discovered within 15 minutes of the polls opening on election day. Tr. Vol. IX Tr. 158:5–160:6 (Skoglund). According to Northampton’s county officials, the error with the BMD ballot was discovered by voters. Tr. Vol. IX 160:7–8 (Skoglund). Mr. Skoglund testified that the ballot-marking devices used in Northampton, Pennsylvania were ES&S ExpressVote XLs, not Dominion EMDs. Tr. Vol. IX 101:13–16 (Skoglund).

E. Philip Stark, Ph.D.

585. Dr. Stark testified that he is “not an authority on Georgia’s election law.” Tr. Vol. IX 162:13 (Stark). Dr. Stark has never reviewed an audit that has taken place in Georgia. Tr. Vol. IX Tr. 194:4–6 (Stark). However, Dr. Stark has been engaged in promoting policy changes advocating for paper ballots for many years. Tr. Vol. IX 187:11–13 (Stark). Election auditing is a topic that falls within Dr. Stark’s research interests of elections. Tr. Vol. IX 126:24–127:1 (Stark).

586. According to Dr. Stark, the field of election auditing is broad and includes physical audits, analyzing event logs in election technology, reviewing seal protocols, and voter eligibility determinations, such as making sure signature verifications are done correctly. Tr. Vol. IX 127:8–12 (Stark).

587. Dr. Stark testified that he invented the risk-limiting audit, but there is “a growing disagreement about what risk-limiting audit means.” Tr. Vol. IX 129:2–8 (Stark). Dr. Stark admits there is a dispute among experts in the field over the definition of the term risk-limiting audit. Tr. Vol. IX 176:10–13 (Stark). According to Dr. Stark, a risk-limiting audit is designed to limit the risk that an incorrect election outcome—not the exact tally—will be certified and final. Tr. Vol. IX 129:12–14 (Stark). In other words, according to Dr. Stark, the risk-limiting audit “checks whether an accurate tabulation would find the same winners, but it doesn’t check whether the tabulation itself was accurate.” Tr. Vol. IX 141:21–24 (Stark).

588. Thus, according to Dr. Stark, the audit “needs to have a trustworthy record of the expressed votes of the eligible voters and it needs to have the legal power to correct the outcome if it determines that the outcome is wrong.” Tr. Vol. IX 130:25–131:3 (Stark).

589. The typical risk limit “might be five percent or ten percent,” which refers to the maximum chance the audit will not detect and correct an

incorrect outcome regardless of the reason why the outcome is incorrect. Tr. Vol. IX 129:20–130:17 (Stark).

590. Dr. Stark personally focused on compliance audits and risk-limiting audits. Tr. Vol. IX 127:13–21 (Stark). Dr. Stark testified that compliance audits are “involved in determining whether there is affirmative evidence that the record of the votes is complete and trustworthy.” Tr. Vol. IX 127:13–16 (Stark). Risk-limiting audits require a “trustworthy paper trail,” and the trustworthiness of the paper trial is established by the compliance audit. Tr. Vol. IX 127:19–21 (Stark).

591. Dr. Stark did not conduct any forensic audits that examine the software running on the voting machines in Georgia. Tr. Vol. IX 127:22–128:2 (Stark).

592. Dr. Stark testified that he did not review any chain of custody forms in forming his opinion in this case. Tr. Vol. IX 182:24–183:1 (Stark).

593. Dr. Stark did not review Georgia poll worker instructions or a poll worker instruction manual when forming his opinions in this case. Tr. Vol. IX 177:12–25 (Stark).

594. Dr. Stark did not review any of the required signage at polling places directing voters to review their ballots in forming his opinions in this case. Tr. Vol. IX 178:1–4 (Stark).

595. Dr. Stark did not recall whether he reviewed any BMD touch screen recap sheets for that poll workers are required to use when opening and closing the polls. Tr. Vol. IX 178:5–11 (Stark).

596. Dr. Stark did not recall reviewing any Poll Pad recap sheets, which record the number of voters checked in according to the Poll Pad. Tr. Vol. IX 179:20–24 (Stark). Dr. Stark agrees that Poll Pad recap sheets make it possible to determine whether the number of voters checked in at a polling location match the number of ballots issued at a polling location. Tr. Vol. IX 179:25–180:3 (Stark).

597. Dr. Stark did not review any ballot recap sheets in Georgia when forming his opinion in this case. Tr. Vol. IX 180:12–18 (Stark). Dr. Stark agrees, however, that accounting for all ballots issued, printed, cast, and spoiled in a polling location would be part of a thorough canvas and part of a compliance audit. Tr. Vol. IX 180:19–24 (Stark).

598. Dr. Stark did not recall reviewing any scanner recap sheets when forming his opinion in this case. Tr. Vol. IX 181:17–22 (Stark).

599. Dr. Stark agrees that the poll worker forms used in Georgia would be part of compliance audit and testified, “This kind of check reporting, this kind of data, and checking it against other records including physical inventories of the amount of paper would be part of a thorough canvass of the compliance audit.” Tr. Vol. IX 182:8–11 (Stark).

600. Dr. Stark also believes that to ensure the vote record is a complete record of the expressed preferences of eligible voters who voted, the compliance audit must verify that voter eligibility and that ineligible voters are not voting. Tr. Vol. IX 183:6–13 (Stark).

601. Dr. Stark testified that “pretty much all electronic technology is vulnerable[.]” Tr. Vol. IX Tr. 132:12 (Stark). He further testified that, in his opinion, the Dominion BMDs cannot be safeguarded by audits:

Auditing can't do anything to determine whether the votes that were expressed by the voter to the ballot-marking device matched the votes that the ballot-marking device printed in its output, so that becomes a piece of the providence of the paper trail that is vulnerable to technology failures, to cybersecurity problems, but that can't be addressed adequately by any audit.

Tr. Vol. IX 133:4–10 (Stark).

602. Dr. Stark testified that he believed a ballot-marking device printout is in some sense born untrustworthy because it “may not accurately reflect what the voter expressed.” Tr. Vol. IX 133:7–11 (Stark). Dr. Stark believes that hand-marked paper ballots are born trustworthy but may become untrustworthy if the canvass and audit do not have “adequate physical security, chain of custody, physical inventories, and other things are conducted.” Tr. Vol. IX 133:12–134:2 (Stark). Dr. Stark further testified that “when you introduce technology between the voter and the record of the vote,

you kind of lose the guarantee that the record of the vote accurately reflects what the voter did.” Tr. Vol. IX 135:3–5 (Stark).

603. Dr. Stark testified that BMDs can be “certainly hardened” to make them more difficult to hack and tested extensively for errors or malware, but the untrustworthiness cannot be mitigated in his opinion. Tr. Vol. IX 138:23–139:5 (Stark). According to Dr. Stark, there are no improvements or upgrades to BMDs that could mitigate the untrustworthiness of the ballot printout. Tr. Vol. IX 138:23–25 (Stark). This is due to a “gap between what the voter did and what the machine did – evidence that what the machine did is identical to what the voter selected.” Tr. Vol. IX 138:25–139:2 (Stark).

604. Dr. Stark has not conducted any studies examining whether voters who vote using a hand-marked paper ballot review their ballot before casting it. Tr. Vol. IX 184:25–185:3 (Stark). It is Dr. Stark’s opinion that among voters who vote using a hand-marked paper ballot, some voters might review their ballots and some may not. Tr. Vol. IX 185:4–14 (Stark). Dr. Stark agrees that mistakes can occur on all voting systems, and regardless of the system, voters “may or may not review their ballots.” Tr. Vol. IX 185:10–17 (Stark).

605. According to Dr. Stark, “[i]n order to get accurate checks requires substantial intervention and tends to require that the voter bring in a

written slate of candidates that they intended to vote for and check the BMD printout against their written intended selections.” Tr. Vol. IX 137:13–17 (Stark). However, Dr. Stark did not review Georgia poll worker instructions or a poll worker instruction manual when forming his opinions in this case. Tr. Vol. IX 177:12–25 (Stark). Voters in Georgia are allowed to bring in sample ballots or written slates of candidates when they go to vote. Tr. Vol. XIII 162:2–8 (Kirk); Tr. Vol. XIII 23:6–9 (Evans).

606. Dr. Stark also testified that scholarship suggests that recalling all ballot selections or the names of the contests on the ballot is a “cognitively non-trivial task” that few voters would be able to do without a written prompt. Tr. Vol. IX 138:11–14 (Stark). However, Dr. Stark did not review any of the required signage in polling places directing voters to review their ballots. Tr. Vol. IX 178:1–4 (Stark).

607. Dr. Stark believes that using optical scanners to tabulate votes “is an example of the use of vulnerability technology in elections, but using it in a way that you can make an end run around that technology to confirm that whatever might have gone wrong didn’t alter the reported outcome[.]” Tr. Vol. IX 140:21–25 (Stark). Using audits can prevent those vulnerabilities from undermining the trustworthiness of the election. Tr. Vol. IX 141:1–4 (Stark).

608. Dr. Stark agrees that optical scanners and hand-marked paper ballots could be altered in a way that prevents an audit from being able to confirm that the outcome is correct. Tr. Vol. IX 175:7–25 (Stark). Dr. Stark admits that images on optical scanners could be altered. Tr. Vol. IX 175:25 (Stark).

609. According to Dr. Stark, hand-marked paper ballots can have tabulation errors for a variety of reasons, including “voters not following instructions for how to mark ovals or how to mark their paper ballot to voters making a mark that is too light or too small or in the wrong color ink or something else that can cause scanners to fail to pick up that mark.” Tr. Vol. IX 142:11–20 (Stark).

610. Dr. Stark believes that scanners produce a faster tabulation and do a good job with “technical cases.” Tr. Vol. IX 143:16–21 (Stark).

611. Because votes in Georgia are cast using ballot-marking devices, Dr. Stark believes that “no procedure, regardless of what you call it, can provide affirmative evidence that the reported winners really win – really won, or conversely, can limit the risk that an incorrect outcome or incorrect reported outcome will become final.” Tr. Vol. IX 144:21–145:1 (Stark).

According to Dr. Stark, this is a “moral issue.” Tr. Vol. IX 195:18 (Stark). As Dr. Stark testified:

[I]f you have a tiny margin and a bunch of the votes were cast using ballot-marking devices, then you can't assume that what was printed on the BMD printout is what the voters expressed to the machine, then you have no reason to believe that a full hand count shows who really won as a moral issue.

Tr. Vol. IX 195:14–18 (Stark).

612. According to Dr. Stark's methodology, if the number of votes cast using a ballot-marking device is greater than the difference between the winner and loser in an election, no audit can conclude that the outcome of the election is correct. Specifically, Dr Stark stated:

Whether an audit can produce affirmative evidence that outcomes are correct will depend on the margin and the number of voters who use ballot-marking devices to cast their votes. If there are few enough voters who use ballot-marking devices, that even if their votes were incorrectly recorded it couldn't alter a political outcome, then an audit can still generate affirmative evidence that the outcome is correct.

But if enough voters use BMDs, that changing their votes could alter the political outcome, could widen the margin, then no audit will be able to provide affirmative evidence that the reported outcome is correct.

Tr. Vol. IX 168:9–20 (Stark). Thus, if two candidates tie and a single voter voted on a BMD, the outcome of the election could not be confirmed by an audit and the results would be “intrinsically unknown.” Tr. Vol. IX 172:10–20 (Stark). In such situation, “[a]ny inference about who won would require assuming that

that ballot accurately reflected that voter's intended selections." Tr. Vol. IX 172:22–24 (Stark).

613. It is also Dr. Stark's opinion that a precertification audit of one contest is not enough to ensure all election outcomes are accurate. Tr. Vol. IX 145:9–18 (Stark). Dr. Stark testified, "[y]ou can't borrow strength from an audit of one contest to determine anything about the correctness of another contest." Tr. Vol. IX 145:13–14 (Stark). It is Dr. Stark's opinion that every jurisdiction should routinely audit every contested race and every election. Tr. Vol. IX 170:16–18 (Stark). Dr. Stark examined data from Orange County, California to determine whether it is feasible to audit every contest on every ballot, but no such audit of every contest on every ballot has actually occurred. Tr. Vol. IX 197:6–21 (Stark).

614. Dr. Stark believes that "under some circumstances, if [ballot-marking devices] are performing correctly, a ballot-marking device might prevent certain kinds of error such as overvoting." Tr. Vol. IX 146:19–21 (Stark). According to Dr. Stark, precinct-based optical scanners can also protect against overvoting with hand-marked paper ballots by "spitting back out" a paper ballot if it contains an overvote. Tr. Vol. IX 146:21–23 (Stark). But Dr. Stark admits that with a precinct scanner in which hand-marked paper ballots are flagged for overvotes, someone could see the voter's ballot "on the way out if the ballot got spit back out." Tr. Vol. IX 186:18–23 (Stark).

615. Dr. Stark believes that “ballot box stuffing, removing ballots, things like that,” is a vulnerability whether voters use hand-marked paper ballots or ballot-marking devices. Tr. Vol. IX 148:2–7 (Stark). Dr. Stark went on to testify that “to alter a substantial number of votes that way is generally going to require a large number of people on the ground. It is going to require accomplices.” Tr. Vol. IX 148:8–10 (Stark).

616. Dr. Stark testified that with ballot-marking devices, voters could detect malfunctions in principle. Tr. Vol. IX 149:5–8 (Stark).

617. Problems in Fulton County were not due to ballot-marking devices per se according to Dr. Stark, but instead were due to the election officials not keeping election materials organized and inventoried, according to Dr. Stark. Tr. Vol. IX 160:18–162:6 (Stark).

618. It is Dr. Stark’s opinion that the best technology for voters with disabilities to independently mark and verify their ballot is ballot-marking devices. Tr. Vol. IX 166:13–16 (Stark). However, Dr. Stark does not know if ballot-marking devices should be restricted to only voters “who identify as having disabilities.” Tr. Vol. IX 166:19–21 (Stark).

619. Dr. Stark testified that he was “not suggesting that there should be some test before a voter, you know, gets to use a ballot-marking device rather than marking a ballot by hand.” Tr. Vol. IX 167:11–14 (Stark). Dr. Stark did not know if there is a basis to “discourage voters from using ballot-

marking devices unless they actually need that accommodation to privately and independently mark a ballot.” Tr. Vol. IX 167:16–24 (Stark).

620. It is Dr. Stark’s opinion that ballot-marking devices and hand-marked paper ballot voting systems have some of the same failure modes. Tr. Vol. IX 169:24–170:1 (Stark). According to Dr. Stark:

Well, a poorly designed ballot, whether it is a paper ballot or an on-screen ballot, can confuse voters and make it difficult for voters to record their intended selections accurately. Once a ballot has been marked, the same physical security concerns apply to the hand-marked paper ballot as to ballot-marking device printout. Regardless, it needs to be kept accounted for and secure. There’s – otherwise, there is a possibility that someone will substitute ballots that are inauthentic, remove ballots, alter marks, and so on.

Tr. Vol. IX 170:3–13 (Stark).

621. Dr. Stark agrees that a BMD can be taken out of use in an election in Georgia. Tr. Vol. IX 178:23–179:1 (Stark). However, if there is evidence of a BMD malfunctioning, removing only the malfunctioning BMD is inadequate in Dr. Stark’s opinion. Tr. Vol. IX 179:1–7 (Stark). Dr. Stark believes that if a single BMD malfunctions, “the presumption should be that something is wrong with the software, and that absent affirmative evidence that the other BMDs don’t suffer from the same fault, the only safe option is to assume that they have all been corrupted.” Tr. Vol. IX 179:11–14 (Stark).

622. Despite his belief that BMD-printed ballots are unauditable, Dr. Stark does not dispute the results of the 2020 elections. Tr. Vol. IX 190:8–10 (Stark).

623. Dr. Stark believes that anyone asserting that the 2020 U.S. election was rigged is making an extraordinary claim that must be supported by “persuasive and verifiable evidence.” Tr. Vol. IX 190:22–191:1 (Stark); DX 67.

624. Dr. Stark also believes that merely citing the existence of technical flaws does not establish that an attack on a voting system occurred or altered an election outcome, as it is simply speculation. Tr. Vol. IX 191:2–7 (Stark); DX 67.

625. The Court finds that, while Dr. Stark is very educated and knowledgeable about audits, he lacks credibility on the administration of elections and issues necessary for this Court’s decision. Dr. Stark’s position and belief that no election system that uses BMD-printed ballots can be audited provides the Court with no assistance in determining the issues before it.

V. Additional fact witnesses.

626. In addition to the experts, Plaintiffs also offered several fact witnesses. While their testimony was part of the record, it was primarily cumulative to the testimony offered by the individual Plaintiffs.

A. Ms. Aileen Nakamura.

627. Aileen Nakamura is a Fulton County voter and is not an expert. Tr. Vol. II 48:11–12, 108:12–15; Tr. Vol. II 108:16–109:9 (Nakamura).

628. Ms. Nakamura is a member of the Coalition for Good Governance. Tr. Vol. II 48:15–17 (Nakamura).

629. In the past, Ms. Nakamura has voted using both absentee-by-mail using a hand-marked paper ballot and in-person using a BMD. Tr. Vol. II 51:9–11 (Nakamura).

630. Ms. Nakamura bring a sample ballot when she votes in person and carefully checks her printout before casting her vote. Tr. Vol. II 56:18–22; Tr. Vol. II 134:10–135:5 (Nakamura).

631. According to Ms. Nakamura, the problem with the QR code is that she cannot be sure what is being counted is being counted correctly, but voting a hand-marked paper ballot would solve that problem for her. Tr. Vol. II 114:14–21 (Nakamura).

632. Ms. Nakamura testified that is she cannot confirm how a vote is counted by scanner on both hand-marked paper ballots and BMD-marked ballots. Tr. Vol. II 115:11–16; Tr. Vol. II 117:3–17 (Nakamura).

633. When asked if the Coalition's challenge in this case included a challenge to the scanners, Ms. Nakamura testified that scanners can also

have errors and “if there was a scanner error, the other part of what we are asking for relief is better audits.” Tr. Vol. II 114:22–115:4 (Nakamura).

634. Ms. Nakamura believes the only thing that solves the problem of how scanners count ballots of any type is requiring audits of every single election and ensuring that every voter verifies their selections. Tr. Vol. II 118:14–16, 119:23–120:1 (Nakamura).

635. Ms. Nakamura agreed that voters can make mistakes on hand-marked paper ballots, including failing to follow instructions and making marks that are overvotes, undervotes, or stray marks. Tr. Vol. II 123:9–12, 124:5–12 (Nakamura). When voters make mistakes on hand-marked paper ballots, Ms. Nakamura does not consider them to be voter verified votes. Tr. Vol. II 124:13–16, 126:5–15, 126:19–127:5 (Nakamura).

B. Ms. Jeanne Dufort.

636. Ms. Dufort does not have any training or expertise in election security and she did not testify as an expert at trial. Tr. Vol. I 181:15–20 (J. Dufort).

637. Ms. Dufort worked on a voter review panel during which she, for the most part, reviewed hand-marked paper ballots which the scanner has a hard time interpreting the voter’s choice. Tr. Vol. I 184:5–14 (J. Dufort).

638. Examples of issues seen on voter review panels are human error in filling in hand-marked paper ballots, such as a voter accidentally filling in

two candidates for the same election, resulting in an ambiguous vote on the hand-marked ballot. Tr. Vol. I 184:15–18 (J. Dufort).

639. Unlike hand-marked ballots, Ms. Dufort has never seen a BMD ballot which was ambiguous. Tr. Vol I 186:1–3 (J. Dufort).

640. Ms. Dufort spoke about the voter review panel needing to review a BMD ballots during an election, but that was likewise due to human error of a manager of a polling place. Tr. Vol. I 185:2–22 (J. Dufort).

641. Ms. Dufort has objections to voting by BMD, including that the printed ballot uses a QR code. Tr. Vol. I 186:17–20 (J. Dufort).

642. Ms. Dufort also expressed issues with remembering all of the choices she made when reviewing the printed ballot while voting on a BMD machine. However, she agreed that it is a personal choice whether someone would like to bring in a sample ballot to help them review their choices. Tr. Vol. I 142:23–143:6; 192:12–14 (J. Dufort).

643. Ms. Dufort agreed that she has an opportunity to review her ballot once it is printed. Tr. Vol. I 193:3–5 (J. Dufort).

644. Ms. Dufort further agreed that if someone else doesn't review their ballot, it does not affect her personal ability to go vote. Tr. Vol. I 193:6–12 (J. Dufort).

645. Ms. Dufort also agreed that voting by absentee ballot has its own set of problems. Tr. Vol. I 189:11–13 (J. Dufort).

646. This is at least in part because Ms. Dufort does not have confidence in the U.S. mail system. Tr. Vol. I 189:17–25 (J. Dufort).

VI. Procedural history and background.

647. This case was originally filed in Fulton County Superior Court on August 4, 2017, seeking to declare the results of the 2017 Special Congressional Runoff Election “void ab initio,” [Doc. 1-2 at 66 (¶ 161), 69 (¶ 169) and 81], on the basis that “the insecurity of Georgia’s voting system and the lack of voter-verifiable paper ballots” rendered the outcome of that election unknown. *Id.* at 4.

648. At that time, Georgia’s voting system utilized DREs, which Plaintiffs sought to enjoin the state from using in future elections under state and federal law. *Id.* at 51–63.

649. Four days after filing the initial complaint, the case was removed to the United States District Court for the Northern District of Georgia. [Doc. 1]. Since removal, Plaintiffs have amended their complaints on multiple occasions and this Court held three different hearings on Plaintiffs’ earlier motions for preliminary injunction, in September 2018, July 2019, and March 2020. *See* [Docs. 298, 550–551, 721].

A. Initial stages of litigation.

650. Upon removal to this Court, the case began to evolve and expand. Plaintiffs amended their complaint, which remained focused on potential hacking and manipulation of elections by third parties. [Doc. 15 at 4–5].

651. Generally, Plaintiffs continued to allege vulnerabilities of the then-in-use DREs and election management system (“GEMS”), *id.* at 28–37, threats of malicious hackers, *id.* at 37–39, and various “irregularities or questionable results” in the 2017 Special Runoff Election, *id.* at 53.

652. The only reference to the voter-registration database in the Amended Complaint was to an incident that occurred in April 2017 involving the theft of four electronic pollbooks. [Doc. 15 at 40 (¶ 79)].

653. With the case having been before this Court for slightly more than six weeks, Plaintiffs filed a Second Amended Complaint (“SAC”) but, once again, their complaint again, and, once again, did not mention the voter-registration database except to reference the 2017 theft of four electronic pollbooks and remained focused on DREs. [Doc. 70 at 2–3, 21, 23–24, 32–33].

654. The case was then administratively closed by this Court while Plaintiffs worked out disputes with their counsel. [Docs. 116–117, 135, 144].

655. In May 2018, this Court officially reopened the case. [Doc. 198]. At this point, the plaintiffs split into the two Plaintiff groups, Coalition Plaintiffs and Curling Plaintiffs.

656. The scope of the claims were at issue at that point, when it was unclear whether the then-in-use optical scanners, used for counting hand-marked ballots, were part of the litigation and thus properly part of Plaintiffs' preservation demands. [Doc. 204 at 10:1–11]. Coalition Plaintiffs believed that the scanners were part of the litigation because “all computers can be infiltrated with malware” and because Coalition Plaintiffs sought to use them as part of their requested relief. [Doc. 209-1 at 1].

657. Following the separation of the Plaintiffs, Coalition Plaintiffs filed their Third Amended Complaint (the “Coalition TAC”), which now defined “Georgia’s Voting System” to include four components: (1) AccuVote DREs, (2) Diebold optical scanners, (3) Electronic Poll Books, and (4) the GEMS software. [Doc. 226 at ¶ 59]. Curling Plaintiffs continued under the SAC. Defendants moved to dismiss both. [Docs. 79, 82–84, 234].

B. Plaintiffs’ first motions for preliminary injunction and the initial appeal.

658. On August 3, 2018, Coalition Plaintiffs filed the first motion for preliminary injunction, [Doc. 258], seeking to mandate the use of hand-marked paper ballots in the 2018 elections and impose audits of election results. *Id.* at 1–2. The district court directed State Defendants to “particularly focus on the public interest factor” in their response. [Doc. 259 at 2].

659. The hearing on the preliminary-injunction motions was held on September 12, 2018, during which Coalition Plaintiffs made clear that they were not challenging “the accuracy of the scanners.” [Doc. 307 at 114:1–7]. No Plaintiff testified at the hearing. *See generally* [Doc. 307].

660. Following the hearing, this Court ruled orally on standing and the Eleventh Amendment. [Doc. 307 at 33:1–22, 34:20–25]. This Court later issued a written order ruling on the threshold jurisdictional defenses, reserving ruling on the remainder of Defendants’ motions to dismiss, and denying the motions for preliminary injunction. [Doc. 309].

661. Specifically, the Court began by noting its “measure of true caution” in finding that Plaintiffs were likely to succeed on the merits of their claims—indicating “there is still key information that needs to be gathered” and that “the case would benefit from some discovery and a full evidentiary hearing on the merits over several days.” *Id.* at 32.

662. State Defendants immediately appealed to the Eleventh Circuit seeking review of the determination of their Eleventh-Amendment immunity and Plaintiffs’ standing, [Docs. 310–312], and moved to stay proceedings in this Court pending the outcome of the appeal, [Doc. 320].

663. This Court stayed the case on October 23, 2018, while the appeal to the Eleventh Circuit proceeded. [Doc. 336].

664. On appeal, the Eleventh Circuit affirmed in part and dismissed in part, finding that Plaintiffs' claims, as pleaded, were not barred by the Eleventh Amendment because they sought "only declaratory relief and an injunction against enforcing [the DRE System]," *Curling v. Sec'y of Ga.*, 761 F. App'x 927, 932 (11th Cir. 2019), and did not "seek a court order directing the precise way in which Georgia should conduct voting," *id.* at 934. The Eleventh Circuit did not review claims about Plaintiffs' alleged lack of standing. *Id.* at 934–935.

C. Remand to this Court and Plaintiffs' second attempt to obtain a preliminary injunction.

665. When the case returned to this Court, it ruled on the remaining issues from the 2018 motions to dismiss on May 21, 2019. [Doc. 375]. This Court then ordered discovery to begin immediately. *Id.*

666. Within days, Curling Plaintiffs filed a new motion for preliminary injunction on May 30, 2019, [Doc. 387], and this Court set a briefing schedule on Coalition Plaintiffs' yet-to-be-filed preliminary-injunction motion and set a hearing for July 25 and 26, 2019 on both motions. [Doc. 398].

667. Coalition Plaintiffs' motion for preliminary injunction, filed on June 21, 2019, sought again to require the State utilize hand-marked paper ballots and now also sought to have paper pollbook backups (instead of the

existing electronic pollbooks) used as “the official record on Election Day for adjudication” of voter eligibility. [Doc. 419-1 at 42].

668. On August 15, 2019, this Court issued a 153-page order on the motions. [Doc. 579]. Despite discovery only being open for little more than six weeks before the hearing, this Court found that the record in the case was “substantial” and that Plaintiffs “have marshaled a large body of evidence.” [Doc. 579 at 5]. At no point did Plaintiffs introduce evidence of any actual hack or manipulation of the elections system.

669. The Court then denied Plaintiffs’ request to prohibit use of the DREs in the 2019 elections, but enjoined their use after 2019, *id.* at 148, *see* House Bill 316 (2019), and the contract award to Dominion Voting Systems for the system. [Docs. 544, 552, and 575]. This Court further ordered a variety of extraneous forms of relief. [Doc. 579 at 148–151].

670. State Defendants sought clarification of the order, [Doc. 584], and this Court held a status conference on August 27, 2019, to address that motion, Plaintiffs’ discovery requests, and the status of the case. [Docs. 588 (minute entry) and 590 (transcript)].

671. Coalition Plaintiffs sought to amend the preliminary injunction order on September 12, 2019, seeking extensive changes that included requiring a paper printout of the pollbook used on Election Day (notwithstanding the State’s existing regulations requiring paper pollbook

backups). [Docs. 605-1 and -2]. This Court granted the motion insofar as it had already clarified the order but denied the remainder of the motion. [Doc. 637].

D. Plaintiffs challenge the Dominion BMD System.

672. On August 16, 2019, the day following the district court's ruling, Curling Plaintiffs sought to amend their complaint to add a challenge to the Dominion BMDs. [Doc. 581]. Coalition Plaintiffs filed a motion to supplement their complaint on September 6, 2019 to do the same. [Doc. 600].

673. On October 15, 2019, this Court granted the motions to amend and supplement, adding challenges to the Dominion BMDs to the case. [Doc. 626]. In connection with that order, the Court also stayed discovery as to the Dominion BMDs pending a ruling on motions to dismiss, *id.*, and instructed State Defendants that it would “not entertain further arguments regarding the dismissal” of Plaintiffs’ DRE claims. [Doc. 638 at 1].

E. The new complaints and Plaintiffs’ first motions to enjoin the Dominion BMD System.

674. The operative complaints became Curling Plaintiffs’ Third Amended Complaint (“TAC”), [Doc. 627], along with the Coalition TAC and Coalition Plaintiffs’ First Supplemental Complaint (“FSC”). [Doc. 628].

675. Curling Plaintiffs’ TAC defines the election system as “in-precinct scanners/tabulators for 2D barcodes generated by BMDs.” [Doc. 627 ¶ 71].

676. Coalition Plaintiffs’ FSC defines the “Dominion BMD System” as the (1) the election management system, (2) the adjudication software, (3) the BMD itself, (4) the precinct scanner (ICP), and (5) the central scanner (ICC). [Doc. 628 at 23 (¶ 67)]. Generally, the FSC alleges that Defendants’ use of the Dominion BMD System for in-person voters violates their fundamental right to vote under the First and Fourteenth Amendments, and deprives them of equal protection and procedural due process under the Fourteenth Amendment. *Id.* at 67–74.

677. State Defendants moved to dismiss both the Curling TAC and the Coalition FSC, arguing, *inter alia*, that Plaintiffs’ DRE claims were moot, [Doc. 645-1 at 12–15]; claims about DREs and the Dominion BMD System were barred by the Eleventh Amendment, *id.* at 15–19; failure to state a claim, *id.* at 19–21; lack of jurisdiction over state-law claims, *id.* at 22–23 and 28–33; and lack of standing, *id.* at 24–28.

678. Meanwhile, Plaintiffs filed new preliminary-injunction motions. [Docs. 619, 640]. In orders issued on March 2, 2020—while State Defendants’ motion to dismiss remained pending—the Court scheduled a hearing for March 6, “for the purpose of asking some limited questions of the State’s counsel, witness-representatives, and designated experts,” identifying six topics and numerous sub-topics to be addressed. [Docs. 714, 715].

679. The Court proceeded with the March 6 hearing despite State Defendants’ “expressed concerns about the hearing”—their jurisdictional defenses—because it had determined it had “sufficient colorable grounds . . . to believe that the Court has jurisdiction.” [Doc. 722 at 7:2–5].

680. The case then became largely dormant again until July 30, 2020, when this Court ruled on State Defendants’ motions to dismiss. [Doc. 751]. That order dismissed Coalition Plaintiffs’ procedural-due-process claim and Curling Plaintiffs’ state-law claims. *Id.* at 52. This Court, again, directed discovery to begin immediately. *Id.*

681. In a separate order, this Court denied Plaintiffs’ pending motions to preliminarily enjoin the Dominion system on an “in-principle, or quasi-facial” basis, finding the record “dated” and “insufficient” to support an “as applied challenge of the constitutionality” of the Dominion BMD System, but permitted Plaintiffs the chance to refile with additional evidence. [Doc. 768]. This Court then granted expedited discovery again, [Doc. 775], with an eye toward new preliminary-injunction motions.

F. Plaintiffs move again to enjoin the Dominion BMD System.

682. Eight days after the Court denied their prior motion, Curling Plaintiffs filed their fourth motion for preliminary injunction, identical to the one the district court had just denied. [Doc. 785]. This Court set a briefing schedule that had all briefing, including briefing on Coalition Plaintiffs’ yet-

to-be-filed preliminary injunction motions, to be completed within 11 days, [Doc. 788], later extended. *See* August 27, 2020 Docket Entry. Coalition Plaintiffs then filed their motions for preliminary injunction on paper pollbooks, [Doc. 800], and “BMDs, Scanning and Tabulating, and Audits,” [Doc. 809].

683. Curling Plaintiffs motion sought an order enjoining Defendants “from using any system or devices for voting that do not use hand-marked paper ballots as the primary method of recording the elector’s votes, and are specifically enjoined from using the Dominion ballot-marking device (“BMD”)-based system as the primary voting method. Defendants are further enjoined to conduct in-person voting in elections by a hand-marked paper ballot system; Defendants are enjoined to supply a minimum of one electronic or mechanical ballot marking device per polling location for assistive voting by paper ballot that meets HAVA/ADA requirements and is transparent and verifiable; and Defendants are further enjoined to provide a minimum of one ballot scanner for casting, tabulation, and secure storage of voted paper ballots at each polling place.” [Doc. 785-7, p. 2].

684. Coalition Plaintiffs’ pollbook motion incorporated by reference their numerous prior motions and various notices of filing, [Doc. 800-1 at 2 n.1], and sought an order requiring the Secretary to direct every county election superintendent to take a number of steps, including providing

updated paper backups, to use the paper backups to adjudicate voter eligibility and precinct assignment, and make a number of changes to how voters not appearing on poll lists were processed. [Doc. 800-7]. Coalition Plaintiffs did not cite to the claim(s) which encompassed their relief in either their motion or reply. *See* [Docs. 800-1 and 854].

685. In a separate motion, Coalition Plaintiffs also sought to enjoin enforcement of Georgia statutes that required the use of BMDs for in-person voting and compel the use of hand-marked paper ballots instead. [Doc. 809-17 at 2]. Additionally, Coalition Plaintiffs asked the district court to order State Defendants to issue directives regarding scanner settings, auditing processes, and pre-election testing of equipment. *Id.* at 2–4.

686. With the November 3, 2020 Election looming, this Court held a hearing on the preliminary-injunction motions on September 10, 11, and 14, 2020. [Doc. 904, 905, 906]. This Court denied State Defendants’ request to explore the standing of Plaintiffs, explaining that cross-examination on the Plaintiffs’ standing would “not aid the court in its determination of the pending relief issues.” [Doc. 884].

G. Additional post-hearing facts.

687. Within two weeks after the preliminary-injunction hearing, Coalition Plaintiffs filed an “Emergency Notice” claiming that the databases for the Dominion BMD System were “defective” and that there was

“compelling evidence of the State’s severe lack of ability to deploy the [BMD] system.” [Doc. 916].

688. On September 28, 2020, the district court held a telephone conference concerning the issue with counsel for the parties, Curling Plaintiffs’ expert, Dr. Alex Halderman, and Dominion Voting Systems’ Director of Product Strategy and Security, Dr. Eric Coomer, appearing voluntarily. *See generally* [Doc. 925]. With 20 candidates appearing on the ballot for the U.S. Senate Special Election, the Secretary determined that all candidates should appear on a single page of the BMD screen, requiring two columns for that display. *Id.* at 8:9–25. This display was not typical for the Dominion BMDs, and while the counties were conducting pre-election testing, they discovered that certain voter behavior triggered candidates’ names not appearing. *Id.* at 9:4–10. The issue required a *de minimis* software change to the BMDs themselves, which triggered requirements for certification by the Election Assistance Commission (“EAC”). *Id.* at 12:20–13:12. Following the teleconference, this Court ordered State Defendants to produce information about the *de minimis* update to the Dominion BMD system. *See* September 28, 2020 docket entry.

689. The following day, Plaintiffs jointly filed another notice claiming that the *de minimis* software update was “a far greater and riskier change to the election system than merely using [hand-marked paper ballots] in lieu of

the BMDs.” [Doc. 923 at 1]. Plaintiffs further argued that the change was not compliant with EAC certification guidelines, might not work, and was subject to security risks, *id.* at 4–7. State Defendants objected, but complied with this Court’s directive to file notices of the status of certification and the report of its certified test lab. [Docs. 929, 939, 948].

690. This Court held another conference on the issue on October 1, 2020, indicating the issue “is an indicia of – it is an important indicia of what is going on . . . and from an evidentiary perspective certainly relevant.” [Doc. 935 at 10:24–11:2]. Over State Defendants’ objection, *id.* at 65:10–13, the district court heard testimony from Plaintiffs’ expert, Dr. Halderman, who speculated that other remedies to the issue may exist, whether testing was sufficient, and that “if attackers have gained access to Dominion’s systems . . . it would be an opportunity” to subvert the software. *Id.* 66:23–25, 68:1–5. Dr. Halderman further compared the de minimis software change to the “fatal consequences” of a software issue with Boeing 737 MAX aircraft. *Id.* at 71:11–22.

691. Both groups of Plaintiffs then filed declarations of their experts, covering largely the same grounds discussed in the conference. [Docs. 941–943]. On October 9, 2020, the EAC approved the software change and State Defendants informed the district court. [Doc. 960].

H. The 2020 preliminary injunctions and appeals.

692. This Court two orders following the preliminary injunction hearing in September 2020. First, it entered its Pollbook Order on September 28, 2020. [Doc. 918]. After the district court's inquiry into EAC certification, it issued the Scanner Order on October 11, 2020. [Doc. 964].

1. *The Pollbook Order.*

693. In the Pollbook Order, this Court found that State Defendants' failure to provide counties with updated paper pollbook backups severely burdened the rights of voters and granted Coalition Plaintiffs' preliminary-injunction motions on the paper pollbook backups. [Doc. 918 at 51, 67; Doc. 966]. Consequently, this Court found that Coalition Plaintiffs had demonstrated a likelihood of success on claims regarding "the due process rights guaranteed by the Fourteenth Amendment." [Doc. 918, pp. 7, 61-62].

2. *The Scanner Order.*

694. In the Scanner Order, this Court first addressed Plaintiffs' request to order hand-marked paper ballots be used, finding that the Dominion BMD System did not comply with state law (an issue not before the court), [Doc. 964 at 81–84], and that "Plaintiffs' strong voting interest and evidentiary presentation indicate they may ultimately prevail in their claims," [Doc. 964 at 84]. Nonetheless, this Court declined to order a switch to hand-marked paper ballots, finding it unlikely that "state and county

elections staff . . . would be equipped to move the system and voters through such major operational change without chaotic disruptions occurring anew.” *Id.* at 89.

695. On the scanner settings, this Court determined that “the burden on voters to read and follow instructions for marking their absentee, provisional, or emergency ballots is minimal.” [Doc. 964 at 129]. But the Court then found that the burden on the right to vote is “more than minimal but less than severe” and applied what it described as “an intermediate level of scrutiny.” *Id.* at 130. Despite evidence that the State assessed a variety of different scanner threshold settings before arriving at the setting pronounced in the State Election Board regulation, *id.* at 116–124, and the State’s interest in having threshold settings, *id.* at 130–131, the district court found that State Defendants’ interests were outweighed by the potential burden on voters. *Id.* at 132. Consequently, the Court ordered State Defendants to implement “remedial measures . . . by the next election cycle following the January 2021” runoff or sooner. *Id.* at 141.

696. This Court also discussed at length the *de minimis* software change approved by the EAC. *Id.* at 44–51. The district court made note of the testimony and declarations of Dr. Halderman and Messrs. Hursti and Skoglund, *see id.* at 48–50 and n.53 (discussing the 737 Max comparison), in explaining its “recommendations” concerning pre-election testing of

equipment. The district court, without identifying any burden imposed on Plaintiffs' right to vote, "recommend[ed]" a public review of testing procedures prior to the January 2021 Runoff Election. *Id.* at 59–60.

697. State Defendants appealed both orders and the Eleventh Circuit stayed the Pollbook Order on October 24, 2020. The Eleventh Circuit later denied Coalition Plaintiffs' attempt to lift the stay on April 4, 2021.

I. The November 2020 elections and its aftermath.

698. Meanwhile, the November 2020 election in Georgia drew national attention. A close race between then-President Donald Trump and President Joe Biden turned on fewer than 12,000 votes in Georgia.

699. Georgia conducted its first risk-limiting audit by conducting a statewide hand recount of every paper ballot. Dozens of lawsuits attempted to overturn the results of the election, including several cases that relied on this Court's prior orders and Plaintiffs' filings. *See, e.g., Pearson v. Kemp*, 1:20-cv-04809-TCB, ECF Doc. 1-5 at 11 (Halderman Dec.), 18 (Skoglund Dec.), 29 (Hursti Dec.), 36–43 (VSTL Report), 44–120 (Transcript) (N.D. Ga. Nov. 15, 2020).

700. After the post-election litigation in 2020 and the January 5, 2021, runoffs, this Court raised questions about its jurisdiction. *See* [Doc. 1049]. The Court held status conferences and allowed additional briefing on the issue in early 2021. [Docs. 1060, 1066, 1067, 1071, 1073, 1074, 1075]. The

Court later determined that this case should move to resolution through completion of discovery and a schedule for summary judgment. [Doc. 1088].

J. Additional discovery, including Coffee County.

701. The Court then set a schedule to resolve all remaining discovery by September 3, 2021 with a trial to take place in early 2022. [Doc. 1093].

702. Discovery disputes continued through 2021 and early 2022, with the Court resolving a number of disputes and leaving other disputes unresolved because they were not immediately necessary. *See, e.g.*, [Docs. 1099, 1127, 1130, 1143, 1154, 1160, 1183, 1194, 1203, 1232, 1245, 1246, 1250, 1266, 1272, 1295, 1335, 1340, 1348, 1402]. The parties served expert reports, as discussed below, and this Court extended the discovery schedule several times, first to have all discovery conclude on December 6, 2021, [Doc. 1176], then to February 15, 2022, [Doc. 1238].

703. This Court later moved the discovery deadline to March 31, 2022, [Doc. 1347, p. 6 n.6], and stayed the case until May 26, 2022, to wait until after the Eleventh Circuit argument on the appeals of the preliminary injunction orders, *id.* at 6.

704. During this stay period, the Court provided the parties with a checklist of pending discovery disputes to determine what remained to be resolved. [Doc. 1359].

705. In early April 2022, Plaintiffs raised for the first time a potential breach of Coffee County equipment [Doc. 1360], which is discussed in more details below. A new period of discovery for Coffee County continued for most of 2022, with more need for the Court to resolve disputes. *See, e.g.*, [Docs. 1408, 1418, 1420, 1421, 1424, 1425, 1428, 1429, 1442, 1466, 1473, 1476, 1491, 1498, 1500, 1501, 1512, 1513, 1522]. The Court eventually set a deadline for Coffee County discovery of September 13, 2022, with motions for summary judgment due 45 days after the conclusion of the additional discovery period. [Doc. 1477].

706. On October 5, 2022, the Eleventh Circuit reversed the Pollbook Order and found the Scanner Order was not an injunction.

707. After further disputes and conferences, the Court extended the discovery deadline to November 22, 2022 with motions for summary judgment due on December 19, 2022. [Doc. 1529]. Those deadlines were further extended to complete discovery by December 21, 2022. [Doc. 1549].

K. State Defendants' motions for summary judgment.

708. On January 9, 2023, State Defendants and Fulton County Defendants moved for summary judgment on all claims in the case. [Docs. 1567, 1568, 1569, 1570, 1571, 1572, 1573]. Plaintiffs did not move for summary judgment, but responded to the various motions for summary

judgment. [Docs. 1624, 1625]. This Court held a hearing on the motions. [Docs. 1665 (questions for counsel), 1667].

709. On November 10, 2023, this Court issued an order on Defendants' motions for summary judgment. [Doc. 1705]. That order dismissed Fulton County Defendants from the case and narrowed the remaining issues for trial against State Defendants. Specifically, the Court granted summary judgment to State Defendants on the DRE claims, but found there were disputes of fact regarding the BMD claims. The Court further granted summary judgment to State Defendants on the "collateral theories and relief requests" of Coalition Plaintiffs. [Doc. 1705, p. 135].

L. Trial on the merits.

710. This Court entered a pretrial schedule on October 13, 2023 [Doc. 1700], advising the parties to complete the process before trial would start on January 9, 2024.

711. After ruling on a series of pretrial motions, trial began on January 9, 2024 and concluded on February 1, 2024.

CONCLUSIONS OF LAW

I. Scope of evidence considered.

712. The Court did not order consolidation of any of the preliminary-injunction hearings with the trial on the merits under Fed. R. Civ. P. 65(a)(2), which requires clear and unambiguous notice of the Court's intent to do so

and a “full opportunity” for the parties to present their respective cases at such hearings. *See Univ. of Tex. v Camenisch*, 451 U.S. 390, 395 (1981) (internal citation omitted); *SEC v. N. Am. Rsch. & Dev. Corp.*, 511 F.2d 1217, 1218 (2d Cir. 1975). Under Rule 65(a)(2), “[e]ven when consolidation is not ordered, evidence that is received on the motion ***and that would be admissible at trial*** becomes part of the trial record and need not be repeated at trial” (emphasis added.) Therefore, the Court will consider evidence submitted during the multiple preliminary-injunction hearings in this case but not at the trial on the merits only if such hearing evidence was submitted in a form that would have been “admissible at trial.” Any preliminary-injunction hearing evidence that was not submitted in admissible form will not be considered. This includes all declarations submitted at preliminary injunction hearings. *See Pope v. Cnty. of Albany*, No. 1:11-cv-0736, 2015 U.S. Dist. LEXIS 181191, at *5-6 (N.D.N.Y. Jan. 22, 2015) (declarations submitted at preliminary injunction hearing in lieu of live testimony were hearsay and therefore would not be admitted at trial) (citing Rule 65(a)(2)); *Home Oil Co. v. Sam’s E., Inc.*, 252 F. Supp. 2d 1302, 1307 (M.D. Ala. 2003) (hearsay statements in deposition would not be considered in response to motion for summary judgment, despite admission of the testimony during preliminary injunction hearing) (citing Rule 65(a)(2)); *Gonzalez v. Arizona*, No. CV 06-1268, 2008 U.S. Dist. LEXIS 137509, at *8

(D. Ariz. June 27, 2008) (hearsay documents admitted at preliminary injunction hearing would not be considered on summary judgment) (citing Rule 65(a)(2)).

II. Jurisdiction.

713. Before turning to the merits, this Court must determine whether it has jurisdiction to hear each of Plaintiffs' claims. *Jacobson*, 974 F.3d at 1245; *Town of Chester*, 137 S.Ct. at 1650.

A. Injury in fact.

714. When ruling on State Defendants' motions for summary judgment, this Court determined the key question of injury-in-fact turned on whether there was a substantial risk of injury for individuals to have their cotes "counted as cast if they are required to vote on Georgia's BMD System." [Doc. 1705, p. 94].

715. But the evidence at trial shows that there is no unique injury to having votes counted as cast on the BMD system versus any other election system.

1. Curling Plaintiff injuries.

716. Beginning with the three individual Curling Plaintiffs, the evidence showed that they agreed there are risks that their votes may not be counted as cast regardless of whether they are from a BMD or on a hand-

marked paper ballot. Tr. Vol. I 108:15–21 (Schoenberg); Tr. Vol. II 31:10–16 (Price); Tr. Vol. V 13:19–25 (Curling).

717. Curling Plaintiffs also had no evidence that any vote cast on a BMD was ever not correctly counted or that any Georgia election had ever been hacked. Tr. Vol. I 90:2–8 (Schoenberg); Tr. Vol. II 32:25–33:7 (Price); Tr. Vol. V 14:1–3 (Curling).

718. Further, Plaintiffs’ experts all agreed that the mere existence of technical flaws, without more, is not evidence of any attack on an election or election outcome. In their words it is “simply speculation.” DX 67; Tr. Vol. VII 234:5–23 (Halderman).

719. As a result, Curling Plaintiffs do not suffer any harm that is unique in any way from any other voter and thus cannot have a particularized injury. *Wood*, 981 F.3d at 1315.

720. Even if the potential injury was particularized, based on their own testimony, it is only a speculative fear of a hypothetical future harm, which is insufficient to support standing. *Tsao v. Captiva MVP Rest. Partners, LLC*, 986 F.3d 1332, 1338–39 (11th Cir. 2021).

721. In either case, all three individual Curling Plaintiffs lack standing to pursue this action or invoke this Court’s jurisdiction and their claims must be dismissed on this basis alone.

2. Coalition Plaintiffs' and Mr. Davis's individual injuries.

722. The same problem affects the injuries sought by the individual Coalition Plaintiffs and Mr. Davis and their witnesses. Like the individual Curling Plaintiffs, they have no evidence to support their “counted as cast” theory because it is not particularized to them and involves no evidence of manipulation of the voting system. Tr. Vol. I 208:1–24, 210:6–19 (L. Digges); Tr. Vol. II 41:5–9, 45:25–46:2 (W. Digges); Tr. Vol. II 115:11–16, 117:3–23 (Nakamura); Tr. Vol. VIII 161:4–11, 162:7–11, 167:13–168:4 (Missett).

723. Thus, for the same reasons as the individual Curling Plaintiffs cannot invoke the jurisdiction of this Court, the individual Coalition Plaintiffs lack standing to pursue this action and their claims must be dismissed on this basis alone.

3. Organizational injuries for the Coalition.

724. Turning to the sole organizational Plaintiff, this Court previously found standing at the summary-judgment phase based on the diversions of resources by the Coalition for Good Governance. [Doc. 1705, p. 94]. But the evidence regarding standing must be supported “with the manner and degree of evidence required” at each stage of litigation. *Lujan*, 504 U.S. at 561. Because this case has now proceeded to trial, the facts necessary for standing must be supported by evidence from the trial and Plaintiffs must also “prove

that their injuries are ‘certainly impending.’” *Jacobson*, 974 F.3d at 1245 (quoting *Clapper v. Amnesty Int’l USA*, 568 U.S. 398, 401 (2013)).

725. Importantly, plaintiffs “‘cannot manufacture standing merely by inflicting harm on themselves.’” *Muransky v. Godiva Chocolatier, Inc.*, 979 F.3d 917, 931 (11th Cir. 2020 (en banc) (quoting *Clapper*, 568 U.S. at 416)).” *City of S. Miami v. Governor of Fla.*, 65 F.4th 631, 638 (11th Cir. 2023).

726. As discussed below, the evidence at trial demonstrates that the Coalition has failed to establish standing in this case.

(a) Associational standing.

727. The Coalition first asserts that it has associational standing. But to establish this type of standing, “an organization must prove that its members ‘would otherwise have standing to sue in their own right.’” *Jacobson*, 974 F.3d at 1249 (quoting *Friends of the Earth, Inc. v. Laidlaw Env’tl. Servs. (TOC), Inc.*, 528 U.S. 167, 181 (2000)).

728. The Coalition put forward no evidence that its members experience any injury different than the individual Plaintiffs in this action. Indeed, it is impossible to imagine what that different injury could be because the only injury identified is one shared by all voters in Georgia.

729. Even if they could identify another potential injury, it remains completely speculative. And the Eleventh Circuit has “rejected the argument that plaintiffs have standing based on their ‘subjective fear of . . . harm’ and

its ‘chilling effect.’” *City of S. Miami*, 65 F.4th at 638 (quoting *Corbett v. Transp. Sec. Admin.*, 930 F.3d 1225, 1238–39 (11th Cir. 2019)). The Coalition presented no evidence at trial that its fears regarding the manipulation of election equipment was “certainly impending”—to the contrary, the only evidence was that it had never happened and that all voting systems face risks.

730. But the Coalition also failed to present any evidence regarding its membership. It does not have members in every Georgia county. Tr. Vol. XV 12:9–11 (Marks). It cannot identify its members. Tr. Vol. I 131:6–24 (Martin). It has no requirements for dues or any other obligations on its members. Tr. Vol. I 124:25–125:4 (Martin). The Coalition cannot stand in the shoes of members it cannot identify.

731. For all the foregoing reasons, the Court finds the Coalition lacks associational standing to assert its claims in this litigation.

(b) Organizational standing.

732. Finally, the Coalition claims that even if it doesn’t have associational standing, it has organizational standing due to injuries to itself. But “[a]lthough an organization can establish standing under a diversion-of-resources theory, it cannot do so by inflicting harm on itself to address its members ‘fears of hypothetical future harm that is not certainly impending.’” *City of S. Miami*, 65 F.4th at 638–39 (quoting *Clapper*, 568 U.S. at 416).

733. Thus, to establish standing, the Coalition had to come forward with evidence (1) of its diversions of resources from particular activities to particular activities responding to the alleged harm and (2) that the harm to which it is responding is legally cognizable, that is, not “speculative fears of future harm.” *City of S. Miami*, 65 F.4 at 638–39 (quoting *Shelby Advocs. for Valid Elections v. Hargett*, 947 F.3d 977, 982 (6th Cir. 2020)).

734. In the case cited favorably by the Eleventh Circuit, the Sixth Circuit recognized that the Supreme Court “has not been sympathetic to claims that past occurrences of unlawful conduct create standing to obtain an injunction against the risk of future unlawful conduct.” *Shelby Advocs. for Valid Elections*, 947 F.3d at 981.

735. The Coalition failed on both counts in its evidence at trial.

736. First, the Coalition failed to put forward evidence that it was diverting resources for anything other than this litigation, which cannot be a basis for a diversion of resources. *City of S. Miami*, 65 F.4 at 638–39. Its primary monetary expense for the last three years is this case. Tr. Vol. I 129:7–11, 117:9–18 (Martin). It is the spending on this litigation that has caused the Coalition’s reduction in ability to engage in other activities. Tr. Vol. I 130:16–23, 120:9–121:5 (Martin).

737. Second, the Coalition has only put forward evidence that it is doing anything different because of speculative future harms. This Court

previously found the diversion was due to efforts to protect members' rights to have their votes counted as cast when it was required to construe all facts in Plaintiffs' favor at summary judgment. [Doc. 1705, p. 86]. But as discussed above, the evidence at trial demonstrated that there is no election system that can show votes are counted as cast—even the Plaintiffs' preferred hand-marked paper ballot system.

738. Further, the imminence of any potential harm is significantly avoided by the implementation of the CISA recommendations discussed above and below. That is, any imminence of harm that existed from the vulnerabilities identified by Dr. Halderman's report have been mitigated by the implementation or continuation of the CISA recommendations, making any potential future harm "simply speculation." That is insufficient for standing. *City of S. Miami*, 65 F.4 at 638–39.

739. The Coalition has failed to adduce evidence at trial that supports their standing to bring this case.

740. But even if the Coalition had sufficiently demonstrated an injury-in-fact to itself to establish organizational standing, that would not be enough to sustain its claims in this case because the organization itself does not have a constitutional right to vote and it has not satisfied the elements necessary to have third-party standing.

741. Ordinarily, a party may assert only “his own legal rights and interests, and cannot rest his claim to relief on the legal rights or interests of third parties.” *Warth v. Seldin*, 422 U.S. 490, 499 (1975). This is true even if the party has satisfied Article III’s standing requirement. *Id.*

742. Thus, where an organization satisfies Article III solely by demonstrating an injury to itself—and not to its members—then it may ordinarily assert only its own legal rights. *Id.* at 511; *see also Americans for Immigrant Just. v. U.S. Dep’t of Homeland Sec.*, No. CV 22-3118 (CKK), 2023 WL 1438376, at *9 (D.D.C. Feb. 1, 2023) (analyzing third-party standing even after establishing organizational standing)

743. The Supreme Court has crafted a limited exception to that rule—known as third-party standing—the party invoking the exception must demonstrate that there is a “hindrance” to the possessor of the right’s “ability to protect his own interests.” *Kowalski v. Tesmer*, 543 U.S. 125, 130 (2004). Such a finding is impossible in a case like this where three of the Coalition’s members were named plaintiffs and a number of others testified at trial.

744. In short, even if the Coalition could establish organizational standing sufficient to satisfy Article III, it would lack standing to sue on that basis alone because the Coalition itself does not have a right to sue under § 1983. Nor can it sue on its members’ behalf because it cannot demonstrate anything which hinders its members from pursuing their own interests—

indeed, at least three of them did in this lawsuit. Tr. Vol. I 129:22–23.

Accordingly, the case must be dismissed. *See Vote.Org v. Callanen*, 39 F.4th 297, 304 (5th Cir. 2022) (organizational-standing plaintiff lacked statutory standing to sue under § 1983); *see also Vote.org v. Byrd*, No. 4:23-CV-111-AW-MAF, 2023 WL 7169095, at *4 (N.D. Fla. Oct. 30, 2023). *Cf. Vote.org v. Georgia State Election Bd.*, 661 F. Supp. 3d 1329, 1339 (N.D. Ga. 2023) (declining to address third-party standing issues because it found organization had *associational* standing).

745. Thus, on the lack of evidence to support an injury in fact alone, this case must be dismissed.

B. Traceability/Redressability.

746. Even if Plaintiffs had shown an injury, they cannot establish traceability and redressability.

747. The undisputed evidence demonstrates that if the sole remedy is enjoining the application of O.C.G.A. § 21-2-300, that would not redress Plaintiffs' injuries because non-party counties would still be able to decide whether to use BMDs or not. Tr. Vol. XVI(B) 23:23–24:7 (Sterling).

748. This Court also cannot order additional audits or logic and accuracy testing because counties would have to conduct those processes. Tr. Vol. XV 223:14–17, 224:1–9 (Sterling). This Court cannot require absent third parties, like the counties, to carry out its orders. *Jacobson*, 974 F.3d at 1254;

see also Ga. Republican Party, Inc. v. Sec’y of State for Ga., 20-14741-RR, 2020 WL 7488181, at *2 (11th Cir. Dec. 21, 2020).

749. Further, as discussed below, even if this Court could order the counties to do something, there are no remedial measures short of ordering hand-marked paper ballots that the evidence shows will redress Plaintiffs’ injuries—no amount of upgrades, logic and accuracy testing, monitoring, or auditing will be enough to redress the injuries.

750. Because it must be “likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision of the court,” *Ga. Ass’n of Latino Elected Offs., Inc. v. Gwinnett Cty. Bd. of Registration and Elections*, 36 F.4th 1100, 1116 (11th Cir. 2022) (cleaned up), this Court cannot redress the Plaintiffs’ alleged injuries because any Court-ordered resolution would remain entirely speculative in its ability to remedy those injuries.

751. Finally, any costs for remedies would be imposed on non-party counties, not State Defendants. Tr. Vol. XVI(B) 23:23–24:7 (Sterling).

752. For all the forgoing reasons, there cannot be traceability or redressability as to the use of BMDs and the Plaintiffs’ proposed injuries. The lack of a connection is an independent reason to dismiss this case for lack of jurisdiction before reaching the merits.

C. One Plaintiff Rule.

753. The Court also finds that the One Plaintiff Rule does not apply given the evidence at trial. While the Court found the rule was sufficient to allow the case to proceed at summary judgment, the evidence at trial demonstrated that different Plaintiff groups sought different remedies. Curling Plaintiffs have no claim regarding audits. Tr. Vol. IX 162:24–163:2. Coalition Plaintiffs are seeking audits as part of their relief. Tr. Vol. I 126:4–5; 132:13–14; 133:4–5 (Martin); Tr. Vol. XV 191:1–10 (Marks); Tr. Vol. II 114:22–115:4 (Nakamura).

754. Further, the cases where the rule has been applied involve situations where a single complaint was utilized. *See Florida v. United States HHS*, 648 F.3d 1235, 1240 (11th Cir. 2011); *Rumsfeld v. Forum for Acad. & Institutional Rights, Inc.*, 547 U.S. 47, 52 n.2 (2006); *Shaw v. Hunt*, 154 F.3d 161, 163 (4th Cir. 1998).

755. Because the Plaintiffs here are seeking different relief in different complaints with different plaintiffs, the Court finds the One Plaintiff Rule cannot apply.

III. Merits.

756. Even if the Plaintiffs had standing, their claims still fail at the merits. As this Court previously explained, it analyzes all remaining claims under the *Anderson-Burdick* test, which requires the Court to “weigh the

character and magnitude of the burden that the State’s rule imposes on Plaintiffs’ voting rights against the interests that the State contends justify that burden, and consider the extent to which the State’s concerns make the burden necessary.” [Doc. 1705, p. 111].

A. *Anderson/Burdick* test.

1. *Character and magnitude of the burden on the right to vote.*

757. The approach required by *Anderson-Burdick* first requires the court to identify the state policy being challenged and weigh the character and magnitude of the burden on the right to vote. *Timmons*, 520 U.S. at 358; *Burdick* 504 U.S. at 434.

758. The policy Plaintiffs challenge in this case is the configuration and implementation of the requirement of Georgia law that all in-person voters use Dominion BMDs. *See* [Doc. 1705, p. 115].

759. Plaintiffs claim this policy burdens their right to vote because (1) there is a risk of harm that the election system security vulnerabilities and operational issues imposes on (2) the Plaintiffs’ right to cast an effective, accurately counted vote. [Doc. 1705, p. 112].

760. The Court approaches the categorization of the burden on the right to vote recognizing two important concepts. First, there is no flawless or risk-free election system, as Plaintiffs’ own evidence showed—frequently,

Plaintiffs and their experts agreed that the hand-marked paper ballot systems they favor have risks and can lead to situations where what the voter intended is not what is understood by the scanner. *See, e.g.*, Sections I.A, I. B., IV. D. *above*; [Doc. 1705, p. 101] (“no election system is flawless”). Indeed, Coalition Plaintiffs previously presented evidence at the preliminary-injunction stage showing the prevalence of these types of user errors occurring—in real election—on *hand-marked* ballots in Georgia. *See generally, e.g.*, [Doc. 964, pp. 93–116]. Second, Georgia’s Dominion voting system cannot be unconstitutional merely because it utilizes electronic components. [Doc. 1705, p. 115].

761. In support of their claim that there is a severe burden on the right to vote, Plaintiffs rely heavily on Dr. Halderman’s 2021 report, the 2022 CISA advisory, and the 2021 Coffee County security breach. And all of those issues raise serious concerns about protecting electronic infrastructure.

762. But what is notable about Plaintiffs’ evidence is the lack of the connection between those *risks* and any *harm*. No Plaintiff, expert witness, or State witness offered any evidence that any Georgia ballot has ever not been counted as cast. And further, Plaintiffs themselves acknowledged that they have no idea if votes cast on hand-marked paper ballots have been counted as cast because they do not know what the scanner reads.

763. Most significantly, though, Plaintiffs have not provided any evidence quantifying the risk of exploitation of these various potential risks on the election system. That leaves the Court unable to judge the likelihood of any potential burden on the right to vote, especially when “ordinary and widespread burdens” cannot be severe burdens. *Clingman v. Beaver*, 544 U.S. 581, 593 (2005).

764. And the evidence before the Court has demonstrated that the State has taken reasonable measures to address the risks. As discussed previously, the State has either already implemented or considered and reasonably rejected recommendation from CISA stemming from the vulnerabilities identified in Dr. Halderman’s report. It has undertaken proactive measures to check on the functioning of Dominion equipment in counties. And the evidence shows the Secretary’s office acts quickly when advised of counties taking action inconsistent with cybersecurity principles. *See* Sections III. B. 9., III. C. 3. *above*.

765. The evidence also provides a further basis for finding the potential burdens that Plaintiffs identify are only “ordinary and widespread” because Plaintiffs’ own testimony is that it is impossible to mitigate the risks they identify with anything other than their preferred policy solution.

766. Plaintiffs' experts testified that BMDs are inherently unauditible. Tr. Vol. VIII 14:25–15:3 (Halderman); Tr. Vol. IX 133:4–10 (Stark).

767. Plaintiffs' expert testified that no amount of software upgrades, testing, or physical security could ever detect or eliminate the risks they identified. Tr. Vol. VIII 12:12–13:9, 13:10–14, 14:2–5, 14:25–15:3, 16:21–25, 26:16–19 (Halderman); Tr. Vol. IX 138:23–139:2 (Stark).

768. The evidence before the Court on these points makes it more akin to a facial challenge to the Dominion BMD system than it is an as-applied challenge to the particular configuration. Because the evidence shows there is simply no configuration that would satisfy Plaintiffs within the State's chosen system, Plaintiffs actual claims are that BMDs are unconstitutional. But voting systems are not unconstitutional merely because they are electronic. [Doc. 1705, p. 115] (citing *Banfield v. Cortes*, 110 A.3d 155, 178 (Pa. 2015)).

769. The evidence put forward by Plaintiffs further emphasizes that the risks faced by the use and configuration of Dominion BMDs in Georgia is no different from that faced by other election systems.

770. But even if the risk is slightly elevated as compared with other election systems, the State provided significant reasons for use its of BMDs, which are discussed in the next section.

771. This is where Plaintiffs' failure to quantify the risk is fatal to their effort to have this Court categorize the burden on the right to vote as severe. Without some indication of the risks of different voting systems, the Court is without judicially manageable standards to determine how to weigh the risks—and weighing risks without manageable standards is inherently the role of the political branches of government.

772. Plaintiffs also face a significant problem trying to tie criminal activity to a burden on the right to vote. *Anderson-Burdick* requires that the State's rule has to impose some burden on Plaintiffs' voting rights. [Doc. 1705, p. 111] (quoting *Timmons*, 520 U.S. at 358).

773. But Section 1983 constitutional claims are still subject to the rules of proximate causation. *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 572 U.S. 118, 134 n.6 (2014); *Zalter v. Wainwright*, 802 F.2d 397, 401 (11th Cir. 1986); *Jackson v. Sauls*, 206 F.3d 1156, 1168 (11th Cir. 2000); *Fair Fight Action v. Raffensperger*, 634 F. Supp. 3d 1128, 1199 (N.D. Ga. 2022).

774. The intervening criminal conduct in Coffee County thus cannot be part of a burden on the right to vote because it severs the causal chain that would connect a potential burden back to the State. *Buckman v. Halsey*, No. 20113596, 2021 WL 4127067, at *3 (11th Cir. Sept. 10, 2021).

Independent acts and the inaction of county officials also severs the causal

chain to the only remaining Defendants in this case. *Jacobson*, 974 F.3d at 1255; *Fair Fight Action, Inc. v. Raffensperger*, 1:18-CV-5391-SCJ, 2021 WL 9553856, at *8 (N.D. Ga. Mar. 31, 2021), *opinion clarified* 1:18-CV-5391-SCJ, 2021 WL 9553849 (N.D. Ga. Nov. 15, 2021).

775. Plaintiffs' idea that state inaction in responding to security threats can impose a burden on the right to vote also cannot be squared with binding precedent. Initially, Section 1983 liability cannot be based on government inaction. *DeShaney v. Winnebago Cnty. Dep't of Soc. Servs.*, 489 U.S. 189, 195 (1989) (due process); *Smith v. Arkansas State Highway Emp., Local 1315*, 441 U.S. 463, 465 (1979) (first amendment); *Fair Fight Action, Inc. v. Raffensperger*, 1:18-CV-5391-SCJ, 2021 WL 9553856, at *8 (N.D. Ga. Mar. 31, 2021), *opinion clarified* 1:18-CV-5391-SCJ, 2021 WL 9553849 (N.D. Ga. Nov. 15, 2021) ("The Court agrees with Defendants that '[t]he law does not impose constitutional liability for governments because they do not exceed their statutory obligations").

776. Refusing to allow Plaintiffs to proceed on a theory of state inaction under *Anderson-Burdick* also makes sense. In today's world, there are any number of individuals and entities claiming that states have failed to do enough to secure elections from voter suppression or voter fraud. Allowing Plaintiffs to claim the state has not done enough "makes it difficult to apply *Anderson-Burdick's* balancing approach. After all, it is one thing to assess the

government's interest in taking a specific action that imposed burdens on the right to vote. It is much less natural for a court to evaluate whether the government had a good reason for not doing something differently, or for failing to do more to prevent (or reduce the risk of) misconduct by third parties that could burden the right to vote.” *Donald J. Trump for President, Inc. v. Boockvar*, 493 F. Supp. 3d 331, 393 (W.D. Pa. 2020).

777. Finally, to the extent the evidence at trial shows mistakes in the process of the administration of elections, that does not implicate *Anderson/Burdick*. Isolated events are not violations of the Constitution. *Fair Fight Action, Inc. v. Raffensperger*, 634 F. Supp. 3d 1128, 1201–02 (N.D. Ga. 2022) (quoting *Gamza v. Aguirre*, 619 F.2d 449, 453–54 (5th Cir. 1980)).

778. Based on the foregoing, the Court categorizes the burden on the right to vote from the use and configuration of the Dominion BMD system as an ordinary and widespread burden, and thus a minimal one if it exists at all. Every voting system has risks and the evidence demonstrates significant efforts by Georgia and its officials to mitigate the risks to Georgia's election system through the use of physical security, testing, and audits.

779. The Court turns next to the state interests, which, because the burden was categorized as minimal and because they are reasonable and non-discriminatory, need only be justified by the state's regulatory interests. *Common Cause/Georgia v. Billups*, 554 F.3d 1340, 1352 (11th Cir. 2009).

2. *The state's interests in using Dominion BMDs.*

780. The State's interests in the particular election practice are the second part of the *Anderson-Burdick* analysis, where the Court reviews the interests in justifying the limitation on the right to vote. *Id.*

781. What is significant about this point is what Plaintiffs did not provide the Court. Plaintiffs did not put forward a single witness with experience running elections in Georgia. They did not put forward testimony from any county election officials or any poll workers. Unlike during prior iterations of this case, they did not put forward any expert on election administration. And even for the concept that the State's various investigations were insufficient, they did not offer a single law-enforcement investigator or expert.

782. This complete lack of evidence already demonstrates the State's stated regulatory interests are sufficient because they stand unrefuted.

783. And those interests are significant. Defendants provided evidence on the history of Georgia using touchscreen voting for decades, on how BMDs provide clear voter intent unlike hand-marked paper ballots, and of problems with election administration for early voting when hundreds of possible ballot combinations would have to be physically maintained at polling locations if BMDs were not used. Tr. Vol. XV 245:23–247:23 (Sterling); Tr. Vol. XVI 7:22–8:17 (Sterling).

784. If a hand-marked paper ballot is ambiguous, the voter's intent is determined by a voter review panel, to the best of the panel's ability, determining the voter's intent of what the voter selected. Tr. Vol. XIII 25:12–16, 26:1–12 (Evans).

785. Vote dilution could happen with an illegal ballot cast with a hand-marked paper ballot. Tr. Vol. XI 180:9–11 (Evans).

786. In Mr. Evans' election experience, he is aware of cases where individuals were prosecuted for illegal conduct involving hand-marked paper ballots. Tr. Vol. XI 180:23–181:1 (Evans).

787. Defendants provided evidence on the size of ballots and the space used on the current system, which are not addressed by moving to full-face ballots. Tr. Vol. XVI 11:9–13:5 (Sterling).

788. Defendants provided evidence of the state's interests in the use of QR codes, including the ease of review of ballots for voters and physical limitations of election equipment. Tr. Vol. XVI 26:15–27:2 (Sterling).

789. Significantly, Defendants also provided extensive evidence regarding disability access using BMDs and the state interest from the SAFE Commission and others on not requiring voters with disabilities to vote on separate election systems. *See* Section IV. D.

790. Defendants provided evidence that Georgia is a leader in the nation on post-election audits and has significant interests in continuing risk-limiting audits for Georgia elections. Tr. Vol. XVI 26:3–14 (Sterling).

791. The state also has interests in preventing voter intimidation, voter coercion, and voter fraud. Tr. Vol. VI 53:17–54:4 (Mashburn). And it has interests in having people trust the election system. Tr. Vol. VI 84:6–8 (Mashburn).

792. Georgia has a strong interest in avoiding lines at polling places on election day and during early voting. Tr. Vol. XIII 60:24–61:6 (Evans).

793. In the past, polling locations have opened late and that has caused lines. Tr. Vol. XIII 59:20–60:9 (Evans). This underscores the importance of equipment that county officials can operate, providing a reasonable basis for not unifying tabulator security keys.

794. And as further discussed below, Georgia does not have the infrastructure in place and has not done the testing required to switch over to using hand-marked paper ballots instead of BMDs. Tr. Vol. VI 96:20–97:11. (Mashburn).

795. Thus, given the relatively minor burden on the right to vote, the significant interests of the state more than easily justify that restriction. Even if the burden was heightened, the evidence of state interests, especially

when compared with the lack of evidence from the Plaintiffs, demonstrates that Georgia's voting system is appropriate and constitutional.

796. The Court further notes that it would be a high bar indeed to determine that the U.S. Constitution speaks to the version of software used in election systems or to burdens as a result of using particular systems chosen by policymakers. Risks exist in every human activity and in every election system. The risks identified by Plaintiffs here do not impose a significant burden on the right to vote and, to the extent any burden exists, it is more than justified by the state's interests.

B. Remaining injunctive relief factors

797. For all the foregoing reasons, Plaintiffs have not demonstrated they can succeed on their constitutional claims. There is no evidence of a burden on the right to vote, and to the extent there is a burden, it is more than justified by the state interests put forward at trial.

798. But even if the Plaintiffs had shown they could succeed on their claims, there still would be no basis to enter any permanent injunction.

799. To enter a permanent injunction, Plaintiffs must still come forward with evidence (1) of an irreparable injury absent an injunction, (2) of the lack of any adequate remedy at law, (3) that the balance of the equities weighs in Plaintiffs' favor, and (4) that the public interest would not be

disserved by a permanent injunction. *eBay, Inc. v. MercExchange, LLC*, 547 U.S. 388, 391 (2006).

1. No irreparable injury absent an injunction.

800. Even assuming, *arguendo*, that Plaintiffs can succeed in their claims on the merits, they have still fallen short of demonstrating the certainty of an irreparable injury in the absence of their requested injunction. *See Siegel v. LePore*, 234 F.3d 1163, 1176–78 (11th Cir. 2000) (discussing that irreparable harm must be present, even assuming success on the merits demonstrating a constitutional injury).

801. As discussed, Plaintiffs produced no evidence at trial that any vote cast on the Dominion BMD System was not properly counted as cast, but nonetheless ask this Court to enjoin the BMD System based on the speculative fear that this could occur in the future. This is insufficient to establish this essential element for obtaining injunctive relief because it is not an “actual and imminent” harm, but rather a remote and speculative fear of harm occurring in the future. *Siegel*, 234 F.3d at 1176–77 (citing *NE Fla. Chapter of the Ass’n of Gen. Contractors v. City of Jacksonville*, 896 F.2d 1283, 1285 (11th Cir. 1990)).

802. Moreover, assuming that the purported injury Plaintiffs claim is simply the use of BMDs for in-person voting—a purported injury that is at least non-speculative—there use alone is not irreparable since this Court and

others have already found that voting systems are not unconstitutional merely because they are electronic, [Doc. 1705, p. 115], and such BMD systems are among those sanctioned by the preeminent Consensus Report on the matter produced by the National Academies of Science, Engineering, and Medicine. DX 728 at 27–28 (6–7); Tr. Vol. XIV(A) 38:02–24.

803. In a similar vein, to the extent Plaintiffs’ injury is centered on the burden of reviewing their ballots prior to casting, such an injury is not irreparable as the individual Plaintiffs themselves can overcome this injury by reviewing their own ballots. And, more broadly, Plaintiffs’ [d]istrust in an electorate’s ability to properly use” the Dominion BMD System—by reviewing their ballots prior to casting—does not give rise to a constitutional violation nor to imminent, irreparable injury. *Wexler v. LePore*, 342 F. Supp. 2d 1097, 1110 (S.D. Fla. 2004), *aff’d sub nom. Wexler v. Anderson* 452 F.3d 1226 (11th Cir. 2006). This is doubly true where voters are instructed to review their ballots prior to casting. *Compare* Ga. Comp. R. & Regs. r. 183-1-12-.11(8) *with Wexler*, 342 F. Supp. 2d at 1110, n.20 (noting voters’ responsibility to “familiarize[e]” themselves with operation of voting equipment under Florida law).

2. Lack of adequate remedy at law.

804. Plaintiffs are not entitled to any monetary damages. Because Plaintiffs challenge “a state official’s action on federal grounds,” they are only

entitled to prospective injunctive relief. *Nat'l Ass'n of the Deaf v. Florida*, 980 F.3d 763, 774 (11th Cir. 2020).

805. Further, this Court has repeatedly reminded Plaintiffs that they can proceed in superior court for violations of state law. *See, e.g.*, [Doc. 1705, p. 100 n.62]; [Doc. 751, p. 50 n.28].

806. The same is true of Plaintiffs' remedy in the event of a hack or misconfiguration placing into doubt the results of an election. Not only is Georgia one of only a handful of states which conduct risk-limiting audits to confirm the outcome of an election, and to further protect against a hack or misconfiguration of the election equipment, but in the event such occurs Plaintiffs have an adequate remedy in the form of election contests under Georgia law. O.C.G.A. § 21-2-520, *et seq.*

807. Because Plaintiffs have not shown they can succeed on their claims, they also have not shown that they lack any remedy otherwise available or interest that this Court can address.

3. Balance of equities/public interest.

808. When government officials are the defendant in a case, "its interest and harm—the third and fourth elements—merge with the public interest." *Florida v. HHS*, 19 F.4th 1271, 1293 (11th Cir. 2021) (citing *Swain v. Junior*, 958 F.3d 1081, 1091 (11th Cir. 2020)).

809. As the Court considers the balance of equities and the public interest, there are several factors to consider.

810. First, the failure of Plaintiffs to offer any evidence on potential remedies is fatal to their claims. Viable remedies are a necessary part of Plaintiffs' proof under *Anderson-Burdick* and at the very least to obtain a permanent injunction. *Fair Fight Action*, 634 F.Supp.3d at 1201–02. In order for the Court to fashion any relief, there must be an ability to fashion a remedy that remedies whatever the constitutional violation is in that particular case. *See Gibson v. Firestone*, 741 F.2d 1268, 1273 (11th Cir. 1984); *Young Israel of Tampa, Inc. v. Hillsborough Area Reg'l Transit Auth.*, 89 F.4th 1337, 1351 (11th Cir. 2024); *Alabama v. U.S. Army Corp of Eng'rs*, 424 F.3d 1117, 1127 (11th Cir. 2005).

811. This Court previously identified several potential remedies, including using printed ballots without QR codes, changes to election audits, implementing other cybersecurity issues, or to be determined tailored remedial measures. [Doc. 1705, p. 5]. But as the Court clearly stated, there must be proof of these measures at trial. [Doc. 1705, pp. 116–17].

812. Plaintiffs failed to provide any evidence that remedial measures would address or otherwise mitigate the constitutional violations they claim exist, further demonstrating they are not entitled to a permanent injunction.

813. The evidence presented regarding eliminating QR codes to print full-face ballots was that it would not eliminate all risks Dr. Halderman identified, nor could any witness quantify the reduction in risk as a result. Tr. Vol. VIII 28:13–29:4 (Halderman). Further, the un rebutted testimony from Mr. Sterling was that eliminating QR codes would require new software, new printers, time, and more than \$25 million in cost. Tr. Vol. XVI(B) 8:1–14:16 (Sterling).

814. Defendants' experts also testified that voters verify their ballots, further reducing any potential risk from the use of QR codes. Tr. Vol. XII 287:14–288:9 (Adida); Tr. Vol. XIV 59:9–14, 62:2–13 (Gilbert).

815. The evidence presented on audits was unanimous agreement among Plaintiffs' experts that they believe BMDs are inherently un-auditable, meaning that no additional audits could mitigate our address the risks raised by Plaintiffs. Tr. Vol. VIII 27:19–22 (Halderman); Tr. Vol. IX 134:6–12, 178:1–11 (Stark).

816. Likewise, Defendants' expert and witnesses testified about Georgia's auditing process and how Georgia's audits are more robust than many states. Tr. Vol. XIII 134:8–16, 149:10–14, 152:24–25 (Kirk); Tr. Vol. XII 153:22–154:3, 153:14–16, 168:14–16 (Adida).

817. The evidence presented on additional cybersecurity measures showed that it was impossible to update the existing software in time for the

2024 elections and no Plaintiffs' expert had examined the procedure required by Georgia law, including the Poll Worker Manual forms. DX 1242. Plaintiffs also offered no testimony regarding what additional cybersecurity measures—apart from ordering hand-marked paper ballots—would resolve their alleged injury. Instead, Dr. Halderman testified that there were no physical security measures the State or any county could take that would protect against nation-state attackers. Tr. Vol. VIII 16:21–25 (Halderman).

818. And Plaintiffs cannot obtain relief through an injunction requiring Defendants to follow existing Georgia law, because follow-the-law injunctions are not appropriate—and as this Court has repeatedly urged, Plaintiffs can always proceed with a mandamus action in Georgia superior courts to enforce existing Georgia law.

819. The evidence regarding enjoining the uniformity requirement of O.C.G.A. § 21-2-300 was also sorely lacking. Plaintiffs presented no evidence of what any county would do if given the option to use another election system—meaning that it is entirely possible that every county may continue using the existing BMD system even if the uniformity provision were enjoined. And Plaintiffs agree that a hand-marked system would still provide no means to verify that an individual vote was counted as cast. Tr. Vol. XII 267:22–268:9 (Adida); Tr. Vol. XIV 113:5–16 (Gilbert).

820. In fact, the only evidence from a county official about offering other options besides BMDs to in-person voters was that it would be “the worst of both worlds.” Tr. Vol. XIII 160:19–20 (Kirk). The only county official to testify also explained the infrastructure and cost demands of eliminating the required use of touchscreens for in-person voters. Tr. Vol. XIII 160:22–161:20 (Kirk).

821. Plaintiffs have ultimately provided no evidence of a reason to change the policy decision that has remained in place in Georgia for more than 20 years—that all in-person voters vote on touchscreen voting units. That has been true across multiple legislative decisions and Plaintiffs have provided no evidentiary basis for this Court to second-guess that decision.

822. In fact, the evidence shows that hand-marked ballots are susceptible to their own set of vulnerabilities and risks, including undervote and overvote hacks and an error rate that disproportionately affects voters of color. Tr. Vol. XIV 66:11–16, 67:23–25 (Gilbert). Further, the evidence shows that changing to a new voting system now would result in significant administrative and fiscal burdens for counties. Tr. Vol. XVI(B) 20:18–23:21 (Sterling).

823. Plaintiffs did not offer evidence on other potential remedies and did not address one of the most serious issues with enjoining the use of BMDs in Georgia—the treatment of voters with disabilities, which they would

propose continue using an election system they say is unconstitutional. Tr. Vol. XIV 64:14–23 (Gilbert); Tr. Vol. XII 236:1–6 (Adida). In fact, Dr. Stark even testified that a voter with a disability using a BMD could render a race intrinsically unauditable under certain conditions. Tr. Vol. IX 173:10–20 (Stark).

824. Plaintiffs did not rebut evidence that Ballot-On-Demand printers are not available in sufficient numbers to administer elections in Georgia without introducing the possibility of errors in ballot styles, especially during early voting. Tr. Vol. XVI 18:12–23:21 (Sterling). It was only by the use of these types of printers that a Florida county was able to conduct early voting with a number of different ballot styles in a hand-marked paper ballot system. Tr. Vol. XIII 15:19–15:10 (Evans).

825. Finally, as to the public interest, the unrefuted testimony shows that Georgia does not have the infrastructure in place and has not done the testing required to switch over to using hand-marked paper ballots instead of BMDs. Tr. Vol. VI 96:20–97:11 (Mashburn); Tr. Vol. XV 245:23–246:10 (Sterling).

826. Moreover, Plaintiffs have produced no evidence that their preferred method voting can be practically implemented. The 2024 election cycle is underway with in-person Presidential Preference Primary voting happening now and concluding on March 12, 2024. Followed shortly

thereafter will be primary elections and runoffs, and several already-scheduled special elections, and the November general election and possible runoffs. All of this leaves little room to implement, as a matter of practical and human resources (especially, for example, training), the relief Plaintiffs are seeking and it is far different than the State's long planned rollout of the Dominion BMD System in the first instance. Tr. Vol. XVI(B) 98:19–99:20. “An injunction here would thus violate *Purcell*'s well-known caution against federal courts mandating new election rules—especially at the last minute.” *New Ga. Project*, 976 F.3d at 1283 (citing *Purcell v. Gonzalez*, 549 U.S. 1, 4–5, 127 S.Ct. 5, 166 L.Ed.2d 1 (2006)).

827. Thus, even though Plaintiffs' claims fail as a matter of constitutional law because they do not meet *Anderson-Burdick*, they also have failed to present sufficient evidence to show their entitlement to a permanent injunction. The public interest and equities all weigh heavily in favor of Defendants, not Plaintiffs.

C. The problems with Plaintiffs' requested relief.

828. The Court further notes the issues inherent with the relief requested by the Plaintiffs, in addition to those discussed elsewhere because “[e]ven if the Court were to find that *Anderson-Burdick* applied and that Plaintiffs satisfied their burden in establishing a First and Fourteenth Amendment violation, Plaintiffs have not proposed viable remedies. “The

absence of an available remedy is not only relevant at the remedial stage of the litigation, but also precludes, under the totality of the circumstances inquiry, a finding of liability.” *Fair Fight Action*, 634 F. Supp. 3d at 1206 (citing *Nipper v. Smith*, 39 F.3d 1494, 1533 (11th Cir. 1994)). Specifically, the Court must address (1) the inherent problem with Plaintiffs’ relief as it relates to voters with disabilities; (2) the incongruence of Plaintiffs’ relief with respect to any burden occasioned by unauthorized access occurring in Coffee County or attempted elsewhere; and (3) the limitations of this Court in effectuating the Plaintiffs’ requested relief.

829. At trial, as they have elsewhere in this case, Defendants argued that Plaintiffs’ requested relief would result in burdening the right to vote of voters with disabilities. To be clear, the Court and Defendants acknowledge that a hand-marked balloting system with a BMD available for use by disabled voters is compliant with both the Help America Vote Act and the Americans with Disabilities Act; this, however, is not the issue. Instead, the inherent problem with Plaintiffs’ requested relief in this regard is the logical premise that this Court must accept in order to impose a hand-marked balloting system: that the BMDs are so inherently insecure that they cannot be used by Georgia voters, writ large, but that even still they must be used by those voters who are unable to hand-mark a ballot on their own.

Consequently, the logical result of this position would relegate voters with

disabilities to a position of “political powerlessness in our society.” *Tennessee v. Lane*, 541 U.S. 509, 516 (2004). This Court is simply unwilling to take that step.

830. Further, Plaintiffs have made much of the unauthorized access occurring in Coffee County in this case, but such access is entirely untethered to the central relief they seek. To be clear, neither Defendants nor this Court condone in any manner the actions of Coffee County employees in permitting access to the election equipment. And those actions are presently the subject, in part, of a criminal prosecution brought in the name of the State in Fulton County Superior Court. *State v. Trump, et al.*, No. 23SC188947. But even still, any injunction entered by this Court “must be no broader than necessary to remedy the constitutional violation.” *Young Israel of Tampa, Inc. v. Hillsborough Area Reg’l Transit Auth.*, 89 F.4th 1337, 1351 (11th Cir. 2024).

831. Here, Plaintiffs have not put forth any relation between what the evidence shows occurred in Coffee County alone (forensic imaging of the scanners, election management servers, and poll pads, but not a BMD itself) and their request to enjoin their use throughout the State. Indeed, taking Plaintiffs’ logic as to this theory, the Court must then also enjoin the use of the scanners and election management servers throughout the State, but Plaintiffs (excepting Mr. Davis), in fact, request those scanners and servers

continue to be used. Moreover, Plaintiffs have not put forth any evidence of some actor utilizing the information gathered from equipment in Coffee County for some nefarious purpose and, on the substance, this Court heard testimony from Drs. Adida and Gilbert that both have developed BMD devices which are currently and have previously been used in other jurisdictions, whose source code is publicly available. Setting this aside, at most this would counsel toward the Court enjoining the use of the equipment in Coffee County (presuming this Court would have jurisdiction to do so), not the entire State.

832. Finally, the Court notes its limited authority to enjoin an allegedly unconstitutional course of conduct. Defendants concede that, presuming other prerequisites and success on the merits are established, this Court could enjoin the State from enforcing O.C.G.A. § 21-2-300 (requiring use of BMDs for all in-person voting), but it cannot go beyond that to require an alternative method of the State or any of Georgia's 159 counties. *See Jacobson*, 974 F.3d at 1254–56 (holding that federal courts' authority in entering injunctions is limited to enjoining executive officials from enforcing a statute). As a result, even if this Court were to enjoin enforcement of the statute, and in light of the lack of evidence of the method of voting any Georgia county would institute as a result, such an injunction would not remedy the alleged constitutional violation. Indeed, in the absence of

evidence from the counties this Court may reasonably conclude that all counties, or at least the majority, would simply continue using the equipment and processes they already have and have already been trained on. But the Court need not go so far in its conclusion, it is enough that the Plaintiffs failed to put up evidence of the matter.

D. Policy nature of case

833. Ultimately, Plaintiffs have a policy disagreement with the State of Georgia. While Plaintiffs certainly are free to hold and advocate for their policy positions in any variety of venues, it does not mean that those views are mandated by the U.S. Constitution or that this Court can resolve those disputed.

834. This is especially true when “federal courts must resist the temptation to step into the role of elected representatives, weighing the costs and benefits of various procedures when the State has already done so in a reasonable and nondiscriminatory way.” *Curling*, 50 F.4th at 1126.

835. The proper venue for resolving these claims in the Georgia General Assembly and not this Court.

CONCLUSION

836. This case has been on a long journey to reach this point. But after fully considering the evidence presented to this Court, Defendants are entitled to a defense verdict on all counts remaining in this case.

837. The Constitution sets the sphere of this Court’s “decisionmaking, and that sphere does not extend to second-guessing and interfering with a State’s reasonable, nondiscriminatory election rules.” *New Ga. Project*, 976 F.3d at 1284. Georgia’s use of Dominion BMDs is such a reasonable, nondiscriminatory election rule and Plaintiffs have failed to present evidence to the contrary.

838. For the reasons stated herein, this Court hereby **FINDS IN FAVOR OF AND ENTERS JUDGMENT FOR DEFENDANTS** on all counts. The clerk is **ORDERED** to close this case.

So ORDERED this _____ day of _____, 2024.

The Honorable Amy Totenberg,
U.S. District Court Judge,
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LOCAL RULE 7.1(D) CERTIFICATION

I certify that this Defendants' Proposed Findings of Fact and Conclusions of Law has been prepared with one of the font and point selections approved by the Court in Local Rule 5.1. Specifically, this document has been prepared using 13-pt Century Schoolbook font and type.

/s/ Bryan P. Tyson
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