

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
Norfolk Division

LEE SCHMIDT and CRYSTAL
ARRINGTON,

Plaintiffs,

Civil No. 2:24cv621

v.

CITY OF NORFOLK, the NORFOLK
POLICE DEPARTMENT, and MARK
TALBOT, in his official
capacity as the Norfolk Chief
of Police,

Defendants.

OPINION AND ORDER

I. INTRODUCTION

This matter is before the Court on cross motions for summary judgment filed by Lee Schmidt and Crystal Arrington ("Plaintiffs") and the City of Norfolk and Norfolk Chief of Police Mark Talbot ("Defendants").¹ ECF Nos. 107, 112. The Court has also received and reviewed two amicus briefs as well as a "statement of interest" from the Government, all filed in support of Defendants' motion seeking summary judgment. ECF Nos. 139, 183-84. The Court heard oral argument on the motions on January 14, 2026. The cross-

¹ Defendant Norfolk Police Department ("NPD") was previously dismissed from this action through a consent order. ECF No. 21. The consent order states that the remaining Defendants "shall provide discovery" on behalf of the NPD and that any relief ordered "will bind the NPD to the same extent as if it had been a party to the case." Id. at 1.

motions for summary judgment raise two primary issues: (1) whether Plaintiffs have standing to pursue this civil action; and (2) whether Defendants' widespread use of automatic license plate readers ("ALPR") to photograph vehicles on public roadways in the City of Norfolk is constitutional.

Plaintiffs bring this civil-rights action under Section 1983, and the Declaratory Judgment Act, alleging that Defendants ALPR program violates Plaintiffs' Fourth Amendment privacy rights. ECF No. 1. Section 1983 provides a private cause of action to a plaintiff who has suffered a deprivation of a constitutional or statutory right at the hands of a state or local official or other person acting under color of state law. 42 U.S.C. § 1983. Section 1983 "is not 'a source of substantive rights, but a method for vindicating federal rights elsewhere conferred by those parts of the United States Constitution and federal statutes that it describes.'" Lambert v. Williams, 223 F.3d 257, 260 (4th Cir. 2000) (quoting Baker v. McCollan, 443 U.S. 137, 144 n.3 (1979)). "The Declaratory Judgment Act, 28 U.S.C. § 2201(a), provides that district courts 'may declare' the rights of interested parties," a discretionary authority to "clarify[]" legal relations and "afford relief from the uncertainty, insecurity, and controversy giving rise to the proceeding." United Capitol Ins. Co. v. Kapiloff, 155 F.3d 488, 493 (4th Cir. 1998).

The dispositive constitutional question in ALPR cases is whether the alleged "dragnet type law enforcement practices," United States v. Knotts, 460 U.S. 276, 284 (1983), have become so intrusive that they violate individuals' "reasonable expectation of privacy in the whole of their physical movements," Carpenter v. United States, 585 U.S. 296, 310 (2018). Federal and state courts analyzing ALPR claims have almost uniformly concluded that neither taking photos of the license plate of a vehicle on a public roadway nor maintaining and querying a database of ALPR photos constitute a warrantless "search." See Rinaldi v. Sylvester, No. 24-CV-272, 2025 WL 2682691, at *17 (S.D.N.Y. Sept. 19, 2025) (collecting cases demonstrating that "nearly every court" that has addressed the issue "has held that queries of [A]LPR databases do not constitute Fourth Amendment searches").

More recently, however, several federal judges, including another judge of this Court, have expressly cautioned that their rejection of a constitutional challenge to the use of ALPR technology should not be indiscriminately extended because, as the number and capabilities of ALPR cameras expand, the constitutional balancing could conceivably tip the other way. United States v. Martin, 753 F. Supp. 3d 454, 476 (E.D. Va. 2024) ("This Court must rule on the facts as they are and may not speculate about what the future may hold for [ALPR] capabilities."). The undersigned agrees with these cautionary statements, as reflected in this Court's

prior opinion finding that Plaintiffs' complaint, when construed in their favor as required at the pleading stage, plausibly alleged a constitutional violation predicated on dragnet-like surveillance of "the whole" of Plaintiffs' physical movements. Schmidt v. City of Norfolk, No. 2:24cv621, 2025 WL 410080, at *7-8 (E.D. Va. Feb. 5, 2025).

The Court's recognition in that opinion that Plaintiffs' Fourth Amendment claim was plausible was not a tacit merits ruling, nor was it an indictment of the expanded use of ALPR technology in Norfolk or elsewhere. To the contrary, localities and states have the freedom to experiment with new policies and technologies, including innovative approaches to policing. See Arizona State Legislature v. Arizona Indep. Redistricting Comm'n, 576 U.S. 787, 817 (2015) ("[O]ne of the happy incidents of the federal system [is] that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country." (quoting New State Ice Co. v. Liebmann, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting))); Leaders of a Beautiful Struggle v. Baltimore Police Dep't, 2 F.4th 330, 353 (4th Cir. 2021) (Wilkinson, J., dissenting) (reviewing the benefits of experimentation and the "harm to the people . . . and our federalist constitutional system" when courts apply too heavy a hand and deny "the people . . . a proper latitude to address" societal problems); see also Martin, 753 F. Supp. 3d

at 476 ("The Court is cautious to not hinder law enforcement's use of modernizing surveillance capabilities in the public sphere lest the Court 'embarrass the future.'" (quoting Carpenter, 585 U.S. at 316)). Such experimentation is best achieved with input from the public and with guardrails erected by state legislatures or local governing bodies, as is the case in Virginia. See ECF No. 140, at 8 (acknowledging that, in mid-2025, Defendants began retaining ALPR data for 21 days rather than 30 days due to a recently enacted state statute); see also United States v. Jones, 565 U.S. 400, 427-28 (2012) (Alito, J., concurring) (observing that sometimes new technology provides "increased convenience or security at the expense of privacy, and many people may find the tradeoff worthwhile," whereas at other times "concern about new intrusions on privacy may spur the enactment of legislation to protect against these intrusions" thus causing privacy standards to be "governed primarily by statute and not by case law").

Nevertheless, while the people, through their legislatures, should be incentivized to implement privacy guardrails, courts may not reflexively defer to these legislative limits in delineating the proper constitutional boundaries. Instead, state and federal courts must remain a steadfast backstop against constitutional violations. Cf. Carpenter, 585 U.S. at 301-02, 310 (finding that the legislative boundaries created by the federal Stored

Communications Act were insufficient to ensure that the defendant's constitutional rights were observed).

The well-reasoned analysis in non-precedential ALPR cases coupled with the controlling law of this Circuit² leave "serious doubt" about the precise point at which "governmental use of [ALPR] cameras crosses the line to an impermissible warrantless search." United States v. Sturdivant, 786 F. Supp. 3d 1098, 1111 (N.D. Ohio 2025). Consistent with Plaintiffs' claims in this case and controlling precedent involving mass surveillance in public spaces, ALPR "surveillance could become too intrusive and run afoul of [constitutional privacy standards] at some point. But when?" Id. While a definitive answer to that question is elusive, what is readily apparent to this Court is that, at least in Norfolk, Virginia, the answer is: not today.

For the reasons explained herein, the Court **GRANTS** Defendants' motion for summary judgment and **DENIES** Plaintiffs' cross motion for summary judgment.

II. FACTUAL AND PROCEDURAL BACKGROUND

Plaintiffs' complaint arises out of Defendants' installation and operation of ALPR cameras from the private technology contractor, Flock Safety ("Flock"). ECF No. 1, at 2. Plaintiffs contend that "[t]he City of Norfolk lives under the watch of a

² See Beautiful Struggle, 2 F.4th at 333 (discussed in detail infra).

flock of unblinking eyes," comprising 176 Flock cameras operated by Defendants in Norfolk today. ECF No. 108, at 1.

Defendants' 176 cameras are "typically mounted on the top of poles and installed next to public roadways," where they "photograph external vehicle characteristics that are visible to the naked eye." ECF No. 113, at 4. It is undisputed that Defendant's ALPR cameras "photograph every passing car" (or at least endeavor to do so) and that the Flock system "uses artificial intelligence to read the license plate." ECF No. 108, at 3. The cameras capture images of nearly every vehicle traveling in one direction, operate twenty-four hours a day, and have very high accuracy at reading license plates, including at night. Id.; ECF No. 118, at 3. In addition to capturing license plates, "Flock's patented 'Vehicle Fingerprint' also records the make, type, color, and other distinctive features (like roof racks and bumper stickers)."³ ECF No. 108, at 3. "Flock cameras do not provide information to users about the location of individuals beyond public roadways or outside of vehicles," meaning that unlike a cell phone or ankle monitor, they do not "follow" individuals inside buildings, homes, or anywhere else - they photograph vehicles on

³ The Court's summary of the capabilities of the Flock system are based on the technology deployed in Norfolk; to the extent Flock Safety may provide additional functionality to other customers, these additional features are not relevant to this case.

the public roadways where the stationary cameras are located. ECF No. 113, at 5.

"After a Flock camera photographs a passing vehicle, the image is uploaded to encrypted" servers and the data is securely stored for a designated "retention period."⁴ Id. "Law enforcement agencies determine which personnel can become authorized users of the Flock System," and without a "username and password, a person cannot access the Flock System." Id. at 6. "Authorized users access data from Flock cameras by logging into a web-based interface or mobile application" through which they can "run queries for a full or partial license plate number, a set of Vehicle Fingerprint characteristics, or both." Id. "Alternatively, an authorized user can look up all of the photographs by a particular Flock camera within its network during a given time period." Id. Authorized users also "receive real-time alerts when a vehicle on a 'hotlist' is detected by a Flock camera to which the user has access."⁵ Id. Authorized users can also "create 'custom hotlists,' for example to help locate a stolen vehicle or missing person." Id. at 7. If a Norfolk-based Flock camera detects a "hotlist"

⁴ Plaintiffs dispute Defendants' suggestion that all data is deleted after the defined retention period, but also indicate that the factual statement offered by Defendants regarding deletion is "not material." ECF No. 140, at 5. The Court recognizes that, at the very least, data involving an ongoing criminal investigation may be retained longer than the default retention period.

⁵ This includes vehicles associated with an AMBER alert.

vehicle, the NPD, and authorized users within the NPD, will receive "an alert informing them of the date, time, and location of the hit." Id. at 6-7.

Defendants' 176 ALPR cameras are "generally located at busy intersections, in commercial areas, and near freeway onramps and offramps," as well as "major points of ingress to and egress from Norfolk." Id. In some areas as many as four ALPR cameras are located near a single intersection so that every direction of travel is captured. Id. As a result, Defendants' ALPR cameras are grouped into 75 "clusters" in Norfolk rather than placed in 176 isolated locations spread throughout the city. Id.

The specific placement of ALPR cameras in Norfolk was determined after considering areas with "high rates of violent crime and high-priority calls for service." Id. at 7. The NPD also considered how easy it would be for a criminal to avoid the cameras as well as the existing locations of "third-party" Flock cameras where the owner voluntarily shares its data with the NPD.⁶ Id.; ECF No. 140, at 6, ECF No. 108-8, at 51-52, 74. The NPD has successfully used its Flock camera system "to locate stolen cars, missing persons, and vehicles seen leaving the scene of violent crimes." ECF No. 113, at 8. Norfolk spans 66 square miles and

⁶ In addition its own cameras, the NPD has access to data captured by 43 Flock cameras located within the City of Norfolk that are operated by third parties. ECF No. 113, at 8; ECF No. 140, at 6.

contains over nine million feet of road; the 75 Flock camera clusters therefore monitor a very small percentage of Norfolk's public roadways. Id. at 8-9.

Based on a Virginia statute effective July 1, 2025, the NPD shares its "Flock camera data only with other law enforcement agencies in the Commonwealth of Virginia." Id. Prior to the passage of this state law, Defendants' Flock system retained ALPR data for 30 days, but it now generally retains it for 21 days. ECF No. 140, at 8. This retention period does not prevent the long-term retention of ALPR data that is downloaded from the Flock system. Id.; ECF No. 108-8, at 248.

It is undisputed that Plaintiffs' vehicles were photographed by Defendants' ALPR cameras approximately 475 and 325 times, respectively, during a four-and-a-half month period in early 2025, which the parties' experts analyzed as part of this case.⁷ ECF No. 108, at 14-15. During an average 21-day retention period, Defendants' system captured full license plate matches of Plaintiffs' vehicles an average of 2 to 3 times per day. ECF No. 113, at 9. It is undisputed that on days where it is known that

⁷ Plaintiffs contend that these counts are "likely underinclusive" because they only include complete "license plate reads." ECF No. 108, at 14 n.5. Defendants, in contrast, argue that these numbers are "inflated" because they include duplicate photographs of the same plate taken by the same camera "mere seconds apart." ECF No. 145, at 11. The Court assumes for the purposes of summary judgment that the numbers are underinclusive, though it notes that Plaintiffs' own version of the facts reports that Defendants' Flock cameras are extremely effective at reading license plates. ECF No. 118, at 3.

Plaintiffs were photographed multiple times, the average distance between photographs with complete license plate matches was 3.5 and 2.5 miles, respectively, and the average duration between full plate matches was approximately 45-50 minutes. Id. at 10. Finally, the parties agree that (1) outside this litigation, NPD "has never queried any license plate number associated with a vehicle registered to either Plaintiff" and (2) Plaintiffs are law-abiding citizens who do not expect that they will be subject to an ALPR query in the future. Id. at 13.

In the motions now pending before the Court, Defendants seek a summary judgment ruling in their favor that would terminate the case, while Plaintiffs seek partial summary judgment as to liability and an opportunity for additional briefing as to the scope of any injunctive relief. On January 14, 2026, this Court held oral argument on the cross motions. ECF No. 190.

III. STANDARD OF REVIEW

Rule 56(a) of the Federal Rules of Civil Procedure provides that a district court shall grant summary judgment in favor of a movant if the movant "shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). The "mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no genuine issue of material fact."

Anderson v. Liberty Lobby Inc., 477 U.S. 242, 247-48 (1986) (emphases in original). "A genuine question of material fact exists where, after reviewing the record as a whole, a court finds that a reasonable [factfinder] could return a verdict for the nonmoving party." Dulaney v. Packaging Corp. of Am., 673 F.3d 323, 330 (4th Cir. 2012).

Although the initial burden on summary judgment falls on the moving party, once a movant properly presents evidence supporting summary judgment, the nonmoving party may not rest upon the mere allegations in the pleadings, but instead must set forth specific facts in the form of exhibits and sworn statements illustrating a genuine issue for trial. Celotex Corp. v. Catrett, 477 U.S. 317, 322-24 (1986). The Court is not to weigh evidence or make credibility determinations at the summary judgment phase, but must evaluate the evidence only to the extent necessary to determine whether there is "sufficient disagreement to require submission to a jury or whether [the evidence] is so one-sided that one party must prevail as a matter of law." McAirlaids, Inc. v. Kimberly-Clark Corp., 756 F.3d 307, 310 (4th Cir. 2014) (quoting Liberty Lobby, 477 U.S. at 251-52). In making its determination, "the district court must 'view the evidence in the light most favorable to the' nonmoving party." Jacobs v. N.C. Admin. Off. of the Cts.,

780 F.3d 562, 568 (4th Cir. 2015) (quoting Tolan v. Cotton, 572 U.S. 650, 657 (2014)).⁸

When faced with cross-motions for summary judgment, the Court must "consider each motion separately on its own merits to determine whether either of the parties deserves judgment as a matter of law." Defenders of Wildlife v. N.C. Dep't of Transp., 762 F.3d 374, 392 (4th Cir. 2014) (quoting Bacon v. City of Richmond, Va., 475 F.3d 633, 638 (4th Cir. 2007)). In doing so, the Court must "resolve all factual disputes and any competing, rational inferences in the light most favorable to the party opposing that motion." Id. (quoting Rossignol v. Voorhaar, 316 F.3d 516, 523 (4th Cir. 2003)).

IV. DISCUSSION - DEFENDANTS' SUMMARY JUDGMENT MOTION

Defendants' summary judgment motion begins by advancing a standing challenge and goes on to dispute whether Plaintiffs' evidence is capable of demonstrating that Defendants' actions violate an objectively reasonable expectation of privacy. ECF No. 113. As explained in detail below, Defendants' arguments largely miss the mark as to standing, but prevail as to the merits.

⁸ The parties largely agree that the material facts are not in dispute, and that the case is subject to resolution on the cross-motions for summary judgment. See ECF No. 190, at 68 (indicating that the "case is ripe for determination as a matter of law").

A. CONSTITUTIONAL STANDING

1. Legal Standard

Article III of the United States Constitution "limits the judicial power of the United States to 'Cases' and 'Controversies.'" Griffin v. Dep't of Lab. Fed. Credit Union, 912 F.3d 649, 653 (4th Cir. 2019). Embedded within this constraint are three requirements necessary to establish standing: "The plaintiff must have (1) suffered an injury in fact, (2) that is fairly traceable to the challenged conduct of the defendant, and (3) that is likely to be redressed by a favorable judicial decision." Spokeo, Inc. v. Robins, 578 U.S. 330, 338 (2016).

Focusing on the first requirement, "[a] wrong suffered by a party is only an injury in fact if it is sufficiently 'concrete and particularized.'" Griffin, 912 F.3d at 653 (quoting Spokeo, 578 U.S. at 338). "[W]hen a party seeks injunctive relief," as Plaintiffs do here, there must also be "a 'real or immediate threat' that [Plaintiffs] will suffer an injury in the future." Id. (quoting City of Los Angeles v. Lyons, 461 U.S. 95, 111 (1983)). A plaintiff, "as the party invoking federal jurisdiction, bears the burden of establishing these elements." Spokeo, 578 U.S. at 338.

2. Analysis

Defendants' standing challenge focuses on the purported absence of an "injury in fact." ECF No. 113, at 14. After the

benefit of discovery, it is apparent that Defendants' ALPR system generally operates in two stages. First, vehicles are photographed at various locations around the City of Norfolk and the images are automatically uploaded to an encrypted database ("Step One"). Second, when an NPD investigation calls for it, the ALPR database is queried by an authorized user seeking to discover any "hits" tied to a license plate or vehicle of interest ("Step Two").⁹ The standing analysis differs for each discrete stage.

a. Step One - Taking and Storing Photographs

Recent ALPR case law, as well as case law involving large-scale surveillance taking other forms, plainly supports the finding that Plaintiffs have standing to bring their Fourth Amendment claim as to Step One.¹⁰ This conclusion is best illustrated through comparison of the facts and arguments in this case with those of Scholl v. Illinois State Police, 776 F. Supp. 3d 701 (N.D. Ill. 2025). As discussed below, the Court rejects Defendants' strained reading of Scholl. The case directly supports, rather than undercuts, Plaintiffs' standing.

⁹ The second step of the ALPR process differs for "hotlist" vehicles, though this hotlist procedure has limited relevance to the instant case.

¹⁰ This Court previously analyzed standing in this case by considering whether Plaintiffs' complaint contained enough facts to plausibly allege that Defendants were violating Plaintiffs' subjective expectation of privacy that society would accept as objectively reasonable. Schmidt, 2025 WL 410080, at *5-8. Defendants' summary judgment standing challenge does not revisit the subjective/objective inquiry, but instead argues that because Plaintiffs cannot demonstrate that their data was ever queried by Defendants, they necessarily did not suffer an "injury in fact." ECF No. 113, at 15-17.

In Scholl, the plaintiffs sought to enjoin both (1) "the warrantless use of ALPRs to photograph motorists' license plates" (Step One) and (2) "the warrantless use of the LEARN database," a national database that state police officers could use to "retrieve" license plate photos as part of an authorized investigation (Step Two). Id. at 707, 709-10. At the pleading stage, in direct response to the defendants' "threshold" argument that the "plaintiffs lack[ed] an injury-in-fact sufficient to confer Article III standing," the Scholl court made two discrete and well-reasoned findings. Id. at 708.

First, favorable to the Scholl plaintiffs, the district court found that the plaintiffs had standing to challenge the "warrantless use of ALPRs to photograph motorists' license plates" because the well-pled facts supported the reasonable inference that the cameras at issue would continue to "photograph [the] plaintiffs' license plates." Id. at 709 (emphasis added). This conclusion was supported by the observation that multiple appellate courts, including the Fourth Circuit, "routinely hold that the subjects of government surveillance have standing to challenge that surveillance." Id. (citing Wikimedia Foundation v. Nat'l Sec. Agency, 857 F.3d 193, 209 (4th Cir. 2017)).

Second, favorable to the Scholl defendants, the district court found that the plaintiffs failed to allege facts capable of plausibly demonstrating a "substantial risk" that the police "will

soon retrieve plaintiffs' license plate information from the [ALPR] database." Id. at 710. Because the plaintiffs did not allege an "imminent" constitutional injury predicated on Step Two of the ALPR process, the plaintiffs lacked standing "to enjoin the warrantless use of the LEARN database." Id. at 710-11.

This Court, with relative ease, similarly finds that Plaintiffs have standing to challenge Step One of Defendants' ALPR system, and is somewhat puzzled by Defendants' effort to collapse the bifurcated standing analysis in Scholl into a one part analysis that favors Defendants. Here, the undisputed facts clearly demonstrate that Plaintiffs' vehicles were in 2025 (and are today) being photographed every time they pass an ALPR camera in Norfolk. As the subject of consistent and ongoing NPD "surveillance," Plaintiffs have standing to challenge the constitutionality of that surveillance. Wikimedia Foundation, 857 F.3d at 210.

Defendants attempt to distinguish Wikimedia Foundation, the Fourth Circuit case cited in Scholl, on the grounds that Wikimedia involved seizures of private emails, whereas this case involves photographs taken on a public street. ECF No. 166, at 5. This Court rejects this effort. In Wikimedia, the plaintiffs alleged that some of their internet communications were being "intercepted, copied, and reviewed" by the government. Wikimedia Foundation, 857 F.3d at 202. The Fourth Circuit's standing analysis, however, focuses on the interception and copying of the plaintiffs'

messages, making no mention of any "review." See id. at 210 ("The allegation that the NSA is intercepting and copying communications suffices to show an invasion of a legally protected interest," the injury is "concrete and particularized," and there is "nothing speculative about it – the interception of Wikimedia's communications is an actual injury that has already occurred." (emphasis added)). Other circuit courts have reached similar conclusions. See Am. C.L. Union v. Clapper, 785 F.3d 787, 801 (2d Cir. 2015) (explaining that the appellants' claim was based on the seizure of their telephone metadata, holding that "appellants surely have standing to allege injury from the collection, and maintenance in a government database, of records relating to them"); Jewel v. Nat'l Sec. Agency, 673 F.3d 902, 906, 910 (9th Cir. 2011) (explaining that the plaintiff had standing because she "alleged with particularity that her communications were part of the dragnet" and had been "illegally acquired" through "surveillance devices attached to AT&T's network" (second emphasis added)). Defendants fail to distinguish Wikipedia or these other cases.¹¹

¹¹ At oral argument, defense counsel rebuffed the Court's suggestion that Defendants were improperly seeking to inject the merits of Plaintiffs' claim into the standing analysis. ECF No. 190, at 45-49. To the extent Defendants' reply brief standing argument suggests otherwise by claiming that "merely taking photographs" on public streets "cannot invade [plaintiffs'] privacy," ECF No. 166, at 5, this merits argument has no place in the standing analysis. See Am. Fed'n of State, Cnty. & Mun. Emps., AFL-CIO v. Soc. Sec. Admin., 778 F. Supp. 3d 685, 720 (D. Md. 2025) ("For standing purposes, we accept as valid the merits of the plaintiff's claims." (cleaned up) (quoting Fed.

Consistent with the above-cited circuit precedent, and the well-reasoned analysis in Scholl, Plaintiffs have demonstrated standing to challenge the collection and storage of their vehicles' images. Defendants 176 ALPR cameras operate around the clock, capturing images of virtually every vehicle that passes a camera and then storing them in a searchable database. Long before any police officer makes a "query" of the database, countless citizens (including Plaintiffs) have their locations recorded and logged by the NPD, and this data is retained on a three-week rolling basis. The database of retained images is not limited to individuals engaged in criminal activity based on probable cause, or even reasonable suspicion, but instead ensnares an immense array of law-abiding citizens guilty of nothing more than driving their cars in Norfolk. While it is undisputed that queries of Plaintiffs' vehicles were never performed, it is likewise undisputed that hundreds of photographs of Plaintiffs' vehicles were captured and stored during the test period, meaning that over time, Plaintiffs' vehicles are being photographed by Defendants thousands of times. Plaintiffs, therefore, have standing to challenge the constitutionality of Step One of Defendants' ALPR program.¹²

Election Comm'n v. Cruz, 596 U.S. 289, 298 (2022)); Beck v. McDonald, No. 3:13cv999, 2015 WL 13777969, at *4 (D.S.C. Mar. 31, 2015) ("In assessing standing, the Court assumes Plaintiffs will prevail on the merits").

¹² Though supplanted by en banc review, both the majority and the dissent of the Fourth Circuit panel in Beautiful Struggle found that a plaintiff that is photographed during a mass surveillance program has standing to challenge

b. Step Two – Warrantless Queries of the Database

Step Two of Defendants' ALPR system involves NPD officers making a warrantless query of the ALPR database to produce a targeted readout of retained images. Plaintiffs freely concede that their vehicles have never been the subject of a query (outside of this litigation). ECF No. 140, at 11. However, Plaintiffs view this fact as "not material" because their claim for relief asserts that Defendants are violating the Fourth Amendment "by tracking their movements with the Flock Cameras, not by searching for their license plates in the Flock system." Id. (emphasis added). Accordingly, the undisputed facts, including Plaintiff's own admissions, reveal both that Plaintiffs did not suffer any constitutional injuries from a past database query and there is no imminent threat of an injury from a future query. Therefore, again tracking the standing analysis in Scholl, this Court easily concludes that Plaintiffs "lack standing to [challenge] the warrantless use of the [ALPR] database." Scholl, 776 F. Supp. 3d at 710-11.

Step One of that program. Beautiful Struggle, 979 F.3d at 225, 234, on reh'g en banc, 2 F.4th 330 (4th Cir. 2021). Rejecting the defendants' assertion that standing is not conferred until the collected data is reviewed, the Court explained that the alleged injury was not that the plaintiffs were being identified by the police, "but merely that they are being photographed." Id. This standing analysis was not revisited by the en banc Court because by the time the case reached it, the surveillance program had ended and the plaintiffs were no longer being photographed.

Recapping the above, Plaintiffs have standing to challenge Defendants' operation of the 176 camera ALPR system to the extent that such system is repeatedly photographing Plaintiffs' vehicles and storing the seized images in a searchable database. In contrast, Plaintiffs lack standing (as they largely concede) to challenge the query stage of Defendants' ALPR system.

**B. MERITS ANALYSIS - COLLECTION OF IMAGES AND
RETENTION IN A 21-DAY RETROSPECTIVE DATABASE**

1. Fourth Amendment Standard

The Fourth Amendment provides that the "right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated." U.S. Const. amend. IV. "Historically, Fourth Amendment doctrine rested in that of common-law trespass, focusing on whether 'the government obtains information by physically intruding on a constitutionally protected area.'" Martin, 753 F. Supp. 3d at 461 (quoting Carpenter, 585 U.S. at 304); see Jones, 565 U.S. at 403, 410 (concluding that placing a physical GPS device on a vehicle to track its location "within 50 to 100 feet" over the course of four weeks was an unconstitutional trespass). In addition to the "common-law trespassory test," the Supreme Court has adopted a "reasonable-expectation-of-privacy test [that] has been added to, not substituted for, the common law" test. Jones, 565 U.S. at 409; see Martin, 753 F. Supp. 3d at 461 (explaining that the updated

standard not dependent on a physical trespass "modernizes Fourth Amendment doctrine and readies it to address challenges imposed by never-ending technological advancements." (citing Carpenter, 585 U.S. at 305-06)).

This modernized standard, first articulated in Katz v. United States, 389 U.S. 347 (1967), begins by asking whether the plaintiff demonstrates a subjective (personal) expectation of privacy. Id. at 361 (Harlan, J., concurring). If this hurdle is cleared, the second question, which is most typically the focus of Fourth Amendment litigation, asks whether that "expectation [is] one that society is prepared to recognize as 'reasonable.'" Id. While this objective question is framed as dependent on society's expectations (something that evolves with time and technology), the determination of "which expectations of privacy are entitled to protection" continues to be "informed by historical understandings 'of what was deemed an unreasonable search and seizure when [the Fourth Amendment] was adopted.'" Carpenter, 585 U.S. at 304-05 (alteration in original) (quoting Carroll v. United States, 267 U.S. 132, 149 (1925)). These historical understandings include the fact that the Fourth Amendment "seeks to secure 'the privacies of life' against 'arbitrary power,'" id. (quoting Boyd v. United States, 116 U.S. 616, 630 (1886)), and that a "central aim of the Framers was 'to place obstacles in the way of a too permeating

police surveillance,'" id. (quoting United States v. Di Re, 332 U.S. 581, 595 (1948)).

Because rapid technological advances, such as the rise of artificial intelligence, make it impossible to predict how police surveillance will evolve, the Fourth Amendment analysis must remain nimble even as it remains grounded in founding-era traditions. In other words, as the Supreme Court recently observed, new technology often "does not fit neatly under existing precedents." Carpenter, 585 U.S. at 306; see 1 W. LaFare, Search and Seizure § 2.1(d) (6th ed.) (Nov. 2025 Update) (describing the ultimate question under the Katz test as a "value judgment" that asks "whether, if the particular form of surveillance practiced by the police is permitted to go unregulated by constitutional restraints, the amount of privacy and freedom remaining to citizens would be diminished to a compass inconsistent with the aims of a free and open society" (quoting Anthony G. Amsterdam, Perspectives on the Fourth Amendment, 58 Minn. L. Rev. 349, 403 (1974))).

While the increased proliferation of ALPR cameras is a relatively new trend, ALPR systems have existed for many years, and this Court does not write on a blank slate when considering whether these cameras create a "too permeating" police surveillance. See United States v. White, No. CIV.A. 13-1851, 2013 WL 5823701, at *1 (E.D. Pa. Oct. 30, 2013) (describing the "Maryland License Plate Reader program," implemented more than fifteen years

ago, as a "first-in-the-nation statewide network for license plate recognition, which was established as a crime prevention initiative"); Martin, 753 F. Supp. 3d at 474-76 (concluding, after citing multiple federal cases, that the ALPR system in Richmond, Virginia, "did not allow law enforcement to track or monitor the whole of [the defendant's] physical movements" (quotation marks omitted)); Rinaldi, 2025 WL 2682691, at *17 n.13 (collecting ALPR cases). Determining whether an ALPR system creates a too permeating police surveillance is, however, not subject to a universal answer, as all ALPR systems are not created equal. Two major precedents that guide this Court's resolution of this question are the Supreme Court's decision in Carpenter and the Fourth Circuit's en banc decision in Beautiful Struggle.

a. Carpenter

The baseline privacy standard governing public spaces is that "[a] person travelling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another." Knotts, 460 U.S. at 281 (emphasis added). This default principle plainly comports with historical standards and common sense, because a reasonable person understands that when they drive on public streets, they are "voluntarily convey[ing] to anyone who wanted to look" where they start, where they stop along the way, and where their final destination is (or at least, where

they exit "from public roads onto private property"). Id. at 281-82.

The baseline understanding that citizens lack a reasonable expectation of privacy while traveling on public roads recently collided with the realities of advanced technology in Carpenter v. United States, 585 U.S. 296, 310 (2018) ("A person does not surrender all Fourth Amendment protection by venturing into the public sphere."). As concisely summarized by another judge of this Court:

In Carpenter, police officers requested – without a warrant – cell-site location information ("CSLI") from the Defendant's cell-service providers (MetroPCS and Sprint). CSLI provides an approximate location of a cellular device based on discrete location pings continuously sent to cell towers, regardless of whether the person is in public or private places. Those pings automatically occur by the nature of the phone being turned on, without any affirmative action taken by the user to record, release, or send that data to cell servicers. The servicers turned over Carpenter's CSLI to the police. That data included 127 days' worth of Carpenter's movements from MetroPCS and two days' worth from Sprint, which totaled 12,898 location pings cataloging Carpenter's movements for an average of 101 data points per day. Based on this data, police were able to place Carpenter at and near the scenes of various robberies for which they then arrested and charged him.

Martin, 753 F. Supp. 3d at 463 (emphasis added) (internal citations and footnotes omitted).

Based on the invasive nature of this long-term surveillance that the Supreme Court categorized as tracking the "the whole of [the defendant's] physical movements," the Supreme Court found

that the Government "invaded" the defendant's reasonable expectation of privacy when it accessed the CSLI data from wireless carriers. Carpenter, 585 U.S. at 313. In determining that "an individual maintains a legitimate expectation of privacy in the record of his physical movements as captured through CSLI," the Supreme Court gave this explanation:

A majority of this Court has already recognized [through concurrences in Jones] that individuals have a reasonable expectation of privacy in the whole of their physical movements. Prior to the digital age, law enforcement might have pursued a suspect for a brief stretch, but doing so for any extended period of time was difficult and costly and therefore rarely undertaken. For that reason, society's expectation has been that law enforcement agents and others would not – and indeed, in the main, simply could not – secretly monitor and catalogue every single movement of an individual's car for a very long period.

Allowing government access to cell-site records contravenes that expectation. . . . Mapping a cell phone's location over the course of 127 days provides an all-encompassing record of the holder's whereabouts. As with GPS information, the time-stamped data provides an intimate window into a person's life, revealing not only his particular movements, but through them his familial, political, professional, religious, and sexual associations.

Id. at 310-11 (internal citations omitted).

To better illustrate why the public would be offended by such invasive tracking, the Court went on to explain that, "like GPS monitoring, cell phone tracking is remarkably easy, cheap, and efficient"; "[w]ith just the click of a button, the Government can access each carrier's deep repository of historical location

information.”¹³ Id. at 311. The Court went on to explain why “historical cell-site records present even greater privacy concerns than the GPS monitoring of a vehicle,” noting that cell phones have become “almost a feature of human anatomy” and while “individuals regularly leave their vehicles” (thus ending the utility of a GPS vehicle tracker), they “compulsively carry cell phones with them all the time” bringing them “beyond public thoroughfares” and into countless private spaces. Id. (emphasis added).

b. Leaders of a Beautiful Struggle

Three years after Carpenter was decided, the Fourth Circuit addressed the constitutionality of the Baltimore Police Department’s (“BPD”) surveillance program that captured and stored aerial images of nearly the entire City of Baltimore. Beautiful Struggle, 2 F.4th at 333. The BPD had partnered with a private surveillance contractor whose planes were equipped with high-tech cameras that captured “an estimated twelve hours of coverage of around 90% of the city each day.” Id. at 334. Though the technology was capable of greater photographic clarity, by contract, “people and cars” in the images captured by the Baltimore

¹³ The fact that the data was so easy to access was notable given the “retrospective quality of the data,” which gave “police access to a category of information otherwise unknowable.” Carpenter, 585 U.S. at 312. Furthermore, the ease of acquiring the data was a concern not because police are precluded from leveraging technological advances to create efficiencies, but because “location information is continually logged for all of the 400 million devices in the United States – not just those belonging to persons who might happen to come under investigation.” Id. (emphasis added).

"AIR program" were displayed as "individually visible . . . blurred dots or blobs." Id. These images were transmitted from the planes to "ground stations" where they could be analyzed by a team of contractors. Id. The stored images were retained on computer servers for forty-five days, though images "necessary for legal proceedings" could be stored indefinitely. Id.

By the time the appeal in Beautiful Struggle reached the en banc Fourth Circuit, Baltimore's aerial surveillance program had been discontinued due to its "mixed results." Id. at 335. Although the surveillance planes had stopped flying, a subset of data was retained by the defendants. Id. at 336. The plaintiffs thus argued that the end to the program did not moot their constitutional claim, highlighting their request to enjoin the defendants from "accessing any stored images" captured during aerial surveillance. Id. In a closely divided en banc decision, a majority of the Fourth Circuit agreed with the plaintiffs, finding not only that they had standing, but also that their Fourth Amendment challenge to warrantless access to the data was "likely to succeed."¹⁴ Id. at 339-40.

In determining that accessing the AIR database without a warrant violated the Fourth Amendment, the en banc majority found

¹⁴ While much of the reasoning in Beautiful Struggle is directly relevant to this case, the Court's analysis was directed at Step Two of the AIR program (whether previously collected data could be accessed) rather than Step One (whether the defendants could continue photographing citizens).

that "Carpenter applies squarely" because the AIR surveillance program "'tracks every movement' of every person outside in Baltimore," and creates "a 'detailed, encyclopedic,' record of where everyone came and went within the city during daylight hours over the prior month-and-a-half." Id. at 341 (quoting Carpenter, 585 U.S. at 307, 309). Acknowledging that the aerial images had limitations (i.e., blurred dots, impacted by weather, only operated during the day), the Court still found that the data "surpass[ed] the precision even of GPS data and CSLI" because the pixels were precise down to the individual person or vehicle, and police were able to use other investigative techniques to deduce which person, or which vehicle, a given pixel represented. Id. at 343-44. In other words, based on the facts before it, the Court found that the surveillance data in Beautiful Struggle was comparable to "'attach[ing] an ankle monitor' to every person in the city," at least when they were outside during daylight hours. Id. (alteration in original) (quoting Carpenter, 585 U.S. at 312). Accordingly, the majority found that when the BPD "'accesses' AIR data, it invades the recorded individuals' reasonable expectation of privacy." Id. at 344.

After making such finding, the en banc majority offered further analysis that suggested limits to its opinion, like the Supreme Court did in Carpenter. Notably, the Fourth Circuit explained that "[p]eople understand that they may be filmed by

security cameras on city streets, or a police officer could stake out their house and tail them for a time," but "capturing everyone's movements outside during the daytime for 45 days goes beyond that ordinary capacity." Id. at 345. The Court also clarified that the plaintiffs were not challenging what any individual aerial image revealed, nor did they "claim a privacy invasion related solely to being photographed." Id. "Rather, they challenge[d] the creation of a retrospective database of everyone's movements across the city," noting that "[o]nce police identify a tracked 'dot,' its blurred image does little to shield against an invasion into its movements." Id. And because "the AIR program enables police to deduce from the whole of individuals' movements, . . . accessing its data is a search, and its warrantless operation violates the Fourth Amendment." Id. at 346.

2. Norfolk's Flock ALPR System

Turning now to the instant case, Plaintiffs contend that they have a subjective expectation of privacy in the whole of their movements that is violated when they are photographed by the Flock ALPR cameras across the City of Norfolk. ECF No. 108, at 1, 21 (discussing the "mass trove of data" collected by Defendants through the "curtain of technology" that is "deeply disturbing" to Plaintiffs). They further assert that this expectation of privacy is objectively reasonable because the public does not expect the police to engage in mass surveillance of all law-abiding citizens

in a manner that allows police to make revealing deductions about personal habits and patterns. Id. at 22; ECF No. 140, at 2. Though Plaintiffs acknowledge that their vehicles were never queried by Defendants (Step Two), they challenge the ongoing collection and retention of their data on a rolling 21-day cycle (Step One), asserting that Defendants' current ALPR system unlawfully captures enough information to reveal, or to enable deductions from, the whole of a person's movements. ECF No. 140, at 3.

Defendants, for their part, do not directly challenge Plaintiffs' subjective expectations at the summary judgment stage, nor do they contend that the public lacks an objectively reasonable expectation that NPD will not track "the whole of their physical movements." Carpenter 585 U.S. at 310. Rather, Defendants' merits argument asserts that "tracking" does not occur at the data collection stage, and even if it did, the 75 clusters of ALPR cameras in Norfolk do not capture enough information to catalogue "the whole" of Plaintiffs' movements (or the movements of other citizens). ECF No. 113, at 17-26.

**a. Operational Focus - No "Search" Occurs
when Photographs are Taken**

The undisputed facts before this Court reveal that Defendants' ongoing operation of their 176 ALPR cameras, located in 75 clusters across the City of Norfolk, does not constitute a "search." As reviewed previously, citizens do not "have a reasonable expectation

of privacy in the visible exterior parts of an automobile that travels the public roads and highways." United States v. George, 971 F.2d 1113, 1120 (4th Cir. 1992). It is well-established that police pole cameras or security cameras that photograph or record public areas do not violate any objectively reasonable expectation of privacy. See Beautiful Struggle, 2 F.4th at 345 ("People understand that they may be filmed by security cameras on city streets."); Carpenter, 585 U.S. at 316 ("Our decision today is a narrow one. . . . We do not . . . call into question conventional surveillance techniques and tools, such as security cameras."); United States v. Vankesteren, 553 F.3d 286, 291 (4th Cir. 2009) (explaining that because there is no reasonable expectation of privacy in privately owned "open fields," the Virginia agents "were free, as on public land, to use video surveillance to capture what any passerby would have been able to observe"). To be sure, Plaintiffs here do not even contend that taking a single ALPR photograph can violate their constitutional rights. ECF No. 140, at 14. Rather, they rely on Carpenter and Beautiful Struggle to argue that it is the web of interconnected ALPR cameras, the array of photographs they take, and the storage of these photographs in a database that constitute an unconstitutional "search." This search occurs, according to Plaintiffs, because Norfolk's ALPR system constitutes a "too permeating" police surveillance, allowing Defendants to use this information, supplemented by information

collected in other ways, to surveil (and later reconstruct) the whole of an individual's personal movements. ECF No. 108, at 2, 16-29; ECF No. 140, at 18-28.

Defendants deny this allegation at both a threshold level (discussed here) and a factual level (discussed below). At the threshold level, Defendants assert that, because Plaintiffs only have standing to challenge the collection and storage of the images, and lack standing to challenge any query of the ALPR image database, there is no "tracking" or potential tracking to analyze at all. Stated another way, Defendants assert that because "reconstruction" of Plaintiffs' movements is not a realistic eventuality, the Court need not even consider what a query of the database could reveal. ECF No. 190, at 46.

Assuming, without deciding, that Defendants' approach to the interplay between standing and the merits is correct, Defendants would surely prevail. An individual scan of a license plate, a vehicle identifier that generally must be displayed under state law, does not invade any privacy interests. Scholl, 776 F. Supp. 3d at 714. Indeed, it is "unreasonable to have an expectation of privacy in an object required by law to be located in a place ordinarily in plain view from the exterior of the automobile." Id. at 715 (quoting New York v. Class, 475 U.S. 106, 114 (1986)). Plaintiffs, of course, do not challenge the taking and storing of a single picture from a single camera, but are concerned with "what

the ALPR data [cumulatively] reveals about their movements." Id. However, since a collection of photos taken in public places that are never accessed or analyzed reveals nothing about a person's movements from one place to another, it definitionally does not reveal "the whole" of that person's movements.

Accordingly, were the Court to accept this construct, Defendants would necessarily prevail on their summary judgment claim that no Fourth Amendment "search" occurred when discrete cameras took discrete pictures at different locations. Cf. Scholl, 776 F. Supp. 3d at 719 (finding that the plaintiffs' reliance on Carpenter and Beautiful Struggle "encounters an early roadblock" because the searches in those cases occurred when the authorities accessed the CSLI and aerial surveillance data, which is "analogous to" querying the ALPR database, an activity that the "plaintiffs lack standing to challenge"). This Court, however, need not decide whether Plaintiffs' lack of standing to challenge Step Two dooms their Step One claim because, as set forth in detail below, full consideration of what Defendants' ALPR system is capable of revealing if queried still supports granting summary judgment in Defendants' favor.

**b. Capability Focus - Defendants' Maintenance
of a Searchable ALPR Database does not
Constitute an unlawful "Search"**

Next, the Court shifts its focus away from Defendants' acts associated with the collection and storage of photos and analyzes

instead what the stored photos in the searchable database are capable of revealing. See Scholl, 776 F. Supp. 3d at 719-21 (analyzing what the ALPR data revealed about the plaintiffs' movements "[e]ven assuming that the Carpenter and [Beautiful Struggle courts would have applied the same reasoning to the collection of data that they applied to the government's access of already-collected data"). As explained below, the evidence developed during discovery is insufficient to demonstrate that Defendants' current ALPR system captures enough images of Plaintiffs – or other drivers – to reconstruct the whole of their movements. The record evidence is likewise insufficient to demonstrate that the ALPR images collected by Defendants, when supplemented by "other" investigative techniques, reveals the whole of their movements.

Notwithstanding the redundancy, it is helpful to repeat the undeniable fact that this issue involves "surveillance" in a public place, and does not implicate the elevated privacy interests inside a residence or other spaces shielded from public view. See Carpenter, 585 U.S. at 311 (contrasting tracking a car, which has "little capacity for escaping public scrutiny," with tracking a cellphone, which "faithfully follows its owner beyond public thoroughfares and into private residences, doctor's offices, political headquarters, and other potentially revealing locales"). Accordingly, the analysis must remain tethered to the reality that

what a person displays in public is definitionally not private - and the calculus only shifts when police surveillance is so intrusive that it crosses the line into cataloging the whole, or nearly the whole, of a person's movements.

Here, on the current record - developed after a fulsome opportunity for discovery - Plaintiffs are unable to demonstrate that Defendants' ALPR system is capable of tracking the whole of a person's movements. A review of the number of miles of roadway in Norfolk and the location of the system's 176 cameras is illustrative. Many of these cameras are, to be sure, located in high traffic areas that capture thousands of vehicles, but their arrangement does not "blanket" the City as the cell towers did in Carpenter and the planes did in Beautiful Struggle. Rather, the cameras are fixed in 75 clusters across the many miles of Norfolk roadways such that they are incapable of cataloging the whole of vehicles' movements. See Scholl, 776 F. Supp. 3d at 719-20 ("A GPS tracking device follows a car wherever it goes. By contrast, the ALPR system records a vehicle's location only when it passes one of a limited (though expanding) number of ALPRs . . . [and] [b]ecause it is less comprehensive, the information recorded by the ALPR system lacks the same 'deeply revealing nature'" as the data collected in Jones, Carpenter, and Beautiful Struggle).

In addition to considering the number and location of ALPR cameras vis-à-vis the size and miles of roadway in Norfolk, there

are critical distinctions between the quantity and quality of the data collected here and that collected in Carpenter and Beautiful Struggle. First considering quantity, in Carpenter, the Supreme Court reported that the collected CSLI revealed "an average of 101 data points per day" and opined that "when the Government tracks the location of a cell phone it achieves near perfect surveillance, as if it had attached an ankle monitor to the phone's user." 585 U.S. at 302, 311-12. It is true that the blanket of cell tower coverage in Carpenter did not reveal locations with the same precision as that revealed here when a car happens by an ALPR collection point. However, the invasiveness of the tracking in Carpenter was grounded in the fact that it was near continuous, throughout the day and night, with the hundred-plus data points per day emanating from a device that was essentially attached to the user's hip, producing data points (pings) wherever it moved. Consistent with the discussion during oral argument in this case, while it is impossible to identify a static demarcation point regarding how many data points are "too many," the average number of captures in Carpenter were 30 to 50 times greater than the number of captures here. Cf. ECF No. 140, at 8 (acknowledging that the test data revealed that Plaintiffs' vehicles were subject to "full license plate matches" an average of 2 to 3 times a day).

In Beautiful Struggle, the number of captures was even greater than in Carpenter, with the Fourth Circuit reporting the facts as

demonstrating that "the AIR program 'tracks every movement' of every person outside in Baltimore." Beautiful Struggle, 2 F.4th at 341 (emphasis added) (quoting Carpenter, 585 U.S. at 307). This conclusion was reached even though the planes in Beautiful Struggle did not operate at night, and depending on the weather, at times did not operate during the day, leaving multi-hour "gaps" in coverage. But importantly, when the AIR system was operating, it took enough photographs to track the whole of every vehicle and every pedestrian's movements anywhere outside in the City of Baltimore.

In contrast, here, when all 176 Norfolk ALPR cameras are up and running, they are "capable" of locating a vehicle for the brief time that it is in one of 75 designated areas. This means that under the best conditions, Defendants' ALPR system has many thousands more blind spots than it has "unblinking eyes."¹⁵ Illustrative of this point, though surely not dispositive, during the multi-month test period, full matches of Plaintiffs' plates typically occurred miles apart, with lengthy gaps of time unaccounted for by Defendants' ALPR system. See ECF No. 113, at 10 (reflecting that, on days when Plaintiffs' cars were captured

¹⁵ The "vision" achievable by Defendants' ALPR system is comparable (assuming the identity of the tracked vehicle is known) to placing a black sheet of paper with 75 (or 176) holes punched through it over every AIR image taken of the City of Baltimore, thereby obscuring nearly all the data and permitting information gathering only in a narrow range of static locations.

more than once, the average distance between full plate captures was 2.5 to 3.5 miles and the average time gap was 45 to 50 minutes). These data points are infrequent and often widely spaced, even though Plaintiffs are among the citizens most often captured by Defendants' ALPR system. See ECF No. 140, at 7 (acknowledging that "Plaintiffs' primary cars are among 'the 5% of vehicles' with the largest number of full license plate matches").¹⁶ Therefore, even assuming that a citizen in the top 5% of those most captured passes by 2 or 3, or even 5 or 10, ALPR cameras on a given day, the ALPR system is not like an ankle monitor attached to that citizen (or even to their car) as the data does not consistently reveal where trips started, where they ended, or where (or even in which specific "quadrant") a driver stopped in between. Rather, with the exception of 75 static locations, no data is captured by Defendants' ALPR system throughout nearly all of the 66 square miles of Norfolk.

Next considering the quality of the datapoints, in both Carpenter and Beautiful Struggle, the disputed surveillance followed people beyond their public movements in their car,

¹⁶ To the extent that Plaintiffs suggest flaws in Defendants' calculations regarding frequency of captures due to the fact that Defendants' expert relied only on "full" plate matches, Plaintiffs do not offer a counter-calculation from their expert demonstrating a materially more intrusive level of tracking. As previously noted, the Court assumes in Plaintiffs' favor that Defendants' data reflecting the number of "hits" on Plaintiffs' vehicles is underinclusive, but Plaintiffs do not point to (nor is the Court otherwise aware of) anything in the record from which to infer that the data is materially underinclusive.

creating a more intrusive and pervasive trail that could be used to link them to schools, churches, hotels, homes, or businesses. See Scholl, 776 F. Supp. 3d at 720 ("Knowing what portions of an expressway someone passes tells the government far less about the privacies of life, than data that tracks . . . the movements of a cellphone's owner.") (cleaned up); Martin, 753 F. Supp. 3d at 473 ("In no sense does the technology, at present, rise to the level of all-encompassing surveillance threatened by GPS tracking, CSLI, or the AIR program."). To be clear, this Court does not suggest that following a person beyond their car is a prerequisite to finding that a dragnet-type surveillance program is constitutionally unreasonable. See Schmidt, 2025 WL 410080, at *8; see also Carpenter, 585 U.S. at 310 (noting that through two concurrences in Jones "a majority" of the Supreme Court had recognized that long-term warrantless GPS tracking of a vehicle is constitutionally unreasonable). However, the limitations of the ALPR data collected in this case are apparent when compared to the type and breadth of "encyclopedic" tracking in Carpenter and Beautiful Struggle that blanketed the respective cities.

As the data here does not follow a driver outside a car, it is more similar to the continuous GPS surveillance of a vehicle at issue in Jones than to the surveillance in Carpenter and Beautiful Struggle. See Scholl, 776 F. Supp. 3d at 719 (identifying Jones

as "a closer analogue"). That said, the ALPR data here is not continuous. As one of the two concurrences in Jones articulated:

GPS monitoring generates a precise, comprehensive record of a person's public movements that reflects a wealth of detail about her familial, political, professional, religious, and sexual associations . . . [including] "trips the indisputably private nature of which takes little imagination to conjure: trips to the psychiatrist, the plastic surgeon, the abortion clinic, the AIDS treatment center, the strip club, the criminal defense attorney, the by-the-hour motel, the union meeting, the mosque, synagogue or church, the gay bar and on and on."

Jones, 565 U.S. at 415 (Sotomayor, J., concurring) (quoting People v. Weaver, 909 N.E.2d 1195, 1199 (N.Y. 2009)).

Critically, unlike the revealing inferences that can be drawn from knowing precisely where, or even roughly where, a vehicle starts a trip, drives, parks, lingers, or overnights anywhere across the entire city, Defendants' ALPR system only identifies a vehicle's location when it enters one of 75 areas. After the system identifies a car, it quickly loses the trail, and thus does not "follow" or "surveil" that same car unless it happens past another fixed ALPR camera. This could happen seconds later as the car turns right at an intersection with a four-camera cluster, or it could occur hours or even days later when the car next passes an ALPR camera several miles away. In light of the documented capabilities as established by the summary judgment record, Defendants' fixed ALPR cameras, like security cameras, are best described as "captur[ing] images of locations, not individuals."

Martin, 753 F. Supp. 3d at 473; Commonwealth v. Church, No. 737-25-1, 2025 WL 2908089, at *3 (Va. Ct. App. Oct. 14, 2025) (concluding that, even during the period that Norfolk's Flock data was retained for 30 days, "the 172 Flock cameras in use in Norfolk are not as intrusive as" the "cell towers" in Carpenter or the "aerial surveillance equipment" in Beautiful Struggle).

This Court does not discount the fact that Plaintiffs have demonstrated through their experts that ALPR data can assist in reconstructing a route that a driver might have taken on a given day. But the ability to leverage computer modeling driven by regional transportation data and other modeling assumptions is starkly different from recreating a citizen's actual movements with data collected from a dragnet-like system that actually surveilled those movements across the entire city. See Sturdivant, 786 F. Supp. 3d at 1112 (indicating that while the ALPR data helped law enforcement "infer[]" some of the defendant's route, the ALPR surveillance "did not generate enough data" to catalog every movement of his car; "[i]nstead, it provided discrete data points with considerable stretches of obscurity in between"). Here, the 75 ALPR clusters plainly permit rudimentary "tracking" on days that at least two data points from the same vehicle are captured, but the gaps in data between point A and point B are pronounced.¹⁷ See

¹⁷ Of course, if point A and point B were one block apart, and a city had an ALPR camera at the next street corner, and the next, and the next, the result

United States v. Jackson, No. 24-CR-10010, 2025 WL 1530574, at *3, 8 (D. Kan. May 29, 2025) (contrasting "two clear examples of widespread mass surveillance" in Beautiful Struggle and a Fifth Circuit "geofencing" case that tracked a user's location every few seconds, with "the limited surveillance of the [160 camera] Flock System" in Jackson); Scholl, 776 F. Supp. 3d 719-20 ("[T]he ALPR program lacks the same depth, breadth, and comprehensive reach as the surveillance at issue in Carpenter, Jones, and Leaders of a Beautiful Struggle," as Carpenter involved data collection in public and private spaces as often as "several times a minute," Beautiful Struggle surveillance followed cars and people "anytime they were outside," and the Jones surveillance followed a car "wherever it goes." (quotation marks omitted)).

Accordingly, despite Plaintiffs' counsel's effective advocacy, the Court must conclude that the limited number of photographs available on a 21-day rolling basis from 75 camera clusters in Norfolk does not "track" the whole of a person's movements nor does it provide an "intimate" window into where citizens drive, park, visit, linger, sleep, or patronize. To the extent that "other" police techniques can reveal this more sensitive information after an individual becomes the subject of a

of a constitutional inquiry might track the concurrences in Jones. This Court, however, is limited to the facts before it, rather than possible future ALPR systems in Norfolk or elsewhere. Martin, 753 F. Supp. 3d at 476 (rejecting speculation about future ALPR capabilities).

police investigation (including information gathered when police lawfully "tail" a citizen), it is these techniques, and not Defendants' ALPR system, that reveal the privacies of life. See Beautiful Struggle, 2 F.4th at 344-45 (explaining that while deductions that allow the government to recreate a "detailed log" of a person's movements can be informed by both the challenged technology and "other information" gathered in other ways, the Fourth Amendment analysis turns on whether the challenged technology "is what enables deductions from the whole of individuals' movements" (emphasis added)).

The above analysis is not undermined by the reality that Defendants' ALPR system can be used, in certain circumstances, to roughly reconstruct one route, or to link a vehicle to one church or to one business due to the fortuitous placement of one or more ALPR cameras. Critically, the constitutional concern in Carpenter and Beautiful Struggle was not reconstructing one route, but tracking all (or nearly all) of a citizen's movements. See United States v. Goins, No. 3:23cr15, 2025 WL 1285936, at *3 (W.D. Va. May 2, 2025) ("[T]he two fixed [pole] cameras . . . only captured one aspect of the Defendant's life - when and how often he visited his girlfriend's business - [data that] . . . did not come close to creating a comprehensive record of his whereabouts or who he associated with when he was off-site."). Importantly, when police access comprehensive data reflecting "all of another's travels,"

they "can deduce whether he is a weekly church goer, a heavy drinker, a regular at the gym, an unfaithful husband, an outpatient receiving medical treatment, an associate of particular individuals or political groups – and not just one such fact about a person, but all such facts." Beautiful Struggle, 2 F.4th at 342 n.8 (emphasis added) (quoting United States v. Maynard, 615 F.3d 544, 562 (D.C. Cir. 2010)).¹⁸

Adding further gloss to the above, this Court finds it illustrative that the citizens of Virginia, presumably knowledgeable about the technology available both to police and to those who break the law, have become directly involved in the Flock ALPR camera debate through their elected state legislature. At a time when more and more of our activities are tracked through technology (both online and in the real world), the citizenry has increased familiarity with the ongoing need to examine and re-examine how society's privacy demands interact with the need to

¹⁸ Presumably, in some locations around Norfolk, Defendants can likely determine where a vehicle starts or ends a specific trip. However, when the systemwide capabilities of Defendants' cameras are considered, these exceptions do not transform the Norfolk ALPR system into one that tracks the whole, or substantially the whole, of a person's movements. Tellingly, a lawful pole camera installed by police near a church or school can identify all the people who likely attend that church or school (regardless of their criminality) yet the ability to discover this one "intimate" datapoint does not render that camera unconstitutional. Cf. ECF No. 108-26, at 20 (reflecting Plaintiffs' expert's conclusion that Defendants have the capability to "monitor everyone who visits particular locations" as long as that location is adjacent to an ALPR camera (emphasis added)). The same can be said of an individual location where a constitutionally permitted police stakeout occurs over a period of time.

monitor and detect crime. In Virginia, this balancing has been determined at the state level, through legislation reducing the retention period of ALPR data to 21-days, limiting disclosure of data to law enforcement outside Virginia, and limiting the use of collected ALPR data to (1) investigations where there is "reasonable suspicion" that a crime was committed, (2) investigations into missing or endangered persons, or (3) situations where a "hot list" alert is linked to one of several qualifying categories. Va. Code § 2.2-5517 (effective July 1, 2025). The state statute also establishes an audit procedure. Id. While the public's involvement in crafting these guardrails does not insulate the statutory line-drawing from judicial scrutiny, it offers at least some indication that the use of ALPR systems within these parameters promotes public safety without transgressing the public's reasonable expectation of privacy.¹⁹

In summary, the ALPR technology in Norfolk "captures only the public movements of vehicles that happen to pass by locations on a public street in view of an ALPR camera," and due to the number

¹⁹ To the extent Plaintiffs suggest that the better way to define the public's reasonable expectation of privacy is by drawing a parallel to "founding-era" privacy considerations, this shift offers little solace. Understanding that a person can be monitored at a discrete number of "checkpoints" in public – whether by outpost, watchtower or security camera – is far more consistent with traditional lawful surveillance than tracking a person's every step outside during daylight hours (whether walking or driving), or tracking people's general whereabouts a hundred or more times per day, including when they are inside private residences. See Carpenter, 585 U.S. at 316 ("Our decision today . . . [does not] call into question conventional surveillance techniques and tools, such as security cameras." (emphasis added)).

and locations of cameras presently deployed in Norfolk, "[e]ven in the aggregate, the ALPR cameras . . . do[] not approach the near-constant surveillance of cell-phone users' public and private move[ments] that so concerned the [Supreme] Court in Carpenter." United States v. Bowers, No. 2:18cr292, 2021 WL 4775977, at *3 (W.D. Pa. Oct. 11, 2021). The same holds true when comparing the ALPR data collected in Norfolk and the aerial images in Beautiful Struggle. Accordingly, Defendants have carried their burden to demonstrate that, on the record developed in this case documenting the capabilities of Defendants' ALPR system, Plaintiffs were not subject to an unconstitutional search. Defendants' summary judgment motion will therefore be granted as the evidence "is so one-sided" that Defendants "must prevail as a matter of law." McAirlaids, 756 F.3d at 310.

**c. Plaintiffs' Legal Interpretation
of Beautiful Struggle is Flawed**

Based on the nature of Plaintiffs' arguments in opposition to Defendants' summary judgment motion, the Court finds it appropriate to separately address Plaintiffs' assertion that controlling law in this Circuit compels this Court to find that a "search" occurred if the ALPR data can be combined with other data in jigsaw-puzzle fashion in order to infer or approximate the whole of a person's movements. ECF No. 108, at 26 (arguing that the key question is whether Defendants "could, in combination with other information,

deduce a detailed log of [a person's] movements" (quoting Carpenter, 585 U.S. at 312)); ECF No. 140, at 23-28 (arguing that, under Beautiful Struggle, the police's reliance on other tools and techniques to assist in their tracking does not "insulate" a search from constitutional scrutiny).

After careful consideration, this Court rejects Plaintiffs' suggestion that as long as a technology contributes to a police department's ability to "track" an individual's movements, the use of that technology violates an objective expectation of privacy and thus constitutes an unconstitutional search. To the contrary, the more police work necessary to "fill in the gaps" to build a path of travel (such as monitoring a suspect's residence, tailing a person, interviewing citizens or accessing citizen-provided doorbell camera footage, or placing a pole camera near a place of business), the less the rudimentary "tracking" technology under review can be said to be "capturing" or creating a record of all, or virtually all, of a person's movements.

Crucially, in Beautiful Struggle, the challenged technology was itself fully tracking the actual movements of people and their cars whenever outside, and the most vital "supplementation" to this data was the investigation necessary to determine the identity of the blurred dot. Once the dot's identity was determined, the aerial surveillance data itself routinely revealed "the whole" of the (now-identified) person's movements. See Beautiful Struggle,

2 F.4th at 343 (discussing the need to analyze other data "to deduce the people behind the pixels"). Likewise, in Carpenter, the near-continuous CSLI data effectively followed a citizen as if an ankle monitor were attached to him; the police only had to rely on "other information" to deduce precisely where a person traveled. Carpenter, 585 U.S. at 312. As the en banc Fourth Circuit explained when analyzing Carpenter, the use of this additional information to supplement the CSLI did not equate to "lumping together discrete surveillance activities to form a single, hodgepodge 'search.'" Beautiful Struggle, 2 F.4th at 345 (cleaned up). "Instead, because it was the CSLI that enabled the deductions, the search took place when the government accessed the CSLI alone." Id. (emphasis added). The Fourth Circuit reached the same conclusion regarding Baltimore's surveillance program, finding that "because AIR data is what enables deductions from the whole of individuals' movements, the Fourth Amendment bars BPD from warrantless access to engage in th[e] labor-intensive process" of making the necessary inferences. Id. (emphasis added).

Neither Carpenter nor Beautiful Struggle supports Plaintiff's argument that the collection and analysis of 2 or 3 (or even several more) scattered ALPR data points, sometimes miles and hours apart, constitutes a "search" simply because this data contributes one or more pieces to a larger investigative jigsaw puzzle. Importantly, here, and unlike in Beautiful Struggle, the ALPR data is not "what

enables deductions from the whole of individuals' movements," because it does not capture "the whole" of individuals' movements or even an analogue of "the whole." Beautiful Struggle, 2 F.4th at 345 (emphasis added). Plaintiff's jigsaw theory misconstrues the controlling legal standard outlined in Carpenter and Beautiful Struggle, and it is therefore rejected.

* * *

For all the reasons discussed above, Defendants' motion for summary judgment is **GRANTED**. ECF No. 112.

V. DISCUSSION - PLAINTIFFS' SUMMARY JUDGMENT MOTION

As analyzed above, Defendants' summary judgment motion is meritorious. Such finding, made when the case-specific facts are construed in the light most favorable to Plaintiffs, itself addresses and undermines most of the arguments advanced in Plaintiffs' cross-motion for summary judgment, a motion that the Court has separately analyzed after construing the facts in the light most favorable to Defendants. Defenders of Wildlife, 762 F.3d at 392. For the same reasons outlined above, Plaintiffs' summary judgment motion fails to demonstrate that Defendants' ALPR cameras capture enough data to (1) reveal "the whole" or virtual whole of their or other citizens' movements, or (2) permit deductions from the whole of their (or other citizens') movements.

The Court does, briefly, take up Plaintiffs' summary judgment claim that this Court should resolve the privacy dispute before it

not under the Jones "trespass" test, or the Katz "reasonable expectation of privacy" test, but instead under a third "ordinary meaning test." ECF No. 108, at 29. As Plaintiffs appears to concede, such argument is foreclosed by Supreme Court (and Fourth Circuit) precedent identifying the Katz test as the applicable test here. This argument, advanced by Plaintiffs to preserve it for appellate review, is therefore rejected.

After independent consideration, Plaintiffs' motion for summary judgment is **DENIED**. ECF No. 107.


VI. CONCLUSION

For the reasons set forth above, the Court **GRANTS** Defendants' summary judgment motion, ECF No. 112, and **DENIES** Plaintiffs' summary judgment motion, ECF No. 107.

The Clerk is **REQUESTED** to send a copy of this Opinion and Order to all counsel of record.

IT IS SO ORDERED.

Norfolk, Virginia
January 27, 2026

/s/ 
Mark S. Davis
UNITED STATES DISTRICT JUDGE