ALPR Impact Report

Dayton Police Department
Kamran Afzal
Director and Chief of Police

CONTENTS

TO THE CITY COMMISSION AND COMMUNITY

General Description

As required by RCGO 34.11, this Impact Report is being submitted for the Police Department to pursue the use of Automated License Plate Readers (ALPRs). ALPR technology is either part of an in car Mobile Video Recorder or a device attached to fixed sites such as buildings, trailers, or utility poles. These motion activated cameras read the license plates of vehicles and compare them to entries in the LEADS system, or entries made into the ALPR system by end users. When the program finds a "hit" for a license plate that is entered into LEADS for either being used or taken in a crime, believed to be driven by someone involved in a specific crime, or is being sought for a non-criminal issue such as a Silver Alert or Amber Alert, it sends a notification to officers letting them know where the car is.

The ALPR database can also be used retroactively to search for vehicles used in specific crimes. For instance, if a red pick-up truck is used in a crime, users can search cameras in a particular area, during the time frame the incident occurred, for red pick-up trucks. The system will show results of the query, and users will be able to look at the license plates of the vehicles to find potential suspects. When an ALPR camera takes a picture of a vehicle, not only does it place it in the database by make, model, color, and license plate, but by the following searchable features:

- State the license plate was issued
- If the vehicle is missing its plate
- The presence of roof racks
- The presence of bumper stickers

All of these characteristics are searchable by the end user. This will allow investigators to identify suspect vehicles and patrol officers to locate them much quicker. All operators of the LPR system will receive training on the system, which will include an understanding of the community concerns, as well as what constitutes misuse of the system.

Policy Synopsis

The Department's policy for using the ALPR system is attached to this document. A brief synopsis is as follows:

The ALPRs are a law enforcement tool meant to provide sworn personnel with an easily searchable database that will allow them to identify vehicles linked to specific criminal incidents, as well as past locations of the vehicles.

The cameras take pictures of vehicle license plates and compare them with data provided by the NCIS/LEADS database, as well as the Dayton Police MIS system. The system will alert users when a license plate it records is reported as being lost or stolen, or the vehicle it belongs to has an indicator for:

- Being on the Terrorist Screening Center Watch List
- The vehicle itself is reported as stolen
- The vehicle is linked to an Amber Alert or Silver Alert
- The vehicle is linked to a missing person
- The registered owner has a Felony warrant for his or her arrest

ALPRs will be used by sworn personnel, for law enforcement purposes only. Retention and release of ALPR data will be done in a manner that is consistent with Police General Order 1.10-8, and City of Dayton Schedule of Records Retention and Disposition Form RC-2. All ALPR footage will be retained for 30 days, unless needed as evidence in a criminal offense.

Mobile ALPRs

The Police Department has a contract with Axon for the Mobile Video Recorders (MVRs) in the marked vehicle fleet. Under the current contract, new MVRs are scheduled to be installed in the cruisers in 2022. Upon receiving Commission approval, the ALPR feature will be activated. The MVR incorporates ALPR technology in the front camera mounted on the windshield and would effectively provide ALPRs in all police cruisers equipped with MVRs. When activated, the mobile ALPRs run constantly in the background whenever the police cruiser is in use. The MVR loaded ALPR would replace the use of the current ALPRs that are in use by the department which are aging and past end of life.

The goal of the Mobile ALPR program is to provide focused enforcement for vehicles used or related to a criminal activity, such as reckless driving and street take-overs. The ALPRs of officers responding to these types of events will record the license plates and images of the vehicles. The license plates will then be used for follow-up investigations for the purpose of pursuing criminal charges against the drivers. Ultimately, the Mobile ALPR automates what an officer currently does manually, which is check the license plates of vehicles on public roads. The Mobile ALPR is more efficient and allows for focused enforcement on law breakers versus everyday citizens.

Mobile ALPRs would also be used to help solve more serious, felony offenses. Officers on patrol would be notified if the system identifies a vehicle that was reported as being stolen. Vehicles used in violent offenses such as Homicide or Aggravated Robbery would be stopped in a more timely manner, preventing the offender from committing additional crimes. Vehicles that are on the tow list or have expired license plates would not generate any kind of alert to the cruiser's operator.

Metrics for measuring the success of the mobile ALPRs would involve creating and tracking baselines of investigations involving the use of the ALPR and their investigative leads. Additional data to be tracked and reported would be the use of ALPRs to identify specific types of alerts i.e., Amber or Silver Alerts, felony alerts etc.

Fixed Site ALPRs

Fixed site ALPRs will only be deployed in neighborhoods if the use of the ALPR is recommended in a neighborhood Safety Plan, the ALPRs are requested by the neighborhood or neighborhoods affected, and the crime statistics justify the use of the ALPRs. A neighborhood Safety Plan is a plan that is developed by the citizens of the neighborhood to combat crime or quality of life issues.

The Police Department currently is not utilizing fixed site ALPRs. The department has been approached by businesses in the Old North Dayton area and several industrial areas along Stanley Avenue and Wagner Ford Road inquiring about the use of ALPRs. The businesses have been greatly affected by illegal drag racing. The drag racers are a danger to the community and have caused extensive property damage to many of these businesses. These businesses are a possible location for deployment of fixed site ALPRs, if approved by Commission, and the ALPRs are requested as part of the Neighborhood Safety Plan. The

community engagement surrounding the use of the fixed site LPRs has been focused on the technology and **not** the deployment. If approved, the Use Policy dictates that additional engagement and neighborhood input and approval be obtained prior to deployment in any specific neighborhood.

The goal of the Fixed ALPR program is to lead to a reduction in overall crime in a focused geographic area. The Fixed ALPRs provide three key benefits:

1. Focused enforcement on specific criminal activity instead of casting a broad net of enforcement actions i.e., Identifying stolen vehicles or vehicles used in crimes
2. Provide valuable investigative follow up leads after a crime has occurred in a specific area such as a residential burglary or shooting into habitation by assisting in identifying potential suspect vehicles and establishing timelines.
3. Increasing police presence in the deployed geographic area as they are responding to criminal activity flagged by the ALPRs, thus providing a deterrent to crime (specifically property crimes).

Metrics for determining the efficacy of Mobile ALPRs would be included in any proposal prior to deployment, dependent on the crime problem being addressed. Some examples for potential metrics could be percentage drops in property crimes, increased property crime clearance rates, or successful identification of street traffic take-over (Hooning) offenders.

The ultimate goal of deployment of fixed ALPRs is to increase officer presence and enforcement action that is focused on vehicles involved in criminal activity. This tool is a force multiplier and reduces the chances of enforcement contact with residents who are not involved in identified crime problems.

Data Sharing

All data gathered from ALPR cameras will be property of the Dayton Police Department and will only be shared with other local and state law enforcement agencies. Unless being retained as evidence in a specific criminal case, all data from ALPR cameras will be overwritten 30 days after it is recorded.

The mobile ALPRs will use Axon's Cloud storage system for data storage. If another agency or court requests mobile ALPR footage from a specific incident, it can be uploaded to Axon's

Evidence.com Cloud site, and a link provided to them, in a similar manner to how body worn camera footage is currently shared.

The department has not contracted with any specific vendor yet for fixed site ALPRs, but it is our desire the vendor we choose uses a Cloud based storage system as well. During our test period with Flock Safety cameras, other agencies were able to request we share our data with them and vice versa. If the department were to share ALPR information with agencies in the future, it would require approval from the Major over Support Services, or his or her designee. Before the approval is given, a member of the command staff of the requesting agency will be required to sign and return a statement that his or her department agrees not to use any data the Dayton Police Department shares with them for the purpose of immigration enforcement or share it with agencies whose primary purpose is to enforce immigration laws. When this approval is given, City Commission will be notified in a memo to the City Manager.

Community Engagement

Using weekly email newsletters, Community Engagement Officers sent invitations to presidents of neighborhood community groups. There was one neighborhood group meeting held in each of the city's quadrants. The 80 people present were given a presentation by Community Engagement Officers, and representatives for a vendor were on scene to answer questions about the technology. Meeting attendees were provided surveys so they could give feedback on the proposal. A Community Engagement Officer also gave a presentation in Spanish to Hispanic parishioners from St. Helen, St. Mary, and Immaculate Conception churches.

Positive feedback of the technology is that it allows data to be shared with law enforcement in other cities, even though it remains property of the Dayton Police Department. Data is not stored indefinitely, but an audit trail of the data and who accessed it is kept. At least one event attendee voiced his opinion that he couldn't see any reason not to use these cameras. Another attendee liked that the ALPRs would only be deployed if a community requested them as part of the Neighborhood Safety Plan and the crime statistics justified the use of the technology.

Citizen Complaints

In addition to the positive feedback we received at the meetings, there were some concerns and apprehension about the technology. The most prominent concern is that the use of these cameras may infringe on citizens' privacy. We advised that we took this concern seriously, and

that any use of data retrieved from ALPR cameras would be tightly restricted. Dayton Police Department policy will prohibit any unauthorized use of data collected from ALPR technology, allowing sworn personnel to access it only for specific criminal investigations.

Another concern was raised that the cameras will be used for racial profiling or immigration enforcement. Meeting attendees were advised ALPRs are designed to take pictures of rear license plates on vehicles, not the occupants. However, it is possible occupants of certain vehicles, such as motorcycles could be photographed as well. The technology does not utilize any type of facial recognition technology, and has no ability to racially profile drivers. The cameras are also unable to determine the immigration status of the drivers. The data captured is focused solely on cataloging vehicle information and characteristics.

A similar concern is that the ALPRs would be deployed in predominantly minority areas and cause officers to have increased interactions with minority community members for less serious offenses. It was explained the fixed ALPRs would only be deployed in neighborhoods where community members requested they be deployed as part of a Neighborhood Safety Plan. . Police personnel explained the cameras would only alert officers if the vehicle is entered as stolen, the registered owner has a felony warrant (not misdemeanor), or one of the other approved alerts. Since the ALPRs would not alert for misdemeanor offenses, they would not lead to increased police/citizen interaction for lesser offenses.

An additional concern was raised recently about whether LPR data is shared with Vigilante (an LPR vendor) who utilizes the data for commercial purposes such as vehicle repossession and data sharing with federal agencies. The current mobile ALPR system in use by the Dayton Police Department does not report to Vigilante and is not a Vigilante System. The Axon ALPR system does not share its data with Vigilante's system and the Dayton Police Department has complete control over who would have access to the ALPR data.

At all of the meetings, Police personnel attended, it was made clear to event attendees that the cameras cannot be used for tracking racial demographics, immigration status, or facial recognition. The cameras focus on roadways so as to avoid photographing pedestrians. If a camera does take a picture of a pedestrian who may be walking in the street, it will take a picture of him or her. However, there was not a database to search for pedestrians in the Flock software during our test phase, and this is still the case.

Impact on Crime

In 2020, a pilot program consisting of 29 fixed ALPRs in the Twin Towers and Walnut Hills neighborhoods was done, and the Department was pleased with the results. During the program there was a significant crime reduction in the Twin Towers neighborhood. While there was a drop in crime citywide, the reduction in the Twin Towers area was considerably higher than that of the Walnut Hills neighborhood which experienced a 10% reduction of overall crime. To ensure data comparisons were not unduly affected by the pandemic, the crime trends and comparisons were covered from 2018 through 2020 with the rest of the city, as indicated below. If the Police Department implements a full time ALPR program, the fixed cameras would be deployed as part of a Neighborhood Safety Plan, when the community requests the ALPRs, and the crime statistics justify the use of the ALPRs. The below chart shows the results of the fixed ALPR program in use during the test period compared to the previous 2 years.

Crime Category	Twin Towers			% CNG	Walnut Hills			
	2018	2019	2020	2020 vs. 2018	2018	2019	2020	2020 vs. 2018
P1V	17	9	11	-39%	10	10	11	10%
P1P	57	46	35	-39%	89	82	75	-16%
P2V	42	46	39	-7%	53	37	45	-15%
P2P	25	24	20	-20%	36	20	25	-31%
Other	107	73	37	-65%	45	50	54	20%
Total	248	198	142	-43%	233	199	210	-10%

The below chart compares the ALPR neighborhoods for to the rest of the city for the entire 3-year period.

Crime Category	Twin Towers			% CNG 2020 vs. 2018	Walnut Hills			% CNG 2020 vs. 2018
	2018	2019	2020		2018	2019	2020	
P1V	24	25	28	17%	30	19	24	-2%
P1P	161	119	98	-39%	233	183	221	-5%
P2V	120	108	97	-19%	147	89	98	-33%
P2P	73	61	46	-40%	97	55	88	-9%
Other	35	27	24	-31%	8	10	7	-13%
Total	413	340	293	-29%	515	356	438	-15%

Crime Category	Citywide			% CNG
	2018	2019	2020	2020 vs. 2018
P1V	1112	1139	1087	-2%
P1P	6110	5520	5237	-14%
P2V	4285	3890	3809	-11%
P2P	2215	2246	2240	+1%
Other	446	349	372	-17%
Total	14,168	13,144	12,745	-10%

While there is a drop in crime in the areas the fixed ALPRs were utilized, the Department believes their greatest impact is as an investigative tool that will help us identify and apprehend suspects. There is an added benefit that officers responding to Fixed ALPR alerts will increase officer presence in communities with higher crime rates and provide an increased sense of security for residents while limiting enforcement action to offenders thus reducing the concerns for over-policing in poorer neighborhoods.

A year-long study in Cincinnati revealed 30 officers with ALPR equipped cruisers made 844 “follow-up” arrests, while 111 officers without ALPRs made 242 follow-up arrests. A “follow-up” arrest was defined as an arrest for a crime that was previously reported (Dees, 2019).

Only one Mobile ALPR was in use by the Dayton Police Department during 2021. The user advised since August of 2021, he has used the system to recover 2 stolen vehicles and1 stolen license plate. An example of a future benefit of widespread use of the technology would be if an officer responded to a report of an armed robbery. When the officer arrived on scene and was told the make and color of the vehicle the suspect left in, the case detective could check the officer's ALPR footage to see if he or she passed any vehicles matching that description when he or she drove to the scene. If the detective found a matching vehicle, that license plate number could be used for the investigation, and the photo would be useful in disproving any claims the suspect vehicle was not in the area at the time of the incident.

There are three methods of using ALPR technology to locate suspect vehicles:

- The first is when an officer is operating a cruiser with an ALPR system in it. When the ALPR system scans a license plate that is entered into the system's "hotlist," an audible alert notifies the driver of the cruiser. The operator of the cruiser would be required to verify the license plate and description of the vehicle as the same as the information listed in the alert before making the stop.
- The second is when an officer enters a license plate into the ALPR database. If the ALPRs have taken previous pictures of the vehicle, the officer will be able to view picture of the vehicle, as well as when and where it was photographed. The officer may also enter a request to be notified of future sightings of the vehicle.

- The third method is to enter known details about the suspect vehicle (for instance, a red pick-up truck driving southbound on a specific street in a specific time period), into the database, and find potential matches. The fact a vehicle matches the search parameters would not constitute probable cause to charge the registered owner or driver with the crime, but would, in some cases, give investigators a potential starting point in their investigation.

Analysis of Discriminatory or Adverse Impact

The department understands that any new technology it embraces will be heavily scrutinized. We fully anticipate there will be a vocal minority of the populace who have concerns about how ALPRs would be used. As was the case with the ShotSpotter roll-out, there would be concerns that the system would lead to over-policing in predominately African American neighborhoods. We are aware there are concerns among Dayton's Latino population about the ALPRs being used a tool for immigration enforcement. There is also a general fear about the slippery slope of government intrusion into the privacy of citizens.

We believe the key to putting these fears to rest is to inform the citizens of Dayton about what the system can actually do, as well as informing them of the control they have with the system. For instance, before installing ALPRs in a particular neighborhood, the department would reach out to stakeholders and determine if there is support there to install them. If community stakeholders believe the fixed ALPRs would draw extra, unwanted police presence, they could decide not to have the cameras installed there. If they agree to have the cameras installed, but later change their minds, the cameras would be removed.

The concerns about privacy are valid and would have to be taken into account when stakeholders make a decision about whether to allow the cameras to be installed in their neighborhoods. The Department's procedure for sharing data with other law enforcement agencies, and ALPR use policy would be given to residents who are considering adding the devices as part of a Neighborhood Safety Plan, so they could make an informed decision.

Presentations have been given to the Latino community, both in English and Spanish about ALPRs and what their capabilities are. As noted previously, ALPR cameras are completely automated, and do not have the ability to differentiate between the ethnicity, gender, immigration status, or sexual identity of a vehicle's driver. The Police Department already has

a policy in place forbidding its personnel from stopping, investigating, or arresting anyone solely based on their real or perceived immigration status.

On April 25, 2022, the Dayton Unit NAACP held an online meeting where the topic was Police Surveillance Technology. A large portion of the meeting was dedicated to discussing ALPR technology. Concerns expressed were that the Flock test period was conducted in the Twin Towers neighborhood, which they stated has a population that is 25 percent Latino, how data will be shared with other organizations particularly ones that perform immigration enforcement tasks, privacy concerns, and increased police encounters as a result of alerts from the cameras leading to pretextual stops. All these concerns have been considered, and have been addressed throughout this document.

Although it will never be possible to address the fears of every person in the community, we believe we will continue to maintain the trust our department has earned from the majority of Dayton's residents through the creation, and adherence of, a policy based on nationwide best practices, and has been approved by the City of Dayton Law Department. Upon activation of mobile ALPRs and re-location of fixed site ALPRs, notices will be posted on major social media sites, as well as notification through an email list citizens may subscribe to for notifications of Police Department surveillance policy changes. This policy will be read and signed off on by every member of the department, as all our polices are. Searches of ALPR data are recorded, any complaints or suspicions of misuse will be investigated. Anyone found to be in violation of the Department's ALPR policy will be the subject of disciplinary action.

Public Monitoring

Flock, the vendor whose product the Police Department tested in 2020 has a transparency website that is accessible to the public. The website has information about the specific user's ALPR program, such as data retention, number of cameras in use, external agencies that can view this agency's data, number of searches in the last 30 days, number of hits in the last 30 days, and other information.

Internal Audits

An internal audit found was conducted in 2021 of the ALPRs and the audit found no violations of the Mobile License Plate Reader policy regarding training, data collection, data access, data protection, data retention or public access of the system.

Total Cost

Under the Police Department's current contract with Axon, it is scheduled to add Mobile ALPRs to its marked vehicle fleet in 2022, upon receiving City Commission approval. The cost for the program is included in the existing Mobile Video Recorder Contract. Our total payment to Axon for 2022 is $582,630. This includes Bodyworn Cameras, the in-car camera system the ALPR system is installed in, and the Evidence.com Cloud based digital storage site.

The Police Department has been awarded a grant (2020 Justice Assistance Grant) for the installation of fixed site ALPRs for 2022 and 2023. There will be no cost to the Police Department to purchase and install the fixed site ALPRs. The cost of the mobile ALPRs is covered by the contract with Axon. As Axon's current camera system comes standard with built-in ALPRs, no additional cost is incurred in purchasing them. Any damaged cameras or upgrades are covered under warranty. The cost of the fixed ALPR system is yet to be determined. The decision to choose a particular vendor would be made after completing the RFP process. Part of the that decision includes the cost of services provided by the vendor.

Based on past use of mobile and fixed ALPRs, the personnel and operating costs are negligible. It is a logical expectation that the systems will shorten the amount of time investigators spend attempting to identify suspects. It is impossible to give any kind of estimate as to how much time would be saved by the ALPRs without putting them into widespread use.

Year	Product	Cost
2022	Mobile ALPRs	$582,630 Total Axon Contract (MVR/BWC) – Mobile ALPRs included with MVR costs
2022	Fixed ALPRs	Funding available through BJA Grant for $157,500 ($52,500/year for a total of 3 years)
2023	Fixed ALPRs	Funding available through DOJ Grant for $100,361

Use Policy

The draft Use Policy for the ALPRs is attached to this report.

References

Dees, Tim (2019) *Research review: Identifying the benefits of ALPR systems* Retrieved from https://www.police1.com/police-products/traffic-enforcement/license-plate-readers/articles/research-review-identifying-the-benefits-of-alpr-systems-wYft41yw4ONt5Wqv/