

# Automated License Plate Readers

WHAT ARE THEY,  
HOW DO THEY WORK,  
AND WHY DO WE USE THEM



CHIEF LESTER BAKER, FRAMINGHAM POLICE DEPARTMENT

# What is an LPR/ALPR?

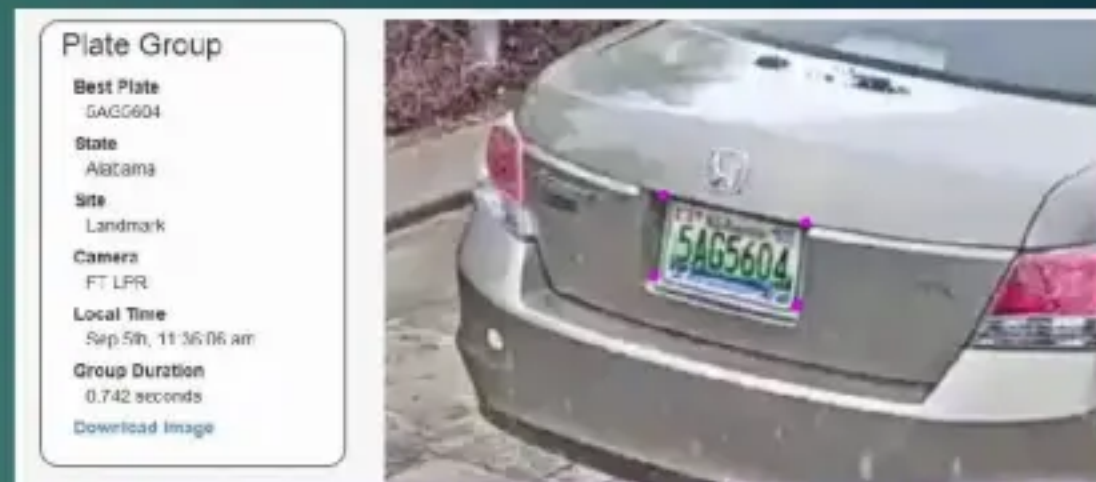
- ▶ Also known as **License Plate Recognition** (LPR), an **Automated/Automatic License Plate Reader** (ALPR) is a programmed system that combines high-speed cameras with sophisticated software.
- ▶ The cameras take photos of license plates and use algorithms to gather data about the plate and vehicle.
- ▶ Police Departments use that data for law enforcement purposes.



Picture of different types of ALPRs taken from Google Images

# What does an ALPR capture?

- ▶ When a vehicle passes an ALPR, it can capture:
  - ▶ License Plate
  - ▶ Geographic location
  - ▶ Date/Time
  - ▶ Description of vehicle (make, model, color, and unique identifiers like bumper stickers and racks).

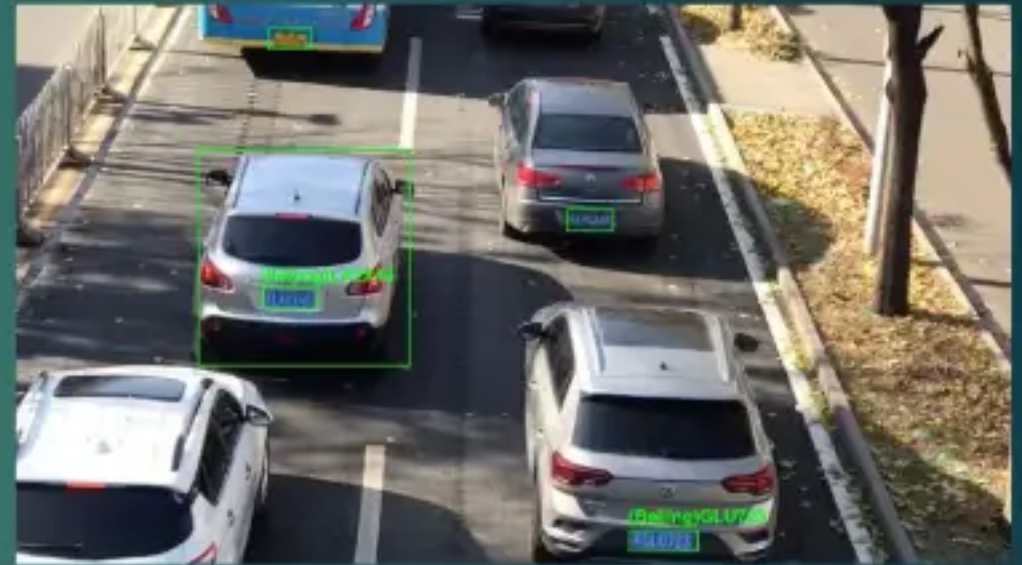


Picture of an ALPR license plate capture taken from Google Images



# Why use an ALPR?

- ▶ According to the Department of Homeland Security, the U.S. has over **250+ million** vehicles on roadways, each with a unique license plate.
- ▶ **70%** of all crimes are committed with a vehicle.
- ▶ It is necessary to have a system that is able to quickly and efficiently identify and locate vehicles.
- ▶ According to the Department of Justice, in cities with populations of 100,000 or more, **75%** of police departments use ALPR systems.

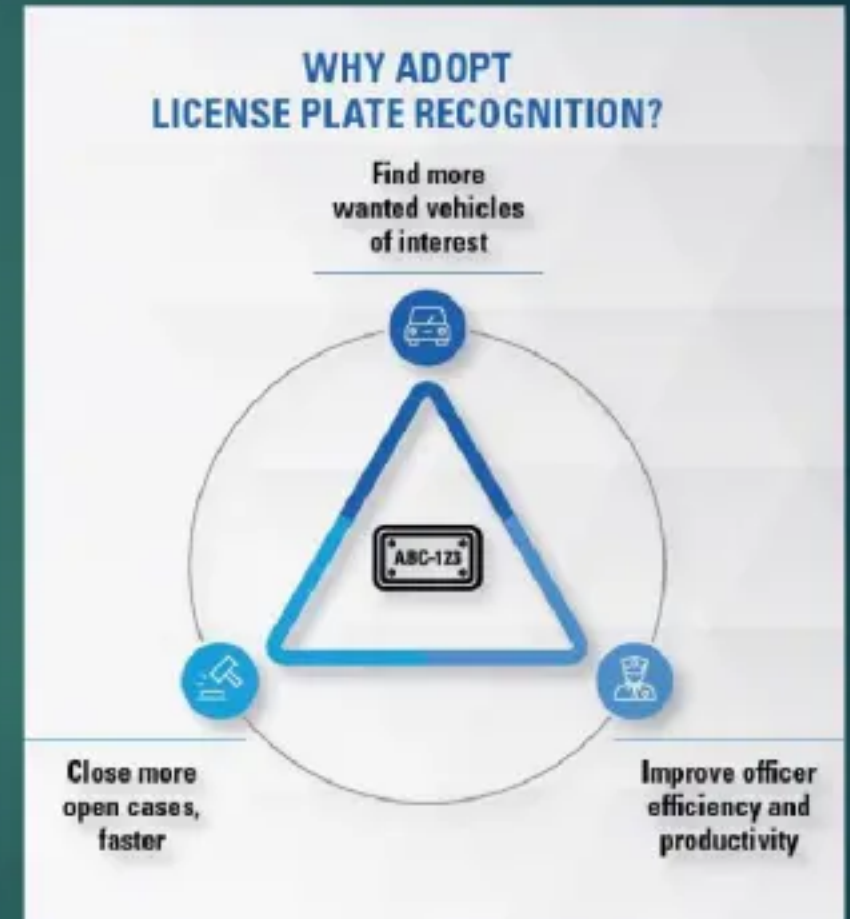


Picture of a backside vehicle ALPR taken from Google Images

# How FPD will use ALPR?

## ▶ ALPRs:

- ▶ Allow Officers to compare plate numbers against those of stolen/wanted vehicles.
- ▶ Help determine whether a vehicle was at the scene of a crime, and associations between vehicles and locations.
- ▶ Assist in gathering information related to active warrants, stolen property recovery, missing persons, terrorist activities, and other major crimes.
- ▶ Offer the ability to create "Hot Lists," which are used for real-time policing.
- ▶ Are used to share information to other departments, which aids in solving multi-jurisdictional crimes.



Taken from an ALPR Vendor Information Guide

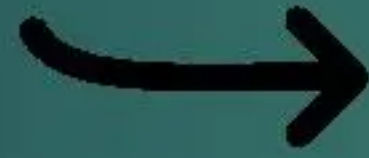


# Example of a Hot List:

Reported stolen vehicle with license plate #ABC123



Police Officer inputs license plate into the Hot List (puts in Report # and "stolen vehicle" as reason).



The vehicle passes an ALPR camera set up on Apple St at 2:05 PM, and then Lemon Ln at 2:15 PM.



Officers get real-time alerts that the vehicle passed both cameras.



Officers respond to that area to try and locate the vehicle.

# ALPRs and Crime Reduction

- ▶ According to an ALPR vendor, they reported overall crime reductions of over **70%** with the use of ALPRs.
  - ▶ Over 60% reduction in non-residential burglaries
  - ▶ 80% reduction in residential burglary
  - ▶ Over 40% reduction in robberies
- ▶ Police Executive Research Forum (2011):
  - ▶ ALPRs used by the Mesa, AZ PD considerably enhanced the productivity of the auto theft unit, resulting in "nearly 3 times as many 'hits' for stolen vehicles, and twice as many vehicle recoveries."



Picture of an ALPR Hot List Match taken from Google Images



# Ethics of ALPRs

- ▶ The pictures captured by ALPRs are **NEVER** sold or shared outside of law enforcement.
- ▶ The database used by ALPRs is **NOT** connected to registration data or third party databases (Carfax, RMV, Immigration Databases).
- ▶ After a certain period of time, data **NOT** associated with a crime is deleted and unrecoverable.
- ▶ To search for a plate in an ALPR, a reason is **required**.
  - ▶ The name of the searcher, date/time, and reason are all audited.

## 426.3.1 ALPR ADMINISTRATOR

The Investigations Bureau Captain shall be responsible for compliance with the requirements of Civil Code § 1798.90.5 et seq. This includes, but is not limited to (Civil Code § 1798.90.51; Civil Code § 1798.90.53):

- (a) Only properly trained sworn officers, crime analysts, and police assistants are allowed access to the ALPR system or to collect ALPR information.
- (b) Ensuring that training requirements are completed for authorized users.
- (c) ALPR system monitoring to ensure the security of the information and compliance with applicable privacy laws.
- (d) Ensuring that procedures are followed for system operators and to maintain records of access in compliance with Civil Code § 1798.90.52.
- (e) The title and name of the current designee in overseeing the ALPR operation is maintained. Continually working with the Custodian of Records on the retention and destruction of ALPR data.
- (f) Ensuring this policy and related procedures are conspicuously posted on the department's website.

Example of an ALPR Policy from the Vallejo PD



# Closing Remarks regarding ALPRs

- ▶ National Conference of State Legislatures:
  - ▶ When employed ethically and objectively, ALPRs are an **effective tool for law enforcement**.
  - ▶ ALPRS **cut down on time** required for investigations and act as a **force multiplier**.
- ▶ The FPD will **NOT** use ALPRs for:
  - ▶ Facial Recognition
  - ▶ Immigration Enforcement
  - ▶ Traffic Enforcement



Picture of an ALPR graphic taken from Google Images