



VILLAGE OF LOMBARD POLICE DEPARTMENT



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To: Public Safety and Transportation Committee (PSTC)

From: Joe Grage
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Re: Request for Public Safety and Transportation Committee Recommendation for Police Department To Purchase Pursuit Risk Mitigation Equipment (GPS Tagging/Patrol Vehicle Protection)-LEGISTAR#260145

Background

The Lombard Police Department has experienced a significant increase in the average annual number of vehicle pursuits over the past five (5) years. While the average annual number of vehicle pursuits between 2016-2020 was 15.8, the average annual number of vehicle pursuits between 2021-2025 was 37.2. This represents an increase of approximately 135% and is representative of a change overall in an increase of the willingness of criminal offenders to flee police and put members of the public, law enforcement officers, and themselves in danger. This danger is increased exponentially when the offender is impaired by alcohol and/or drugs.

The police department convened a Pursuit Policy Review Committee in late 2024,. This committee was made up of patrol officers, sergeants, lieutenants, and deputy chiefs. The purpose of the committee was to review the department's current pursuit policy and determine if any changes were needed. The department's pursuit policy at the time was based on a totality of the circumstances test. Per LPD General Order #41.5.1, police officers and supervisors continually evaluate a number of factors, including but not limited: seriousness of the suspected offense, probability of apprehension later, volume of vehicular/pedestrian traffic, time of day, speeds involved, and weather.

After several meetings, the Pursuit Policy Review Committee recommended that no change be made to the totality of circumstances test in the current policy but did recommend several

pursuit alternative measures. One of the measures was to change police department policy to allow pinning of vehicles. Pinning is a maneuver where one or more patrol vehicles block the movement of a stationary suspect vehicle with the intent to restrict or prevent the suspect vehicle from moving without causing substantial damage to all vehicles involved. This is distinctly different than the pursuit intervention technique (PIT), where police officers intentionally strike pursued vehicles in motion in order to immobilize them or stop their ability to flee. Pinning was adopted into the police department's policy in January of 2025.

Another recommendation from the committee was to pursue the procurement of GPS tagging equipment for pursuits. The use of GPS tagging equipment in a pursuit involves the deployment of a dart or similar device onto the vehicle being pursued. These devices are typically deployed from a mechanism mounted on the front of the patrol vehicle or from a handheld device. Such a system uses compressed air to launch a GPS-enabled tracker that adheres to the rear of the suspect vehicle (either moving or stationary). Once the tracker adheres to the suspect vehicle, the officer or dispatch can use it to monitor the vehicle's location. Police officers can then disengage from the pursuit while tracking the offender and engaging other law enforcement agencies to assist in taking them into custody and/or recovering their vehicle when safe to do so.

Research and Evaluation

In light of the committee's recommendation, police department staff researched and evaluated GPS tagging technology specifically designed for police pursuits.

In 2023, the United States Department of Justice and the Police Executive Research Forum published a paper titled *Vehicular Pursuits: A Guide for Law Enforcement Executives on Managing the Associated Risks*. The paper acknowledged that the use of GPS tagging and tracking technology can serve as an effective pursuit alternative that helps manage risk. It suggested that GPS tagging devices could be used not only after a pursuit has begun, but also preemptively during traffic stops if an officer suspects a vehicle may flee after pulling over. The paper noted that one benefit to the use of a GPS tagging device has a "calming effect". Disengaging from a vehicle pursuit can cause many suspects to slow down, thinking they are safe and are no longer being pursued or tracked by police. This significantly reduces the risk to the public, law enforcement officers, and offenders while creating a scenario that still includes the offender's apprehension and/or recovery of the vehicle used to flee from law enforcement. The paper did identify that there were some known issues with the performance of GPS tagging technology in heavy rain or extreme temperatures.

The paper also referred to National Institute of Justice funded field trials in 2014 of a GPS tagging solution sold by StarChase. The field trials' findings included the following:

- On average, GPS tagged suspects slow to within 10 miles of the posted speed limit in less than two minutes.
- There were no injuries, fatalities, or property damage resulting from GPS tagging vehicles.

- Apprehension rates for tagged vehicles exceeded 80%.

It was determined that StarChase is the only company that currently exists that provides this type of technology.

StarChase deploys a small GPS-enabled tag onto a suspect vehicle using a launcher mounted to the front of a patrol vehicle. After deployment, dispatchers and officers can monitor the suspect's location in real time using a secure mapping interface. This enables officers to back off from pursuit while maintaining awareness of the suspect's location to facilitate their apprehension and/or recovery of the vehicle when it is safest to do so.

Police Department staff received a demonstration from StarChase on how the technology works as well as some related data associated with deployments. Of note was the fact that there have been zero injuries or fatalities associated with StarChase deployments. Additionally, they reported that the offender apprehension rate when StarChase is used is currently 86%. Both are very significant, especially in light of the fact that the police department's apprehension rate (offenders who are arrested at the time of the pursuit or later) for the past 13 years is 36%.

Police department staff has spoken with the public works garage (who maintain and upfit police department vehicles). Based on that discussion, it is the recommendation of both the police department as well as the public works garage that protective push bumpers be purchased for the front of patrol cars. This would make emergency equipment installation and maintenance easier in general (not just StarChase) as well as affording the front of the patrol cars with some protection that would minimize minor damage that may occur if the patrol car was used for pinning or even if it was involved in a minor traffic crash. In both instances, the replacement of push bumper components would be far less than repairs completed by an automotive body shop.

StarChase provided twenty-three (23) law enforcement agencies in northeast Illinois currently that utilize their product:

Addison Police Department	Bensenville Police Department	Brookfield Police Department
Cicero Police Department	Columbia Police Department	Country Club Hills Police Department
Elmhurst Police Department	Joliet Police Department	McCook Police Department
Naperville Police Department	North Riverside Police Department	Oak Brook Police Department
Peoria County Sheriff's Office	Posen Police Department	River Forest Police Department
Rockford Police Department	South Barrington Police Department	South Holland Police Department
Villa Park Police Department	Village of Worth Police Department	West Dundee Police Department
Willowbrook Police Department	Wood Dale Police Department	

(DuPage County Agencies in yellow)

Staff also spoke with several other area departments to gain feedback on their actual experience:

- Naperville Police related that they have had success with deployments. They also utilize protective push bumpers on their patrol cars and have seen a significant decrease in damage to them in general.
- Villa Park Police related that their apprehension rate for successful deployments is 100%. They did advise they had one instance where the officer missed both darts.
- Oak Brook Police advised they have seen great success from StarChase deployments in terms of apprehension with 35 deployments in 2025.
- Willowbrook Police advised they have seen limited success due to the fact that they have only deployed one handheld launcher.
- Elmhurst Police advised they have had great success and strongly recommended StarChase.
- Addison Police advised they have had some issues with success, but attribute that to their officers needing additional training.

Police department staff have also obtained and reviewed policies from other agencies that utilize StarChase. It should be noted that the only change to police department policy anticipated would directly involve the use of StarChase GPS tagging equipment. The current totality of the circumstances test in determining whether to pursue or not will remain unchanged. Thus, the implementation of this equipment will not have a direct impact on the number of pursuits the department experiences on an annual basis.

There is limited information that suggests that the use of GPS tagging pursuit equipment could reduce the Village's insurance costs due to the potential of reducing risk and liability.

Staff obtained quotes on both StarChase (sole source) as well as protective push bumpers for patrol vehicles. These quotes included ten (10) StarChase units as well as twenty (20) protective push bumpers:

StarChase Training, Installation, Equipment, and Software Subscription (1 Yr): \$81,362.00

Protective Push Bumper (lowest of three quotes): \$20,443.50.

Total Cost in Year 1: \$101,805.50

Annual Recurring Software Subscription: \$15,000 per year (\$1500 per car)

Funding for these purchases can be accomplished this current budget year using non-budgetary asset forfeiture/technology funds currently available.

Reccommendation

Based on the significant increase in vehicle pursuits experienced by the Lombard Police Department, the recommendations of the Pursuit Policy Review Committee, the research conducted by department staff, and the positive feedback received from area law enforcement agencies currently utilizing this technology, the police department is recommending moving forward in procuring GPS tagging equipment along with protective push bumpers.

The procurement of StarChase GPS tagging equipment would provide officers with an additional pursuit alternative intended to reduce the risks associated with vehicle pursuits while still increasing the likelihood of offender apprehension and/or vehicle recovery. While the use of GPS tagging technology by the police department will neither decrease nor increase the total number of pursuits, it will make them safer. The use of GPS tagging technology would allow officers to disengage from a pursuit once a tracker has been successfully deployed, thereby reducing the danger to the public, police officers, and offenders.

The purchase of protective push bumpers is also recommended (by the police department as well as public works) in conjunction with this initiative. Push bumpers would support the installation and maintenance of GPS tagging equipment, emergency equipment, provide added protection to patrol vehicles during pinning incidents and minor crashes, and reduce repair costs by minimizing damage to the front end of patrol vehicles. This would provide both operational and long-term maintenance benefits to the department.

It is important to note that the cost of this equipment is minimal when compared to the potential financial liability resulting from a pursuit-related lawsuit.

Accordingly, police department staff is requesting a recommendation from the PSTC for the purchase of StarChase GPS tagging equipment and protective push bumpers as a proactive measure to enhance public safety, expand pursuit alternatives, and better equip officers to respond to the continued increase in fleeing offenders. Additionally, the purchase of this equipment is consistent with the Village's goal of improving operational effectiveness as adopted in the 2026-2029 Strategic Plan.