

VILLAGE OF LOMBARD
REQUEST FOR BOARD OF TRUSTEES ACTION
For Inclusion on Board Agenda

Resolution or Ordinance (Blue) _____ *Waiver of First Requested*
 X Recommendations of Boards, Commissions & Committees (Green)
Other Business (Pink)

TO: PRESIDENT AND BOARD OF TRUSTEES

FROM: Scott Niehaus, Village Manager

DATE: September 29, 2021 AGENDA DATE: October 7th, 2021

TITLE: Police Department Drone Purchase Request

SUBMITTED BY: Deputy Chief Joe Grage, Police Department

BACKGROUND/POLICY IMPLICATIONS:

The police department is requesting approval to purchase two (2) drones from Aerial Influence LLC of Elburn, IL in the amount of \$29,433.00. This purchase would allow the police department to establish a law enforcement drone program and operate the program in accordance with Illinois law and Federal Aviation Authority regulations.

The drones purchased by the police department could also be used to assist other village departments. Examples would be documentation of roadway improvement projects, community development documentation, documentation of fire department scenes and identification of "hot spots" along with obtaining video footage of special events for marketing and tourism purposes.

FISCAL IMPACT/FUNDING SOURCE

50% of cost out of federal asset seizure fund: 245.210.191.73110 73920

50% of cost out of DUI Equipment/Technology Fund: 205.210.175.73110 73920

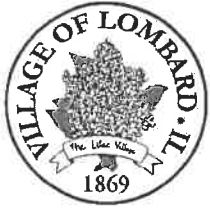
Review (as necessary):

Village Attorney X _____ Date _____

Finance Director X _____ Date _____

Village Manager X  _____ Date 9/29/21

NOTE: Materials must be submitted to / approved by the Village Manager's Office by 12:00 pm, Wednesday, prior to the Agenda Distribution.



To: Scott Niehaus, Village Manager
From: Deputy Chief Joe Grage, Police Department
Through: Roy Newton, Chief of Police
Date: September 29th, 2021
Subject: Police Department Drone Purchase Request

The police department is requesting village board approval to purchase two (2) drones as outlined in the attached agenda packet from Aerial Influence LLC of Elburn, Illinois in the amount of \$29,433.00. Three prices quotes were obtained and Aerial Influence was tied with another business for the lowest quote. However, Aerial Influence is located in Illinois while the other business is not. Additionally, Aerial Influence LLC is the vendor for many law enforcement and fire service agencies throughout Illinois.

It should be noted that the purchased was approved by the Public Safety and Transportation Committee on September 1st, 2021. In addition to this, a communications plan for the use of the drone was approved by the Community Relations Committee on September 13th, 2021. The draft communications plan is attached to this packet.

A draft police department policy for the drone program is also attached. This draft policy provides some specific clarification on how the police department would operate the drones consistent with Illinois law and Federal Aviation Authority regulations.

I will be present at the October 7th, 2021 Village Board meeting to give a presentation on this purchase. A copy of that presentation may be viewed using the following link or QR code:

<https://prezi.com/view/FURG71yAJGIWoeLDxQky/>



Please let me know if there are any questions.

210275



VILLAGE OF LOMBARD POLICE DEPARTMENT



Roy Newton
Chief of Police

Thomas Wirsing
Deputy Chief of Operations

Joseph Grage
Deputy Chief of Administrative Services

TO: Chief Newton #83
FROM: Deputy Chief Grage #754
DATE: 08/11/2021
SUBJECT: Police Department Small Unmanned Aircraft Systems "Drone" Proposal

Chief,

As you are aware the use of Small Unmanned Aircraft Systems (sUAS) colloquially known as "drones" is slowly but surely becoming an industry standard among law enforcement agencies. The purchase of sUAS and operation of them historically has been cost prohibitive and unclear when it comes to federal aviation laws and state laws. Fortunately, the cost of sUAS have reduced significantly and federal aviation and state laws have been implemented. These laws now provide clear guidance on the operation of sUAS by law enforcement agencies in Illinois. The use of sUAS by law enforcement has shown operational clear benefits that will be outlined in this document. I am proposing that the Lombard Police Department begin a sUAS program.

FEDERAL AVIATION AUTHORITY AND FEDERAL LAW

The use of sUAS is governed by federal law under 14 CFR Part 107. This section of law requires that sUAS being operated for law enforcement purposes be registered with the Federal Aviation Authority (FAA). The cost for this registration is \$5 and the registration is valid for three (3) years. 14 CFR Part 107 also requires that any person operating the

villageoflombard.org/lpd

630 / 873-4400 TDD: 630 / 620-5811

DEPT. FAX: 630 873.4496 INVESTIGATIONS FAX: 630 873.4444

235 E. Wilson Avenue Lombard, Illinois 60148

drone for law enforcement purposes be a FAA certified sUAS pilot. The certification test costs approximately \$160 plus the cost of Part 107 training. The training can be completed online. The costs for this training vary with them being as little as \$100 on the lower end. Once certified, sUAS pilots must have their certificate available when operating the sUAS. The certificate must be renewed every 24 months.

ILLINOIS STATE LAW: "FREEDOM FROM DRONE SURVEILLANCE ACT"

The "Freedom from Drone Surveillance Act" (725 ILCS 167) regulates the use of sUAS by law enforcement in Illinois. This law seeks to protect the privacy of the public while allowing law enforcement use of sUAS under certain circumstances. Per the Act, sUAS being operated for law enforcement may only be used under the following circumstances:

1. To counter a high risk of terrorist attack by a specific individual or organization if the United States Secretary of Homeland Security determines that credible intelligence indicates that there is risk.
2. If a law enforcement agency first obtains a search warrant based on probable cause issued under Section 108-3 of the Code of Criminal Procedure of 1963. The warrant must be limited to a period of 45 days, renewable by the judge upon a showing of good cause for subsequent periods of 45 days.
3. If a law enforcement agency possesses reasonable suspicion that, under particular circumstances, swift action is needed to prevent imminent harm to life, to forestall the imminent escape of a suspect, or the destruction of evidence. The use of a drone for this purpose is limited to 48 hours with a requirement that the chief executive officer of the law enforcement agency report the use of the sUAS to the local State's Attorney in writing within 24 hours.
4. If a law enforcement agency is attempting to locate a missing person, and is not also undertaking a criminal investigation.
5. If a law enforcement agency is using a sUAS solely for crime scene and traffic crash scene photography. Use under this section must be time limited and geographically confined. A search warrant or lawful consent is required if the sUAS is being operated on private property.

6. If a law enforcement agency is using a sUAS during a disaster or public health emergency to monitor weather or emergency conditions, survey damage, or to coordinate response and recovery efforts.

Use of sUAS by law enforcement agencies for purposes other than those outlined in the Act are prohibited. Information obtained by sUAS under the permissible uses must be destroyed within 30 days unless there is a reasonable suspicion that the information contains evidence of criminal activity or the information is relevant to an ongoing investigation or pending criminal trial.

Law enforcement agencies in Illinois that operate sUAS must report their use in writing annually to the Illinois Criminal Justice Information Authority. Law enforcement agencies are prohibited from acquiring or directing the acquisition of information from sUAS owned by a private party.

sUAS Applications for the Lombard Police Department

Based on the above, our department could benefit from the use of sUAS under the following circumstances and examples:

1. Missing Person Searches
 - a. Great for quickly searching large areas
 - b. Enhanced application with thermal imaging at nighttime
 - c. Able to more thoroughly check areas officers are not able to physically get to
2. Natural Disasters or Public Health Emergencies
 - a. Search for victims
 - b. Damage assessments
 - c. Coordinate response and recovery efforts
3. Crime Scene Photography
 - a. Video and still images of crime scenes that may cover larger areas
 - b. Images that cover a wider view than a 35 mm DSLR camera can take
4. Active shooters/Critical Incidents
 - a. Provide bird's eye view of incident to enable police to gain a quick understanding of the scope of the incident
 - b. Help provide the location of a shooter
 - c. Identifying escape routes for victims
 - d. Prevent escape of subject
 - e. Real time information provided to command staff
 - f. Live video of incident at command post via remote control or other screen.

5. Search Warrants(typically needs to be documented in search warrant)
 - a. Overview of house
 - b . Chase runners
 - c. Light up house
 - d. Searches of large areas
6. Forestall the escape of a subject(must notify SAO after use)
 - a. Suspects bailing from vehicles
 - b. Suspects fleeing on foot from scene of a robbery or shooting
 - c. Burglaries in progress
7. Prevent the destruction of evidence(must notify SAO after use)
 - a. Scene security of large scenes
 - b. Searching for weapons/contraband/evidence known to have been thrown
8. Prevent imminent harm to life(must notify SAO after use)
 - a. Hostage situations
 - b. Barricaded subjects
 - c. Active shooters
9. Crash Investigation
 - a. Overhead videos and still images
 - b. Images that cover a wider view than a 35 mm DSLR camera can take
 - c. Crash mapping and diagramming
 - d. On scene plotting that would normally take 4 hours, only takes 20 to 30 minutes. Officer diagram build time is also substantially reduced.
 - e. Significantly reduces the inconvenience to the motoring public as roads are closed for substantially less time
10. Bomb Inspections
 - a. Aerial drones can serve the same purpose as a ground-based robot commonly used to investigate suspicious packages
 - b. Provide initial assessment of situation

As you can see, the practical applications for law enforcement use are wide ranging and represent clear benefits.

sUAS Applications for the Village of Lombard

In addition to law enforcement use, the sUAS could be used to assist other Village of Lombard departments in a variety of non-law enforcement capacities. After consulting with other village departments, a police department sUAS would be able to assist other village departments in the following ways:

1. **Special Events: Record video and/or photos of special events such as the Lilac parade and Cruise Nights for promotional purposes.**
2. **Marketing and Promotion: Record video and/or photos of the Village to promote tourism and development.**
3. **Construction Supervision/Management: Record video and/or photos of ongoing village construction projects.**
4. **Community Development: Record video and/or photos of ongoing or prospective of development areas or zoning issues within the Village.**

EQUIPMENT

I have conducted research on what sUAS would work best for our agency. This research was based on technical data as well as anecdotal information from other law enforcement agencies' sUAS programs. Based on this research, I am proposing that we purchase a DJI Matrice 300 RTK with Zenmuse H20T camera. This sUAS is the latest version of the Matrice drone used by other area agencies. This sUAS is a commercial grade drone produced by DJI, a well-known sUAS manufacturer. Here are some quick facts/features of the Matrice 300 RTK equipped with the Zenmuse H20T camera.

- **Maximum flight time: 55 minutes**
- **Maximum range from controller: 9.3 miles**
- **Self-heating intelligent batteries**
- **Automated collision avoidance/obstacle identification system**
- **Operating temperatures from -4F to 122F**
- **Automated hovering and landing**
- **The camera has a 200x zoom capability and thermal imaging.**

A technical brochure for the Matrice 300 RTK is attached.

My research also found that many agencies have a second smaller sUAS as part of their sUAS programs. These sUAS are usually used for practice flight training as well as applications in large buildings such as warehouses or schools. An example of this use might be locating an active shooter within a warehouse with the sUAS in order to provide fast aid to injured people and address the threat effectively. For this sUAS I am proposing the purchase of a DJI Mini 2 sUAS. This sUAS is much smaller than the

Matrice 300 RTK and is housed in a bag the size of a standard DSLR camera bag. It has a flight time of 31 minutes and is equipped with a 12 MP camera that has a 4x maximum zoom.

Both sUAS come with one year of insurance that will cover 90% of the replacement or replacement cost for two crashes or instances of damage.

PRICING

I obtained three quotes for the above listed equipment (all quotes attached)

- DJI: \$29,525.00
- DRONENERDS: \$29,433.00
- Aerial Influence LLC: \$29,433.00

Aerial Influence LLC indicated that they provide free training on both sUAS as part of any purchase. In addition to this, they were the only Illinois-based business (Elburn) out of the three quotes. Based these facts along with their quote being tied for the lowest price I propose we purchased both sUAS from Aerial Influence LLC.

There are no additional annual software maintenance costs for the sUAV from any of the vendors.

FUNDING

The clear operational benefits of law enforcement use of sUAS give this purchase urgency. Because this purchase was not a budgeted item for FY 21, I propose that the purchase be made using 50% funding from the Federal Asset Seizure account funds and 50% funding from the DUI Technology account. Both of these accounts are restricted use for law enforcement purposes only. Both accounts can easily fund this purchase at this time.

dji ENTERPRISE



dji ENTERPRISE

<https://www.dji.com/enterprise>
Follow us @DJIEnterprise



MATRICE 300 RTK

Built Tough. Works Smart.

A New Standard for the Commercial Drone Industry

The Matrice 300 RTK is the latest commercial drone platform that takes innovation from the M300 RTK system, offering up to 55 minutes of flight time, advanced AI capabilities, 6 Directional Sensing & Positioning and more, the M300 RTK sets a whole new standard by combining intelligence with high performance and unrivaled reliability.



15 km Max Transmission*



55-min Max Flight Time



6 Directional Sensing & Positioning



Primary Flight Display



IP25 Rating



20°C to 50°C Operating Temperature



Hot-swappable Battery



UAV Health Management System

*Maximum value based on specific conditions. Actual transmission distance may vary. Always use the correct antenna configuration and ensure the drone is within the maximum range of the ground station. Always use appropriate safety procedures.

*Maximum flight time may vary due to battery configuration and payload configuration.



Improved Transmission System

The all-new OcuSync 3 integration enables transmission up to 15 km away and supports triple-channel 1080p HD video. Real-time auto-switching between 2.4 GHz and 5.8 GHz enables more reliable flight near high-interference environments, while AES-256 encryption offers secure data transmission.



15 km

Transmission Range¹

1080p

Triple-channel Video

2.4/5.8 GHz

Real-time Auto-switching

Enhanced Flight Performance

The refined airframe and propulsion system design gives you a more efficient and stable flight, even in harsh conditions.



55 min

Max Flight Time

7 m/s

Max Descent Speed²

23 m/s

Max Speed

7000 ft³

Service Ceiling³

15 m/s

Wind Resistance

¹ Max. flight distance. Performance may vary. Always operate with care.

² Max. descent speed. Performance may vary. Always operate with care.

³ Max. service ceiling. Performance may vary.

⁴ Max. wind resistance. Performance may vary. Always operate with care.

Multiple Payload Configurations

Configure your M300 RTK to fit your mission needs. Mount up to 3 payloads simultaneously with a maximum payload capacity of 2.7kg.



Smart Inspection



Live Mission Recording

Record mission actions such as aircraft deployment, global positioning, photo shooting, and zoom wheel activity. Generate mission files for future autonomous inspections.

AI Spot Check¹

Autonously detect inspection anomalies and capture coordinates of each anomaly. AI recognizes the subject of interest and identifies its surrounding environment to ensure consistent framing.

Waypoints 2.0

Define up to 65,535 waypoints and set multiple actions for each in those waypoints, including third-party tools. AI optimizes flight path planning to avoid obstacles and maximize flexibility and efficiency for your mission.

¹AI Spot Check is a trademark of DJI. © 2024 DJI. All rights reserved.

Smart Pin & Track*



PinPoint

A quick Pin Point is available on some advanced remote control systems. Immediately, details are sent to the app.

Smart Track

Identify and follow moving subjects in any camera view, and track back the auto home function, while continuously updating the subject's location. Includes:

Location Sharing

While other features in Smart Track are enabled, the subject's location can be shared. The active multiple-camera view, to another remote control, or shared through some platforms such as WhatsApp.

Aviation-Grade Situational Awareness

The M300 RTK adds a new Primary Flight Display (PFD) that integrates flight, navigation, and obstacle information to improve the pilot with exceptional situational awareness.



Flight Information

Flight information such as altitude, attitude, attitude, and velocity, as well as wind speed and wind direction, are all intuitively presented.

Navigation Display

pilots can also view the full status of the aircraft's heading, trajectory, primary information, and home point projection in a more efficient way. Whether you're flying in a crowded or busy area, you'll be fully informed with the new obstacle map. You'll be fully informed.

*PinPoint, Smart Track, and Location Sharing are available on the DJI M300 RTK. For more information, please visit <https://www.dji.com/m300-rtk>.



Advanced Dual Control

Either operator can now obtain control of the aircraft or payload with a single tap. This creates new possibilities for mission strategies as well as higher flexibility during operations.



A Powerful Vision System You Can Rely On

To enhance in-flight safety and aircraft stability, dual vision and TOF sensors appear on all six sides of the aircraft, offering a maximum detection range of up to 40m, with options to customize the aircraft's sensing behavior via the DJI Pilot App. Even in complex operating environments, this 6-Directional Sensing and Positioning system helps keep the aircraft and the mission safe.



Professional Maintenance for Your Drone Fleet

The new integrated Health Management System displays the current status of all systems, notification logs, and a preliminary time likelihood guide. Also in the system are the aircraft's flight logs, duration, and mileage throughout its entire lifecycle, and tips on aircraft care and maintenance.

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Redundancy Systems for Safer Flights

The M300 RTK's built-in advanced redundancy systems help keep your critical missions going even in unexpected scenarios.

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More Adaptable Than Ever Before



IP21



Smart Battery



2900mAh



Active Light Beacon



AirSense Altitude Hold Receiver

Accessories



Battery Station

The Battery Station manages up to 8 flight batteries and 8 remote controller batteries, while fast charging allows you to conduct your missions without turning out of power.



TB60 Intelligent Flight Battery

The high-capacity, hot-swappable TB60 intelligent flight battery lets operators change batteries without powering off, saving time during critical missions.



DJI Smart Controller Enterprise

The DJI Smart Controller Enterprise comes with an ultra-bright 5.5-inch 5500p display that maintains clear visibility even in direct sunlight.

Accessories



D-RTK 2 Mobile Station¹⁰

Gain improved relative accuracy with enhanced level precision processing data using the D-RTK 2 High-Precision GNSS Module station, which supports all major global satellite navigation systems and provides real-time differential corrections.



CSM Radar¹¹

For an added safety measure, a Circular Scanning Millimeter Wave (CSM) Radar with a detection range between 1 to 30 ft can be mounted on top of the aircraft.

Compatible Payloads



Zenmuse H20

Hybrid sensor solution with EO, IR, and wide-angle camera.



Zenmuse H20T

Hybrid sensor solution with EO, IR, wide-angle and thermal camera.



Zenmuse XT S¹²

Hybrid and dual sensor thermal imaging with a 43-mic sensitivity at 23 g.



Zenmuse XT2

Dual sensor camera with 43-mic sensor and thermal imaging with 70-mic sensitivity.



Zenmuse Z30

20x optical zoom camera ideal for detailed inspections.

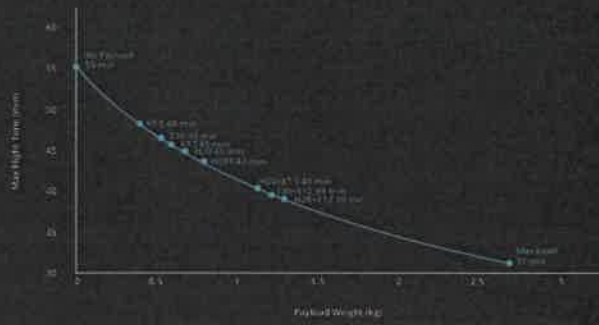


Third-Party Payloads

For specialized missions and types.

Flight Time

Estimate your M 500 RTN's flight time based on the payload configuration.



Purpose-built Applications



DJI PILOT

The Pilot is designed specifically for enterprise users to unleash the power of their DJI drones, with development built specifically for the M 500 RTN. DJI Pilot optimizes your flight capability for peak performance.



DJI FLIGHTHUB

DJI FlightHub is a one-stop solution for managing your drone operations, supporting large organizations to efficiently scale their aerial operations. Compatible with the M 500 RTN, you can integrate FlightHub directly into your existing fleet of DJI pilots and leverage its aerial intelligence for your organization.

Leverage The DJI Ecosystem For Extended Solutions



PAYLOAD SDK

Integrate a variety of 3rd party payloads, like gas sensors, thermal cameras, multispectral sensors, and more. Payload SDK supports DJI Mavic, DJI Phantom 4, and DJI X series. Those greatly extend the payload development lifecycle and maximize the control of your payloads in those diverse scenarios.



ONBOARD SDK

Accesses the full controlling power of your Mavic, Phantom, or Inspire. Supports comprehensive development of a wide range of features such as 3D reconstruction and Pathplanner, Live Health Management System, Waypoints 2.0, and more.



MOBILE SDK

With a large network of 3rd party mobile applications, you can unlock the capabilities of your drone. Used often to power specialized mission teams, DJI Mobile SDK, the Mavic RTK, supports highly customized mobile app development.

Applications



Firefighting
Fight fires and save lives without endangering personnel.



Search & Rescue
Act quickly to locate missing people and locate other critical situations.



Law enforcement
Quickly locate a suspect and place a cordoning when enforcing rules of and by-law safety.



Powerline Inspection
Early insights on defective power line networks in complex areas.



Oil & Gas
Conduct inspections of pipelines, well tops and more - while keeping workers away from busy areas.

Specifications: Aircraft

	MATRICE 300 RTK
Dimensions	<p>Loadable payload(s) excluded: 800 (170×132 mm) x 160 mm Flaring payload(s) and landing gear(s) excluded: 1000 (140 × 130 mm) x 170 mm</p>
Proposed Wingspan	900 mm
Weight (Batteries included)	900 g
Max Payload	700 g
Max Takeoff Weight	900 g
Operating Frequency	2.400-2.483.500, 5.725-5.850 MHz
ERP	<p>2.400-2.483.500 MHz: 29.5 dBm (EIRP), 18.5 dBm (EIRP), 14.5 dBm (EIRP), 12.5 dBm (EIRP) 5.725-5.850 MHz: 28.5 dBm (EIRP), 13.5 dBm (EIRP), 28.5 dBm (EIRP)</p>
Heading Accuracy (Without or With RTK)	<p>±0.3° (No RTK system available) ±0.5° (With RTK system available) ±0.1° (With RTK and using Inertial) ±0.1° (No RTK system available) ±1.5° (With RTK system available) ±0.1° (With RTK and using Inertial)</p>
Max Applicable Wind Velocity	8 m/s (30% max. 100%)
Max Pitch Angle	30° (P mode) and Forward Vision System enabled: 25°
Max Ascent Speed/Max Descent Speed (vertical)	6 m/s (3 m/s)
Max Forward Speed (flat)	7 m/s
Max Horizontal Speed	23 m/s

Specifications: Aircraft

	MATRICE 300 RTK
Screen or Display	<p>MATRIC 300 RTK (optional), 5.5-inch weight: 1.7 kg 7.2-inch (1280 High Resolution) color Active Matrix LCD, 5.5-inch weight: 1.7 kg</p>
Max Wind Resistance	15 m/s
Max Flight Time (Cruise)	25 minutes
Supported IMU (Gimbal)	Trimble RTIMU-3-02 (4-axis/RTCP)
Supported Gimbal Configurations	<p>Dual Downward Camera, Single Downward Camera, Single Downward Camera Single Upward + Single Downward Camera, Triple Camera</p>
Other Supported IMU Products	GMX Radar, Mavlink 2
Ingress Protection Rating	IPX4
IMOs	RTK (L1/L2) and Dual Downward Camera
Operating Temperature	4° F to 122° F (5° C to 50° C)

Specifications: Smart Controller Enterprise

Weight Enterprise Operation Frequency Range	2.400-2.4825 GHz / 5.725-5.820 GHz**	
Max. Transmission Distance (Line-of-Sight, Free of Interference)	NLOS: 10 km LOS: 1 km GPS: 1 km	
Transmit Power (EIRP)	3.000 EIRP (Omni), 75.1 dBm (PC), 18.1 dBm (CS), 18.1 dBm (PDC), 18.1 dBm (MDC) 5.725-5.820 GHz: 28.5 dBm (FC), 12.5 dBm (FS), 20.5 dBm (GR)	
External Battery	Name	W807 Intelligent Battery
	Capacity	4000 mAh
	Voltage	7.4 V
	Battery Type	LiFe
	Energy	27.8 Wh
Built-in Battery	Charge Time (Using BGA Intelligent Battery Station)	30 min (15% to 45%) / 1.5 h (45% to 100%)
	Battery Type	1800 mAh DMR186-8.72V
	Charge Type	Standard USB Charge (with 12V/2A)

**Local regulations in some countries prohibit the use of 5.8 GHz and 5.7 GHz frequencies, and in some regions the 5.7 GHz frequency band is only allowed for indoor use.

Specifications: Smart Controller Enterprise

Built-in Battery	Rated Power	17 W
	Charge Time	2 hours (with 1700 mAh) Using USB Charge (with 12V/2A)
Working Time**	Built-in Battery Approx. 2.5 hours Built-in Battery + External Battery Approx. 4.5 hours	
Power Supply Voltage (Car Power (12V A port))	5V/1.5A	
Operation Temperature Range	-20°C to 50°C (-4°F to 122°F)	

Specifications: Vision System

Distance Sensing Range	Forward / Backward / Left / Right: 0.2 - 40 m Upward / Downward: 0.5 - 30 m
FOV	Forward / Backward / Downward: 37°/60°/30° Left / Right: 120°/120° / 73°/60°/50°
Operating Environment	Surface with clear patterns, and adequate lighting (> 1 lux), the repeatability of an environment with normal outdoor scene (such as roads) with a Backward Light

**The Vision Controller Temperature and supply power for the module device including camera chip, please refer to device manufacturer's specifications.

Specifications: Infrared ToF Sensing System

Obstacle Sensing Range	0.2-8m
FOV	90°
Operating Environment	Light obstacles with diffuse reflection and a high reflectivity (reflectivity > 10%)

Specifications: Intelligent Flight Battery

Capacity	5000mAh
Voltage	52.8V
Battery Type	LiPo (T3)
Energy	238.8Wh
Net Weight (each)	Approx. 175.4g
Operating Temperature	0°C to 120°C (32°F to 250°F)
Optimal Storage Temperature	15°C to 20°C (59°F to 68°F)
Charging Temperature	0°C to 40°C (32°F to 104°F)
Charging Power	When using the Battery Station: Using a 120V power supply, it takes about 60 minutes to fully charge two T600 Intelligent Flight Batteries, and it takes about 30 minutes to charge from 10% to 50%. Using a 100V power supply, it takes about 70 minutes to fully charge two T600 Intelligent Flight Batteries, and it takes about 40 minutes to charge from 10% to 50%.

Specifications: FPV Camera

Resolution	960p
FOV	140°
Frame Rate	30fps

Specifications: Battery Station

Maximum Capacity	4 T600 Intelligent Flight Batteries, 4 880mAh
Input Voltage	100V-230VAC, 50/60Hz / 100V-240VAC, 50/60Hz
Output Power	100W/120W/150W 200W/240W/300W
Operating Temperature	-30°C to 40°C

**Please refer to the official product page for the latest specifications.

Information maintained by the Legislative Reference Bureau

Updating the database of the Illinois Compiled Statutes (ILCS) is an ongoing process. Recent laws may not yet be included in the ILCS database, but they are found on this site as [Public Acts](#) soon after they become law. For information concerning the relationship between statutes and Public Acts, refer to the [Guide](#).

Because the statute database is maintained primarily for legislative drafting purposes, statutory changes are sometimes included in the statute database before they take effect. If the source note at the end of a Section of the statutes includes a Public Act that has not yet taken effect, the version of the law that is currently in effect may have already been removed from the database and you should refer to that Public Act to see the changes made to the current law.

**CRIMINAL PROCEDURE
(725 ILCS 167/) Freedom from Drone Surveillance Act.**

(725 ILCS 167/1)

Sec. 1. Short title. This Act may be cited as the Freedom from Drone Surveillance Act.

(Source: P.A. 98-569, eff. 1-1-14.)

(725 ILCS 167/5)

Sec. 5. Definitions. As used in this Act:

"Authority" means the Illinois Criminal Justice Information Authority.

"Drone" means any aerial vehicle that does not carry a human operator.

"Information" means any evidence, images, sounds, data, or other information gathered by a drone.

"Law enforcement agency" means any agency of this State or a political subdivision of this State which is vested by law with the duty to maintain public order and to enforce criminal laws.

(Source: P.A. 98-569, eff. 1-1-14.)

(725 ILCS 167/10)

Sec. 10. Prohibited use of drones. Except as provided in Section 15, a law enforcement agency may not use a drone to gather information.

(Source: P.A. 98-569, eff. 1-1-14.)

(725 ILCS 167/15)

Sec. 15. Exceptions. This Act does not prohibit the use of a drone by a law enforcement agency:

(1) To counter a high risk of a terrorist attack by a specific individual or organization if the United States Secretary of Homeland Security determines that credible intelligence indicates that there is that risk.

(2) If a law enforcement agency first obtains a search warrant based on probable cause issued under Section 108-3 of the Code of Criminal Procedure of 1963. The warrant must be limited to a period of 45 days, renewable by the judge upon a showing of good cause for subsequent periods of 45 days.

(3) If a law enforcement agency possesses reasonable suspicion that, under particular circumstances, swift action is needed to prevent imminent harm to life, or to forestall the imminent escape of a suspect or the destruction of evidence. The use of a drone under this paragraph (3) is limited to a period of 48 hours. Within 24 hours of the initiation of the use of a drone under this paragraph (3), the chief executive officer of the law enforcement agency must report in writing the use of a drone to the local State's Attorney.

(4) If a law enforcement agency is attempting to locate a missing person, and is not also undertaking a criminal investigation.

(5) If a law enforcement agency is using a drone solely for crime scene and traffic crash scene photography. Crime scene and traffic crash photography must be conducted in a geographically confined and time-limited manner to document specific occurrences. The use of a drone under this paragraph (5) on private property requires either a search warrant based on probable cause under Section 108-3 of the Code of Criminal Procedure of 1963 or lawful consent to search. The use of a drone under this paragraph (5) on lands, highways, roadways, or areas belonging to this State or political subdivisions of this State does not require a search warrant or consent to search. Any law enforcement agency operating a drone under this paragraph (5) shall make every reasonable attempt to only photograph the crime scene or traffic crash scene and avoid other areas.

(6) If a law enforcement agency is using a drone during a disaster or public health emergency, as defined by Section 4 of the Illinois Emergency Management Agency Act. The use of a drone under this paragraph (6) does not require an official declaration of a disaster or public health emergency prior to use. A law enforcement agency may use a drone under this paragraph (6) to obtain information necessary for the determination of whether or not a disaster or public health emergency should be declared, to monitor weather or emergency conditions, to survey damage, or to otherwise coordinate response and recovery efforts. The use of a drone under this paragraph (6) is permissible during the disaster or public health emergency and during subsequent response and recovery efforts.

(Source: P.A. 98-569, eff. 1-1-14; 98-831, eff. 1-1-15.)

(725 ILCS 167/20)

Sec. 20. Information retention. If a law enforcement agency uses a drone under Section 15 of this Act, the agency within 30 days shall destroy all information gathered by the drone, except that a supervisor at that agency may retain particular information if:

- (1) there is reasonable suspicion that the information contains evidence of criminal activity, or
- (2) the information is relevant to an ongoing investigation or pending criminal trial.

(Source: P.A. 98-569, eff. 1-1-14.)

(725 ILCS 167/25)

Sec. 25. Information disclosure. If a law enforcement agency uses a drone under Section 15 of this Act, the agency shall not disclose any information gathered by the drone, except that a supervisor of that agency may disclose particular information to another government agency, if (1) there is reasonable suspicion that the information contains evidence of criminal activity, or (2) the information is relevant to an ongoing investigation or pending criminal trial.

(Source: P.A. 98-569, eff. 1-1-14.)

(725 ILCS 167/30)

Sec. 30. Admissibility. If the court finds by a preponderance of the evidence that a law enforcement agency used a drone to gather information in violation of the information gathering limits in Sections 10 and 15 of this Act, then the information shall be presumed to be inadmissible in any judicial or administrative proceeding. The State may overcome this presumption by proving the applicability of a judicially recognized exception to the exclusionary rule of the Fourth Amendment to the U.S. Constitution or Article I, Section 6 of

the Illinois Constitution to the information. Nothing in this Act shall be deemed to prevent a court from independently reviewing the admissibility of the information for compliance with the aforementioned provisions of the U.S. and Illinois Constitutions.

(Source: P.A. 98-569, eff. 1-1-14.)

(725 ILCS 167/35)

Sec. 35. Reporting.

(a) If a law enforcement agency owns one or more drones, then subsequent to the effective date of this Act, it shall report in writing annually by April 1 to the Authority the number of drones that it owns.

(b) On July 1 of each year, the Authority shall publish on its publicly available website a concise report that lists every law enforcement agency that owns a drone, and for each of those agencies, the number of drones that it owns.

(Source: P.A. 98-569, eff. 1-1-14.)

(725 ILCS 167/40)

Sec. 40. Law enforcement use of private drones.

(a) Except as provided in Section 15, a law enforcement agency may not acquire information from or direct the acquisition of information through the use of a drone owned by a private third party. In the event that law enforcement acquires information from or directs the acquisition of information through the use of a privately owned drone under Section 15 of this Act, any information so acquired is subject to Sections 20 and 25 of this Act.

(b) Nothing in this Act prohibits private third parties from voluntarily submitting information acquired by a privately owned drone to law enforcement. In the event that law enforcement acquires information from the voluntary submission of that information, whether under a request or on a private drone owner's initiative, the information is subject to Sections 20 and 25 of this Act.

(Source: P.A. 98-831, eff. 1-1-15.)

State of Illinois
JB Pritzker, Governor

Illinois Criminal Justice Information Authority
Delrice Adams, Acting Executive Director



STATE FISCAL YEAR 2021 ILLINOIS FREEDOM FROM DRONE SURVEILLANCE ACT REPORT

Legistar#210275



ICJIA

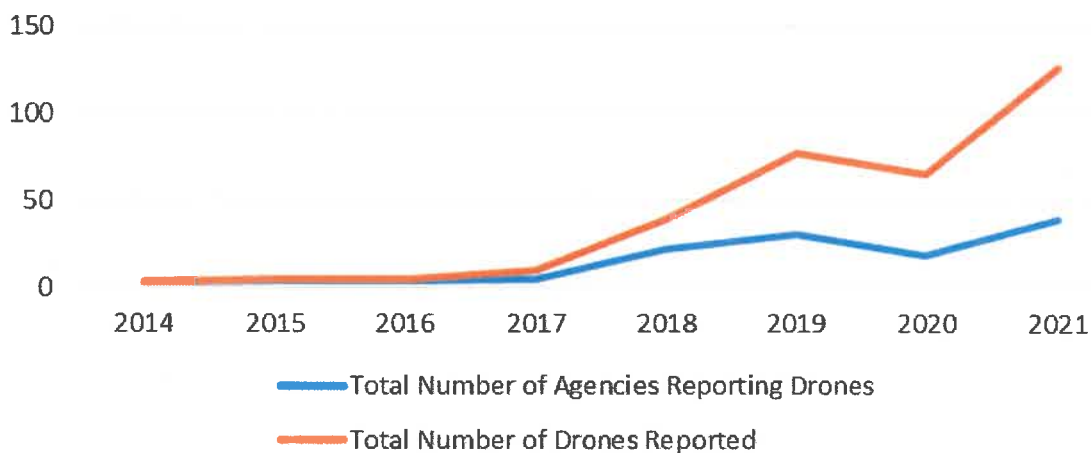
Illinois Criminal Justice Information Authority

The use of drone technology by law enforcement practitioners may vary among departments and jurisdictions, though information regarding specific uses and the extent of drone use among law enforcement is limited. Some potential uses of drone technology by law enforcement practitioners includes use in accident or crime scene investigation or to provide a tactical advantage in dangerous situations.¹ A 2017 study estimated that at least 347 police and other first responder agencies in the United States have acquired drones.²

In Illinois, the number of law enforcement agencies reporting drones has increased since reporting began in state fiscal year (SFY) 2014, and the number of drones owned by these agencies has increased as well. Figure 1 below illustrates this trend, with notable increases occurring since SFY 2017. In SFY 2021, 39 agencies reported owning a total of 127 drones (Table 2).

Figure 1

Total Number of Agencies Reporting Drones and Total Number of Drones Reported, State Fiscal Years 2014-2021



In accordance with the Freedom from Drone Surveillance Act [725 ILCS 167], the Illinois Criminal Justice Information Authority is mandated to publish on its publicly available website the following information for the previous fiscal year, as affirmed by each reporting agency.

Agencies can submit reports of drone purchases through the [Illinois Criminal Justice Information Authority drone reporting form](#). Additionally, reports from previous fiscal years can be accessed [here](#).

¹ McNeal, G. S., Goodwin, W., & Jones, S. (2017). Warrantless operations of public use drones: Considerations for government agencies. *Fordham Urban. Law Journal*, 44, 703.

² Gettinger, D. (2017). Drones at home: Public safety drones. Center for the Study of the Drone. <https://dronecenter.bard.edu/public-safety-drones/>

Table 1*Law Enforcement Agencies Reporting the Purchase of a Drone*

Agency	Number of Drones	Date of Purchase	Model	Status
Winnebago County Sheriff's Office	2			
WCSO	Drone 1	2/18/2019	Mavic 2 Enterprise Dual	O-Operational
WCSO	Drone 2	2/18/2019	Mavic 2 Enterprise Dual	O-Operational
Downers Grove Police Department	1	12/31/2019	Mavic 2 Enterprise Dual	O-Operational
Pontiac Police Department	1	10/18/2017	Inspire	O-Operational
Kane County Sheriff's Office	9			
KCSO	Drone 1	12/1/2019	DJI Mavic 2 Dual	O-Operational
KCSO	Drone 2	12/1/2019	DJI Mavic 2 Dual	O-Operational
KCSO	Drone 3	12/1/2019	DJI Mavic Mini	O-Operational
KCSO	Drone 4	8/2020	Matrice 300 RTK	O-Operational
KCSO	Drone 5	9/2020	DJI Mavic 2 Dual	O-Operational
KCSO	Drone 6	9/2020	DJI Mavic 2 Zoom	O-Operational
KCSO	Drone 7	9/2020	DJI Mavic 2 Zoom	O-Operational
KCSO	Drone 8	5/2021	DJI Mavic 2 Advance	O-Operational
KCSO	Drone 9	5/2021	DJI Mavic 2 Advance	O-Operational
McCook Police Department	1	11/2020	Mavic 2 Dual	O-Operational
Major Crash Assistance Team of Lake County, IL	6			
MCATLC	Drone 1	2020	DJI Mavic Pro 2	O-Operational
MCATLC	Drone 2	6/2019	DJI Mavic Pro 2	O-Operational
MCATLC	Drone 3	2020	DJI Mavic Pro 2	O-Operational
MCATLC	Drone 4	2017	Inspire 1	O-Operational
MCATLC	Drone 5	2017	Inspire 1	O-Operational
MCATLC	Drone 6	2017	Inspire 1	O-Operational

Fox Lake Police Department	1	5/17/2019	Matrice 210 V2	O-Operational
Grundy County Sheriff's Office	8			
GCSO	Drone 1	9/6/2018	Spark	O-Operational
GCSO	Drone 2	9/6/2018	Matrice 200 Pro	O-Operational
GCSO	Drone 3	10/12/2019	Mavic 2 Pro	O-Operational
GCSO	Drone 4	10/12/2019	Mavic 2 Pro	O-Operational
GCSO	Drone 5	10/12/2019	Mavic 2 Pro	O-Operational
GCSO	Drone 6	11/11/2019	Mavic 2 Enterprise Dual	O-Operational
GCSO	Drone 7	11/11/2019	Mavic 2 Enterprise Dual	O-Operational
GCSO	Drone 8	5/10/2021	Mavic 2 Enterprise Advanced	O-Operational
Naperville Police Department	3			
NPD	Drone 1	1/23/2020	Mavic Mini	O - Operational
NPD	Drone 2	10/1/2020	Mavic 2 PRO	O - Operational
NPD	Drone 3	3/26/2021	S2	O - Operational
Arlington Heights Police	2			
AHP	Drone 1	9/2019	Matrice 210	O - Operational
AHP	Drone 2	9/2019	Mavic 2 Enterprise	O - Operational
Northbrook Police Department	2			
NPD	Drone 1	1/10/2018	Inspire 1	O - Operational
NPD	Drone 2	-	Mavic PRO	O - Operational
Elgin Police Department	3			
EPD	Drone 1	9/20/2018	Matrice	O - Operational
EPD	Drone 2	5/2020	Phantom 4	O - Operational
EPD	Drone 3	5/2020	Mavic Mini	O - Operational
Aroua PD	3			
APD	Drone 1	12/30/2018	DJI M200	O - Operational
APD	Drone 2	12/30/2018	DJI M200	O - Operational
APD	Drone 3	12/30/2018	DJI M200	O - Operational
Gurnee PD	1	1/27/2017	Phantom 4 Pro	O - Operational

City of Peoria	2			
	Drone 1	11/6/2017	Phantom 4 Pro	O - Operational
	Drone 2	1/29/2018	Yuneec	O - Operational
Grundee Police Department	1	2016	Phantom 4 Pro	O - Operational
Bartlett Police Department	2			
	Drone 1	5/30/2019	Mavic Pro MIP	O - Operational
	Drone 2	5/30/2019	Matrice 210	O - Operational
Winnebago County Sheriff	2			
	Drone 1	2/25/2019	Mavic 2 Enterprise	O - Operational
	Drone 2	2/25/2019	Mavic 2 Enterprise	O - Operational
North Riverside	1	1/2020	GJ13002721225	O - Operational
Forest Preserve District of DuPage County	1	12/1/2021	Mavic 2 Enterprise Dual	O - Operational
Lake Villa Police Department	1	8/13/2020	Mavoc 2 Pro Zoom	O - Operational
Jacksonville Police Department	2			
JPD	Drone 1	1/10/2021	MT2PD	O - Operational
JPD	Drone 2	1/10/2021	Anamk3	O - Operational
Chicago Police Department	12			
CPD	Drone 1	8/18/2020	Mavic 2 Pro	O - Operational
CPD	Drone 2	8/18/2020	Mavic 2 Pro	O - Operational
CPD	Drone 3	8/18/2020	Mavic 2 Pro	O - Operational
CPD	Drone 4	8/18/2020	Mavic 2 Pro	O - Operational
CPD	Drone 5	8/18/2020	Mavic 2 Zoom	O - Operational
CPD	Drone 6	8/18/2020	Mavic 2 Zoom	O - Operational
CPD	Drone 7	8/18/2020	Mavic 2 Zoom	O - Operational
CPD	Drone 8	8/18/2020	Mavic 2 Zoom	O - Operational
CPD	Drone 9	8/18/2020	Mavic 2 Dual	O - Operational
CPD	Drone 10	8/18/2020	Mavic 2 Dual	O - Operational
CPD	Drone 11	8/18/2020	Mavic 2 Dual	O - Operational
CPD	Drone 12	8/18/2020	Mavic 2 Dual	O - Operational

Antioch Police Department	2			
APD	Drone 1	2/18/2020	LIDE	O - Operational
APD	Drone 2	2/18/2020	MEISS5	O - Operational
Kendall County Sheriff's Office	2			
KCSO	Drone 1	4/2018	Matrice M210	O - Operational
KCSO	Drone 2	12/2020	Mavic Pro	O - Operational
Mt. Vernon Police Department	1	6/19/2020	Mavic 2 Enterprise Dual	O - Operational
Illinois State Police	37			
ISP	Drone 1	5/29/2013	X4-ES	I-Inoperational
ISP	Drone 2	5/19/2015	Inspire 1	O - Operational
ISP	Drone 3	9/13/2016	Inspire 2 V2.0	O - Operational
ISP	Drone 4	2/6/2017	Inspire 1 Pro	I-Inoperational
ISP	Drone 5	2/6/2017	Inspire V2.0	O - Operational
ISP	Drone 6	2/6/2017	Inspire V2.0	I-Inoperational
ISP	Drone 7	3/27/2018	Mavic MIX	O - Operational
ISP	Drone 8	6/25/2018	Mavic MIX	O - Operational
ISP	Drone 9	5/20/2019	Mavic LIDE	O - Operational
ISP	Drone 10	5/20/2019	Mavic LIDE	O - Operational
ISP	Drone 11	11/8/2020	Phantom 4 Pro V2.0	O - Operational
ISP	Drone 12	11/8/2020	Phantom 4 Pro V2.0	O - Operational
ISP	Drone 13	12/3/2018	Mavic 2 Pro	I-Inoperational
ISP	Drone 14	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 15	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 16	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 17	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 18	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 19	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 20	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 21	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 22	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 23	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 24	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 25	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 26	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 27	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 28	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 29	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 30	12/3/2018	Mavic 2 Pro	O - Operational
ISP	Drone 31	2/11/2020	Phantom III Standard	O - Operational
ISP	Drone 32	2/11/2020	Phantom III Standard	O - Operational

ISP	Drone 33	3/24/2020	Mavic 2 Pro	O - Operational
ISP	Drone 34	10/22/2020	Mavic 2 Pro	O - Operational
ISP	Drone 35	10/31/2021	Matrice 210 v2	O - Operational
ISP	Drone 36	10/31/2021	Matrice 210 v2	O - Operational
ISP	Drone 37	10/31/2021	Matrice 210 v2	O - Operational
Huntley Police Department	1	10/15/2017	Inspire 2	O - Operational
West Dundee Police Department	1	10/1/2018	H520	O - Operational
Kane County Accident Reconstruction Team	2			
KCART	Drone 1	8/15/2018	H520	O - Operational
KCART	Drone 2	8/15/2018	H520	O - Operational
Hanover Park Police Department	1	12/1/2016	W323	O - Operational
Morris Police Department	1	3/2019	Mavic 2 Enterprise Dual	O - Operational
Palos Heights Police Department	3			
PHPD	Drone 1	8/4/2020	Matrice 300	O - Operational
PHPD	Drone 2	1/14/2020	Mavic Mini	O - Operational
PHPD	Drone 3	9/20/2018	Inspire 1 v 2.0	I-Inoperational
McHenry County Sheriff's Office	4			
MCSO	Drone 1	9/6/2018	Inspire 1	O - Operational
MCSO	Drone 2	8/11/2020	Bebop	I-Inoperational
MCSO	Drone 3	8/11/2020	Bebop	I-Inoperational
MCSO	Drone 4	8/9/2020	Inspire 1	O - Operational
North Riverside	1	1/10/2020	GJ0027212252	I-Inoperational
Lake Villa Police Department	1	5/1/2020	Mavic 2 Zoom L1Z	O - Operational
McHenry Police Department	1	4/15/2020	Mavic 2 Enterprise	O - Operational

Williamson County Sheriff's Office	1	4/19/2018	Inspire 1	O - Operational
Triton College Police Department	1	9/25/2019	Mavic Pro M1P	O - Operational



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**Village of Lombard
Communications Plan
Police Department Purchase of Small Unmanned Aircraft Systems or “Drones”**

Purpose of the Project/Initiative

The Public Safety Committee has approved the purchase of a small, unmanned aircraft system (a “drone”) for use by the Lombard Police Department.

The use of drones is becoming an industry standard among law enforcement agencies. Recently, federal aviation and state laws have been implemented which provide clear guidance on the operation of drones by law enforcement agencies. Notably, the State of Illinois State Law, entitled “Freedom from Drone Surveillance Act” seeks to protect the privacy of the public while allowing law enforcement use of drones under certain circumstances.

The Lombard Police Department is proposing the following uses for its drone program:

1. Missing Person Searches
2. Natural Disasters or Public Health Emergencies
3. Crime Scene Photography
4. Active shooters/Critical Incidents
5. Search Warrants (typically needs to be documented in search warrant)
6. Forestall the escape of a subject
7. Prevent the destruction of evidence
8. Prevent imminent harm to life
9. Crash Investigation
10. Bomb Inspections

In addition, other Village Departments could also make use of the program for the following applications:

1. Special Events: Record video and/or photos of special events such as the Lilac parade and Cruise Nights for promotional purposes.
2. Marketing and Promotion: Record video and/or photos of the Village to promote tourism and development.
3. Construction Supervision/Management: Record video and/or photos of ongoing village construction projects.
4. Community Development: Record video and/or photos of ongoing or prospective of development areas or zoning issues within the Village.

Other area agencies using drones include:

- Aurora Police Department
- Bartlett Police Department
- Downers Grove Police Department
- DuPage County Sheriff's Office
- DuPage County Forest Preserve Police
- Glen Ellyn Police Department
- Hanover Park Police Department
- Naperville Police Department
- Wheaton Police Department

Some examples of incidents in our community where drone use might have benefitted public safety over the past two years:

- 110 missing juvenile incidents
- 14 missing elderly incidents
- 3 fatal car crashes (scene mapping and documentation)
- 45 foot pursuits
- 2 homicide investigations (crime scene mapping and documentation)
- 1 home invasion/aggravated battery with firearm (crime scene mapping and documentation)

Goal

- Drone program will be useful tool and increase public safety
- Assure public that program would not infringe on residents' privacy
- Improve investigation abilities,
- Assist with critical response to situations
- Additional benefits for marketing/economic development purposes

Objectives: Measureable step to achieve goals

- Measurable
- Percentages
- Dates
- Example: Practice 3 hours each day

Audiences

The audience this communications plan is directed toward includes:

Public:

1. All residents
2. All businesses
3. All owners of property within the Village of Lombard
4. Community Groups

Media:

1. Print/Online (Lombardian, Daily Herald)
2. Radio/TV (WBBM, ABC7, NBC5, WLS, CBS2, WGN9, FOX)

Community Leaders:

1. Mayor/Board of Trustees
2. Chamber of Commerce

Key Messages

- Drone program will be useful tool and increase public safety
- Assure public that program would not infringe on residents' privacy
- Improve investigation abilities
- Assist with critical response to situations
- Additional benefits for marketing/economic development purposes

Action Plan

In an effort to keep residents, business, community leaders and the media informed of the Lombard Police Department Drone Program, the Village of Lombard has/will execute an ongoing and comprehensive communications plan containing the following:

- Webpage
- News Item
- Press release
- Pride Newsletter
- Social Media

FAQ:

- **Q. What would the drone be used for?**
- **A.** The Lombard Police Department would utilize the drone program for things like Missing Person Searches, Natural Disasters or Public Health Emergencies, Crime Scene Photography, Active shooters/Critical Incidents and more. Additionally, the drone could also be used for communication/marketing/special event/economic development purposes.
- **Q. What assurances are there that citizens' privacy will be protected?**

- A. The use of the drone is regulated by the State of Illinois “Freedom from Drone Surveillance Act” which outlines the very specific uses it may be operated by law enforcement.

- **Q. What other area agencies are using drones in law enforcement**
- A. Many area agencies are using drones including:
 - Aurora Police Department
 - Bartlett Police Department
 - Downers Grove Police Department
 - DuPage County Sheriff’s Office
 - DuPage County Forest Preserve Police
 - Glen Ellyn Police Department
 - Hanover Park Police Department
 - Naperville Police Department
 - Wheaton Police Department

- **Q. Where can I get more information?**
- A. For more information on the drone program, contact the Lombard Police Department

DRAFT DEPARTMENT ORDER

Small Unmanned Aircraft Systems(sUAS)

PURPOSE

The purpose of this Order is to establish guidelines under which a small unmanned aircraft may be utilized, and the storage, retrieval, and dissemination of images and data captured by such systems.

POLICY

It is the policy of the Lombard Police Department to ensure authorized personnel are trained on the use of small unmanned aircraft systems, hereinafter referred to as sUAS, to enhance the department's mission of protecting lives and property when other means and resources are not available or are less effective. Any use of the sUAS will be in strict compliance with the Illinois Freedom from Drone Surveillance Act (725 ILCS 167), Federal Aviation Administration regulations, Title 14 of the Code of Federal Regulations (14 CFR) Part 107 requirements, and privacy rights.

DEFINITIONS

For the purpose of this Order, the following definitions apply:

- **Federal Aviation Administration (FAA)** - A national authority with powers to regulate all aspects of civil aviation. These include the construction and operation of airports, the management of air traffic, the certification of personnel and aircraft, and the protection of US assets during the launch or re-entry of commercial space vehicles.
- **Information** - As defined in 725 ILCS 167, any evidence, images, sounds, data, or other information gathered by unmanned aircraft.
- **Remote Pilot in Command** - Person directly responsible for and is the final authority as to the operation of the small unmanned aircraft.
- **Small Unmanned Aircraft System (sUAS)** - A small unmanned aircraft that does not carry a human operator, weighing less than 55 pounds on takeoff, and its associated elements, including communication links and the components that control the aircraft that are required for the safe and efficient operation of the aircraft.
- **Visual Observer** - The person designated by the remote pilot in command to assist the remote pilot in command and the person manipulating the flight controls of the aircraft to see and avoid other air traffic or objects aloft or on the ground.

PROGRAM COORDINATOR

The Chief of Police will appoint a program coordinator who will be responsible for the management of the department's sUAS program. The program coordinator will ensure that this Order conforms to current laws, regulations, and best practices and will have the following responsibilities:

1. Coordinate the FAA Certification of Authorization (COA) and/or the 14 CFR 107 application process and ensure all certifications are current.
2. Ensure all authorized operators and visual observers have completed all required FAA and department-approved training in the operation, applicable laws, and department guidelines regarding the use of the sUAS.
3. Obtain any and all necessary FAA waivers and ensure waivers are current.
4. Develop sUAS inspection, maintenance, and record keeping protocol to ensure continuing airworthiness of the sUAS(s), up to and including its overhaul or life limits.
5. Ensure that established protocols are followed by monitoring and providing periodic program reports to the Chief of Police.

REMOTE PILOT IN COMMAND

1. Upon determining that an incident qualifies for the use of a sUAS, the remote pilot in command will contact the on-duty supervisor for approval to deploy the sUAS.
2. Prior to deployment, the remote pilot in command will conduct a preflight inspection and document such on the Lombard Police Department Preflight Checklist.
3. Upon completion of the deployment of the sUAS, the remote pilot in command will complete a supplemental report documenting the use and results of the sUAS.
4. All uses of the sUAS will be documented in SharePoint. Information shall include the reason for the flight; the date, time, and location; the supervisor who approved of the deployment and the assigned operators; and a summary of the activities covered, actions taken, and outcome of the deployment.
5. Per 725 ILCS 167/20, all information gathered by the sUAS will be destroyed, except when there is reasonable suspicion that the information contains evidence of criminal activity or the information is relevant to an ongoing investigation or pending criminal trial. The remote pilot in command will be responsible for destroying these files. If the information obtained from the sUAS will be maintained as evidence, the remote pilot in command will securely download the recordings and follow proper evidence procedures.

SERGEANTS

1. When appropriate, notification of the sUAS deployment shall be made to the public. It is the responsibility of the on-duty supervisor to make notification to the Village of Lombard Communications Coordinator.
2. If the deployment of the sUAS was based on 725 ILCS 167/15(3), the on-duty supervisor shall make notification to the Chief of Police of the use of the sUAS. The Chief of Police, or his designee, will complete a Lombard Police Department State's Attorney sUAS Notification Form and forward it to the DuPage County State's Attorney's Office.

TRAINING

1. Only officers that have completed the required training will be allowed to operate a sUAS.
2. Prior to authorization to operate a sUAS, assigned personnel must complete mandatory training provided by the department to obtain an understanding on how to use the sUAS and the procedures outlined in this Order and demonstrate proficiency in operating the sUAS.

USE OF SMALL UNMANNED AIRCRAFT SYSTEM(SUAS)

1. Pursuit to 725 ILCS 167/15, the sUAS may not be used to gather information, except during the following types of situations:
 - a. To counter a high risk of a terrorist attack by a specific individual or organization if the United States Secretary of Homeland Security determines that credible intelligence indicates there is a risk.
 - b. Pursuant to a search warrant based on probable cause under Section 108-3 of the Code of Criminal Procedure of 1963. The warrant must be limited to a period of 45 days, renewable by a judge upon showing good cause for subsequent periods of 45 days.
 - c. Upon reasonable suspicion that under particular circumstances, swift action is needed to prevent imminent harm to life, forestall the imminent escape of a suspect or prevent the destruction of evidence. The use of a sUAS under this paragraph is limited to a period of 48 hours. Within 24 hours of sUAS initiation under this paragraph, the Chief of Police must report its use, in writing, to the State's Attorney.
 - d. To locate a missing person while not also undelinking a criminal investigation.

- e. To obtain crime scene and traffic crash scene photography in a geographically confined and time-limited manner. Use of the sUAS under this paragraph on private property requires either a search warrant or lawful consent to search. As it relates to lands, highways, roadways, or areas belonging to the state, a search warrant or consent to search is not required. Reasonable attempts shall be made to only photograph the crime scene or traffic crash scene and to avoid other areas.
 - f. To obtain information necessary for the determination of whether a disaster or public health emergency should be declared, to manage a disaster by monitoring weather or emergency conditions, to survey damage, or to coordinate response and recovery efforts. There is no requirement that an official declaration of disaster or public health emergency prior to use.
2. sUAS deployments by the Lombard Police Department must adhere to the operating procedures established by the FAA which are specified in Title 14 of the Code of Federal Regulations (14 CFR) Part 107, "Small Unmanned Aircraft Systems."
 3. A certificate waiver from the FAA may be applied for which authorizes deviation from specific regulations. The certificate waiver will be granted when the FAA determines that the sUAS operation can be safely conducted under the terms of the certificate waiver.
 4. Whenever possible, if the sUAS will be flying within close proximity to a hospital helicopter, which could create a hazardous situation for a manned aircraft, notification shall be made to the respective hospital's security office.
 5. When appropriate, notification of the sUAS deployment shall be made to the public.

PROHIBITED USES OF SMALL UNMANNED AIRCRAFT SYSTEMS(sUAS)

The sUAS shall not be utilized to:

1. Conduct random surveillance activities or quests for information.
2. Target a person based solely on individual characteristics such as, but not limited to race, ethnicity, national origin, religion, disability, gender, or sexual orientation.
3. Harass, intimidate, or discriminate against any individual or group.
4. Conduct personal business of any type.
5. Any situation outside what is specified in **USE OF SMALL UNMANNED AIRCRAFT SYSTEMS(sUAS)**

PRIVACY CONSIDERATIONS

Use of the sUAS potentially involves privacy considerations. Absent a warrant or exigent circumstances, operators and visual observers shall adhere to FAA altitude regulations and shall not intentionally record or transmit images of any location where a person would have a reasonable expectation of privacy. Operators and visual observers shall take reasonable precautions to avoid inadvertently recording or transmitting images of areas where there is a reasonable expectation of privacy.

When there are specific and articulable grounds to believe that the sUAS will collect evidence of criminal wrongdoing and/or if the sUAS will be used in a manner that may intrude upon reasonable expectation of privacy, the department will obtain a search warrant prior to conducting the flight.

SECURITY OF RECORDINGS

1. Personnel should be aware that recordings may contain sensitive information and are responsible for ensuring compliance to this Order. A breach in security, careless handling of the recordings, and/or intentional release of recordings to non-authorized individuals may jeopardize relationships with citizens, subject victims to an invasion of privacy, and jeopardize prosecutions.
2. All recordings are considered investigative property of the Lombard Police Department. The utmost care and caution shall be taken to ensure the recordings are not mishandled or misused.
3. Electronic trails, including encryption, authenticity certificates, and date and time stamping, shall be used as appropriate to preserve individual rights and to ensure the authenticity and maintenance of a secure evidentiary chain of custody.
4. Employees shall not edit, alter, erase, duplicate, copy, share, or otherwise distribute in any manner recordings without authorization by the program coordinator.
5. Any violations related to unauthorized edits, alterations, and dissemination of this data shall be cause for disciplinary action.

RETENTION AND DISCLOSURE OF sUAS INFORMATION

Pursuant to 725 ILCS 167/20, within 30 days of the recording, the police department shall destroy all information gathered by the sUAS, except when there is reasonable suspicion that the information contains evidence of criminal activity or the information is relevant to an ongoing investigation or pending criminal trial.

Pursuant to 725 ILCS 167/25, the disclosure of information gathered by a sUAS is prohibited, except to another government agency where there is reasonable suspicion that the information contains evidence of criminal activity or the information is relevant to an ongoing investigation

or pending criminal trial. The disclosure of information to another government agency must first be approved by a supervisor.

REPORTING

The program coordinator shall report the following:

1. Annually, by April 1st, the program coordinator shall report to the Illinois Criminal Justice Authority the number of sUASs owned by the Lombard Police Department, per 725 ILCS 167/35.
2. Within 24 hours of utilizing a sUAS for circumstances as described under section 1(c) of **USE OF SMALL UNMANNED AIRCRAFT SYSTEM(sUAS)**, the Chief of Police, or his designee, shall notify the DuPage County State's Attorney's Office of the use.

The remote pilot in charge shall report the following:

1. Within 10 days, the remote pilot in charge will notify the FAA of an accident in the following situations:
 - a. Serious injury to any person or loss of consciousness; or
 - b. Damage to any property, other than the sUAS, unless one of the following conditions is satisfied:
 - i. The cost of repair including materials and labor does not exceed \$500.00;
 - OR
 - ii. The fair market value of the property does not exceed \$500.00 in the event of a total loss.
2. In case of an accident involving a sUAS, the remote pilot in charge shall notify his on-duty supervisor and generate a police report.
3. After all deployments of a sUAS, the remote pilot in charge will generate a police report as well as complete all required Lombard Police Department sUAS forms.

ESTIMATE

AERIAL INFLUENCE™

Aerial Influence LLC

40W020 Hughes Road, Elburn, IL 60119, UNITED STATES

Tax ID: 81-1197808

contact@aerialinfluence.com; Website: www.aerialinfluence.com

Estimate No#: 0420

Estimate Date: Aug 3, 2021

\$29,433.00

ESTIMATED AMOUNT

BILL TO

Gragej@villageoflombard.org

#	ITEMS & DESCRIPTION	QTY/HRS	PRICE	AMOUNT(\$)
1	MATRICE 300 RTK (NA) Combo (Standard) In the Box: Aircraft Body*1 DJI Smart Controller Enterprise *1 USB Charger *1 USB-C Cable *1 WB37 Intelligent Battery *1 2110 Propeller (CW) *2 2110 Propeller (CCW) *2 Landing Gear *2 Spare Stick Cover (pair) *1 Spare Propeller Holder *2 Spare Gimbal Damper *4 USB Cable (with Double A Ports) *1 Vision System Calibration Plate *1 Carrying Case *1 Smart Controller Lanyard *1 Rubber Port Cover (Set) *1 Screws and Tools BS60 Intelligent Battery Station *1 2 TB60 Batteries	1	\$13,199.00	\$13,199.00
2	M300 battery MATRICE 300 SERIES-PART08-TB60 Intelligent Flight Battery	6	\$700.00	\$4,200.00
3	WB37 Intelligent Battery for M300 Smart Controller, CrystalSky and Cendence Battery for M300 Smart Controller, CrystalSky Monitor, Cendence Remote, P4 RTK base station and P4 RTK R/C	3	\$59.00	\$177.00
4	Zenmuse H20T Standar Thermal camera and Color zoom camera	1	\$11,209.00	\$11,209.00
5	DJI Mini 2 with Flymore Kit Includes multi-charger, 3 batteries, carrying case, remote controller and more.	1	\$599.00	\$599.00
6	DJI Mini 2 Care Refresh INSurance	1	\$49.00	\$49.00
			Subtotal	\$29,433.00
			Shipping	\$0.00
			TOTAL	\$29,433.00 USD

NOTES TO CUSTOMER

Please contact us with any questions or comments.

Thank you,

The Aerial Influence Team

TERMS AND CONDITIONS

Terms and Conditions attached.

ATTACHMENTS

ai_TermsConditions.pdf