To the Mayor and Members of the City Council

March 4, 2025

SUBJECT: POLICY OF DESIGNATED DELIVERY ROUTES FOR DELIVERY DRONES

The purpose of this Informal Report is to provide an update to the Mayor and City Council on the City's authority to regulate or require drone operators to use designated delivery routes.

Background

Advanced Air Mobility (AAM) refers to a transportation system that facilitates the movement of people and goods across the U.S. using advanced aircraft technologies, such as electric aircraft and electric vertical takeoff and landing (eVTOL) vehicles. This system operates in both controlled and uncontrolled airspace. A subset of AAM includes Unmanned Aircraft/Aerial Systems (UAS), commonly known as drones, which are remotely piloted and do not carry human operators. A typical UAS consists of:

1. A pilotless aircraft,
2. A remote pilot station,
3. A command and communication system, and
4. A payload designed for specific applications.

Between 2017 and 2020, the UAS Integration Pilot Program (IPP) was launched to explore the integration of civil and public drone operations into national airspace. This initiative has continued under the UAS BEYOND program, which addresses key challenges such as beyond visual line of sight (BVLOS) operations, economic and social impacts, and public engagement.

Participants in these programs have pioneered drone-based package delivery under 14 CFR Part 135 (Part 135) air carrier certification. In April 2019, the Federal Aviation Administration (FAA) granted Wing Aviation, LLC the first Part 135 single-pilot air carrier certificate for drone operations. By October 2019, Wing received a standard Part 135 air carrier certificate, allowing it to operate drone-based aircraft commercially.

Any company looking to provide commercial drone delivery services must first secure a Part 135 Air Carrier Certification. As of today, six FAA-certified Part 135 drone operators are active in the U.S., with more applications awaiting approval.

In June 2024, Walmart began offering small-package drone delivery from its 8520 N. Beach Street store through Wing. This service has since expanded to the Walmart at 2401 Avondale Haslet Rd., making Fort Worth the first major U.S. city to have a commercial drone delivery network. Additionally, Wing operates a DoorDash-affiliated site at 4800 S. Hulen St., enabling the delivery of food, household essentials, and over-the-counter medications directly to homes and businesses.

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Unmanned Aircraft/Aerial Systems (UAS) Regulatory Framework

Federal Regulations

The Federal Aviation Administration (FAA) holds exclusive authority over aviation safety and airspace management for Unmanned Aircraft Systems (UAS) at low altitudes, just as it does for manned aircraft at higher altitudes. While the FAA has not established a minimum altitude requirement for drones, they are generally restricted to operating below 400 feet above ground level. Consequently, state and local governments have limited regulatory authority over drones, as the FAA preempts most regulations.

To conduct commercial drone delivery services under **14 CFR Part 135**, operators must complete a five-phase FAA certification process:

1. **Pre-Application**
    - Submit a Pre-Application Statement of Intent (PASI) to the FAA.
    - Meet with FAA officials to review requirements.
2. **Formal Application**
    - Provide a comprehensive application package, including operational and safety documentation.
    - Obtain economic authority from the Department of Transportation (DOT), if necessary.
3. **Document Compliance**
    - The FAA reviews all manuals and submitted materials.
    - Operators may be required to revise and resubmit documents.
4. **Demonstration & Inspection**
    - Conduct test flights to verify compliance with FAA safety and operational regulations.
    - FAA inspectors evaluate procedures and operational readiness.
5. **Certification & Approval**
    - Upon meeting all requirements, the FAA grants a Part 135 Air Carrier Certificate.
    - Ongoing compliance is required through inspections and audits.

Additionally, before launching operations in the DFW region, Wing Aviation and other companies must complete environmental assessments under the National Environmental Policy Act (NEPA) to analyze potential noise and environmental impacts.

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The FAA enforces strict guidelines for drone operators, requiring them to obtain a **Remote Pilot Certificate** and follow operational conditions such as altitude limits, daylight operation rules, and restrictions on flying over people. Regulations under **FAA Part 107** govern small drones (under 55 pounds) for various commercial and governmental uses, including aerial photography, surveying, and other for-hire services.

FAA Operational Authority & Restrictions

1. **Altitude Restrictions** – Drones are typically limited to a maximum altitude of 400 feet above ground level.
2. **Line of Sight** – Operators must maintain a visual line of sight (VLOS) with their drone, though Beyond Visual Line of Sight (BVLOS) operations are permitted with special FAA approval.
3. **Airspace Restrictions** – Drones cannot fly in controlled airspace near airports, military bases, or sensitive locations without prior FAA authorization.
4. **Collision Avoidance** – Drones must have systems in place to detect and avoid obstacles and other aircraft.
5. **Geofencing Technology** – Many drones include geofencing to prevent entry into restricted or hazardous areas.

State Regulations

The State of Texas regulates drone operations through counties, municipalities, and joint boards. Specifically, Texas Government Code Section 423.009 restricts these entities from implementing ordinances or measures related to drone operations, with exceptions for specific circumstances. These exceptions include the use of drone operations for:

- Special events,
- Governmental internal operations, and
- Areas near critical infrastructure, such as water treatment plants.

However, these activities require FAA authorization and must be preceded by a public hearing.

Local Regulations

Although federal authorities primarily oversee commercial drone operations, local governments, including cities, have limited control over specific aspects within their jurisdictions. They can regulate factors such as designated takeoff and landing areas, noise restrictions, and privacy

considerations. However, any local rules must comply with FAA regulations and cannot directly oppose or conflict with federal airspace authority.

City Administrative Regulation D-14

The City of Fort Worth has adopted Administrative Regulation (AR) D-14 which establishes citywide policies and procedures regarding the use of unmanned aerial systems. This policy applies to:

1. All unmanned aerial systems owned, provided and/or managed by the City of Fort Worth (City); and
2. All uses of unmanned aerial systems and services provided to the City under agreements with third-party vendors and service providers.

Land Use and Zoning

Zoning regulations applicable to drones primarily address the outdoor storage of equipment, similar to regulations for other types of outdoor storage. One drone delivery company, Wing, has partnered with Walmart to facilitate deliveries. As part of the approval process, the company had to designate an outdoor storage area on the site plan and position it so that it remains out of public view from the street.

Other Texas Cities

Municipalities in Texas have adopted different methods to accommodate commercial drone delivery hubs in their communities:

1. No regulations.
2. Defined as existing land use. (Use of drones can be considered an accessory or operate under a special use permit)
3. Adoption of a newly defined land use.

If you have any questions concerning these issues, please contact Roger Venables, Aviation Director at Roger.venables@fortworthtexas.gov. or Lashondra Stringfellow, ACIP, Assistant Director, Zoning and Design Review at lashondra.stringfellow@fortworthtexas.gov.

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