U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

August 6, 2015

Exemption No. 12374
Regulatory Docket No. FAA–2015–1952

Mr. Robert Bates
Foto Pros Studio
200 Grand Avenue
Spencer, IA 51301

Dear Mr. Bates:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

By letter dated May 13, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Foto Pros Studio (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography and videography.

See Appendix A for the petition submitted to the FAA describing the proposed operations and the regulations that the petitioner seeks an exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner.

Airworthiness Certification

The UAS proposed by the petitioner is a DJI Phantom 2 Vision+.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. In accordance with the statutory criteria provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 44704, and in consideration of the size, weight, speed, and limited operating area associated with the

aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that the requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection[1]. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA−2014−0352), 11109 to Clayco, Inc. (*see* Docket No. FAA−2014−0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA−2014−0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA−2014−0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

Having reviewed your reasons for requesting an exemption, I find that—

- They are similar in all material respects to relief previously requested in Grant of Exemption Nos. 11062, 11109, 11112, and 11213;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, and 11213 also apply to the situation you present; and
- A grant of exemption is in the public interest.

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, Foto Pros Studio is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

[1] Aerial data collection includes any remote sensing and measuring by an instrument(s) aboard the UA. Examples include imagery (photography, video, infrared, etc.), electronic measurement (precision surveying, RF analysis, etc.), chemical measurement (particulate measurement, etc.), or any other gathering of data by instruments aboard the UA.

Conditions and Limitations

In this grant of exemption, Foto Pros Studio is hereafter referred to as the operator.

Failure to comply with any of the conditions and limitations of this grant of exemption will be grounds for the immediate suspension or rescission of this exemption.

1. Operations authorized by this grant of exemption are limited to the DJI Phantom 2 Vision+ when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are not permitted.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.

5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.

6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed.

Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS−80) may be contacted if questions arise regarding updates or revisions to the operating documents.

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.

9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.

10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.

11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.

12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be

operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.

18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.

19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification

(N−Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

24. The UA must remain clear and give way to all manned aviation operations and activities at all times.

25. The UAS may not be operated by the PIC from any moving device or vehicle.

26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
    a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
    b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

    The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

27. All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.

28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS−80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.

30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
    a. Dates and times for all flights;
    b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
    c. Name and phone number of the person responsible for the on-scene operation of the UAS;
    d. Make, model, and serial or N−Number of UAS to be used;
    e. Name and certificate number of UAS PICs involved in the aerial filming;
    f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
    g. Signature of exemption holder or representative; and
    h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.

31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

Unless otherwise specified in this grant of exemption, the UAS, the UAS PIC, and the UAS operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

This exemption terminates on August 31, 2017, unless sooner superseded or rescinded.

Sincerely,
/s/
John S. Duncan
Director, Flight Standards Service

Enclosures

Foto Pros Studio
200 Grand Ave.
Spencer, Iowa 51301
(712) 260-7148
fotopros@smunet.net

U. S. Department of Transportation Docket
Management System
1200 New Jersey Avenue SE
Washington, DC 20590

Re: Exemption Request Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations from 14 C.F.R. 45.23(b);14 CFR Part 21;14 CFR 61.113 (a) & (b); 13 C.F.R. 61.133(a); 91.7 (a);91.9 (b) (2);91.103(b); 91.109;91.119; 91.121; 91.151(a);91.203(a) & (b);91.405 (a); 91.407(a) (1); 91.409 (a) (2);91.417 (a) & (b).

Dear Sir(s)/Madam(s):

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 ("**Reform Act**") and 14 C.F.R. Part 11, Foto Pros Studio, an Iowa company, the operator of a DJI *Phantom 2* Vision+ V3.0 ("**UA**"), seeks an exemption from the Federal Aviation Regulations ("**FARs**") as listed and discussed below.

Foto Pros Studio team has flown its UA, for recreational/hobby purposes, for hundreds of hours without incident.
Foto Pros Studio UA is equipped to take aerial videography and photography to enhance awareness for those individuals and companies unfamiliar with the geographical layout of certain areas and augment real estate listings and promote the use of certain real estate properties which provides an enhancement to academic research being performed in certain geographical areas ("**purpose**").

Foto Pros Studio exemption request will permit the operation of comparatively inexpensive UAs in tightly controlled, predetermined and limited airspace. This

airspace will include areas away from general public, airports, heliports and vehicular traffic for community videos, and within property boundaries for real estate listing videos and photos. Currently, similar lightweight, remote controlled UAs are legally operated by unmonitored and untrained amateur hobbyists with no safety plan or controls in place to prevent catastrophic events. Foto Pros Studio has safety protocols and controls in place to avoid and prevent public hazards as well as preventing the interference with manned aircraft which could cause a hazard or catastrophe. This acts to enhance safety protocols unique to Foto Pros Studio lightweight UAs being utilized specifically for real estate/commercial videography and photography. Foto Pros Studio hopes to be able to record flight data and other information gained through permitted flight operations which may be shared with the FAA through any required FAA reports to assist with the development of future FAA protocols and safety regulations.

The use of Foto Pros Studio UAs for these purposes reduces the need to operate conventional aircraft, typically needed to perform these types of operations, provides an economic benefit to the business consumer as the Foto Pros Studio UAs provides higher quality imagery at a fraction of the cost of aerial videography and photography using conventional aircraft. These savings result in not only enhanced efficiency and productivity for the affected activities but added environmental and safety benefits to the public at large.

As described more fully below, Foto Pros Studio requested exemption would authorize commercial operations of aerial videography and photography, using Foto Pros Studio UAs, which will be operated under controlled conditions at an altitude of no greater than three hundred (400) feet AGL in airspace that is limited in scope and will have automated control features. Foto Pros Studio UAs will also be operated by an individual who has passed an FAA approved ground training exam, if required by the FAA. The primary operator Robert Bates is also an FAA licensed private pilot. As outlined below, the airspace in which Foto Pros Studio UAs will operate within will be disclosed to the FAA in advance to flight operation. Finally, Foto Pros Studio UAs will be used in lieu of comparatively hazardous operations now conducted with fixed wing and rotary conventional aircraft which should reassure the FAA that these operations will achieve at least an equivalent level or greater level of safety.

In the interest of economic efficiency and public safety, Foto Pros Studio hereby respectfully applies for an exemption from the listed FARs to allow commercial operations of Foto Pros Studio UAs, so long as such operations are conducted within and under the conditions outlined herein or as may be established by the FAA as required by Section 333. Approval of this exemption would thereby enhance safety and fulfill the Secretary of Transportation's ("**Administrator**") responsibilities under Section 333(c) of the Reform Act to

Foto Pros Studio, 200 Grand Ave., Spencer, Iowa 51301
Phone: (712) 260-7148

"establish requirements for the safe operation of such aircraft systems in the national airspace system."

As discussed above and more fully described below, the requested exemption would permit the operation of small, unmanned and relatively inexpensive UAs under controlled conditions in airspace that is limited and predetermined. Approval of this exemption would thereby enhance safety and fulfill the Administrator responsibilities to "…establish requirements for the safe operation of such aircraft systems in the national airspace system." Please see Section 333(c) of the Reform Act.

Additionally, the FAA has already granted a previous exemption which is essentially identical to the exemption being sought by Foto Pros Studio. Please see FAA Exemption No. 11138.

The name and address of the applicant is:

Robert Bates dba Foto Pros Studio
200 Grand Ave.
Spencer, Iowa 51301
(712) 260-7148

REGULATIONS FROM WHICH THE EXEMPTION IS REQUESTED

14 C.F.R. Part 21
14 C.F.R. 45.23(b)
14 C.F.R. 61.113(a) & (b)
13 C.F.R. 61.133(a)
14 C.F.R. 91.7(a)
14 C.F.R. 91.9(b)(2)
14 C.F.R. 91.103
14 C.F.R. 91.109
14 C.F. R. 91.119
14 C.F.R. 91.121
14 C.F.R. 91.151(a)
14 C.F.R. 91.203(a) & (b)
14 C.F.R. 91.405(a)
14 C.F.R. 91.407(a)(1)
14 C.F.R. 91.409(a)(2)

14 C.F.R. 91.417(a) & (b)

This exemption application is expressly submitted to fulfill Congress' goal in passing Section 333(a) through (c) of the Reform Act. This law directs the Secretary of Transportation to consider whether certain unmanned aircraft systems may operate safely in the national airspace system (NAS) before completion of the rulemaking required under Section 332 of the Reform Act. In making this determination, the Secretary is required to determine which types of UAs do not create a hazard to users of the NAS or the public or pose a threat to national security in light of the following:

- The UA's size, weight, speed, and operational capability;
- Operation of the UAs in close proximity to airports and populated areas; and
- Operation of the UAs within visual line of sight ("**VLOS**") of the operator.

Reform Act § 333 (a).

Lastly, if the Secretary determines that such vehicles "may operate safely in the national airspace system, the Secretary shall establish requirements for the safe operation of such aircraft in the national airspace system." Id. §333(c) (emphasis added).[1]

The Federal Aviation Act expressly grants the FAA the authority to issue exemptions. This statutory authority by its terms includes exempting civil aircraft, as the term is defined under §40101 of the Act, which includes UAs, from the requirement that all civil aircraft must have a current airworthiness certificate.

The Administrator may grant an exemption from a requirement of a regulation prescribed under subsection (a) or (b) of this section or any sections 44702-44716 of this title if the Administrator finds the exemption in the public interest. 49 U.S.C. §44701(f). See also 49 USC §44711(a); 49 USC §44704; 14 CFR §91.203 (a) (1).

Foto Pros Studio UAs are rotorcraft weighing less than five (5) pounds (2.26796 Kg) including energy source(s), equipment and any payload. They operate, under normal conditions at a ground speed of no more than thirty (30) knots and have the capability to hover, and move in the vertical and horizontal plane simultaneously. The UAs will operate only in line of

[1] Foto Pros Studio interprets this provision to place the duty on the Administrator to not only process applications for exemptions under section 333, but for the Administrator to craft conditions for the safe operation of the UA, if it should be determined that the conditions set forth herein do not fulfill the statutory requirements for approval. [3] Reform Act Section 333 (b).

Foto Pros Studio, 200 Grand Ave., Spencer, Iowa 51301
Phone: (712) 260-7148

sight and within safe. Such operations will insure that the UA will "not create a hazard to users of the national airspace system or the public."[3]

Given the small size of the UAs involved and the restricted environment within which they will operate, Foto Pros Studio falls squarely within that zone of safety (an equivalent level of safety) in which Congress envisioned that the FAA must, by exemption, allow commercial operations of UAs to commence immediately. Also due to the size of the UAs and the restricted areas in which the relevant UAs will operate, approval of the application presents no national security issue. Given the clear direction in Section 333 of the Reform Act, the authority contained in the Federal Aviation Act, as amended; the strong equivalent level of safety surrounding the proposed operations, and the significant public benefit, including enhanced safety, reduction in environmental impacts, including reduced emissions associated with allowing UAs for aerial videography and photography operations, the grant of the requested exemptions is in the public interest. Additionally, there is economic efficiency created with the use of Foto Pros Studio UAs as the typical cost to perform aerial videography and photography with helicopters and airplanes heavily multiplies the cost to business consumers and government agencies, including law enforcement, for the services which are to be provided by Foto Pros Studio.

THE EXTENT AND BASIS OF THE RELIEF SOUGHT BY FOTO PROS STUDIO

Foto Pros Studio submits this application in accordance with the Reform Act, 112 P.L. 95 §§ 331-334, seeking relief from any currently applicable FARs operating that presently prevents Foto Pros Studio from contemplated commercial video-graphic, photographic and other flight operations within the national airspace system. The Reform Act in Section 332 provides for such integration of civil unmanned aircraft systems into our national airspace system as it is in the public's interest to do so. Foto Pros Studio UAs meet the definition of "small unmanned aircraft" as defined in Section 331 and therefore the integration of Foto Pros Studio ultralight weight UAs is expressly contemplated by the Reform Act. Foto Pros Studio would like to operate its ultralight weight UAs prior to the time period by which the Reform Act requires the FAA to promulgate rules governing such craft. Thereby, providing direct experience and valuable information for formal regulation that can be administered uniformly to all real estate related UA aerial videography and photography. The Reform Act guides the Administrator in determining the types of UAs that may operate safely in our national airspace system. These considerations include: weight, size, speed and overall capabilities of the UAs; whether the UAs will be operated near airports or heavily populated areas and; whether the UAs will be operated by line of sight.[4] Each of these items is favorable to the grant of an exemption to Foto Pros Studio. Foto Pros Studio UAs utilize four (4) counter-rotating propellers for balance, control and stability. Foto Pros Studio UAs are equipped with GPS and auto return safety technology. Foto Pros Studio UAs weigh less than five (5) pounds including camera and gimbal assembly.

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Phone: (712) 260-7148

[4] 112 P.L. 95 § 333 (a).

Foto Pros Studio puts safety first when considering any UA flight. Foto Pros Studio small UAs are designed to hover in place via GPS and operate in less than a 24 knot (27 mph) wind. In order to increase safety plus stability and limit harm and financial loss of property, Foto Pros Studio will not fly its UAs in winds exceeding 15 knots (17 mph). Foto Pros Studio established safety systems include a GPS mode that allows its UAs to hover in place when radio controls are released. Foto Pros Studio UAs have three modes to choose from, Foto Pros Studio utilizes the Intelligent Orientation Control (IOC) Flight (with GPS & compass module)[5] for aerial videography and photography. This mode is the safest, most reliable and stable mode to prevent accidents and being a hazard to others. When pilot communication is lost, Foto Pros Studio UAs are designed to return then slowly descend to the point of takeoff. Foto Pros Studio does not operate its UAs near airports, hospitals, police heliports or news channel heliports. Foto Pros Studio does not operate its UAs in areas where general public is within fifty (50) to one hundred (100) yards depending on location, conditions and weather. Foto Pros Studio pilots and observers are constantly on alert for any manned aircraft and prepared to immediately abort and land the UA at the nearest and safest ground point in the event a manned aircraft approaches or the Foto Pros Studio pilot or observer suspects a manned aircraft may approach the operating area of a Foto Pros Studio UA. Foto Pros Studio UAs are capable of vertical and horizontal operations, and are flown only within my line of sight of the pilot. Foto Pros Studio UA flights generally last fifteen (15) minutes with an altitude under three hundred (300) and utilize battery power rather than combustible fuels. Foto Pros Studio does not operate its UAs below the manufacturer's recommended minimum charge levels for operation preferring to remain well within a safe operating range to insure adequate communication between radio control and the UAs to eliminate potential for crashes, loss of control or hazard. Fully charged reserve batteries are on hand with to insure replacement for a sufficiently safe level of operation. Foto Pros Studio operates very conservatively and does believe in taking risks that may cause a crash or that could create hazard to the public, property and manned aircraft. Foto Pros Studio pilots have logged numerous practice flights in order to simulate flights for future commercial use to gain familiarization with the characteristics of this specific UA's performance under different temperature and weather conditions. Once again the primary operator Robert Bates is also an FAA licensed private pilot.

Foto Pros Studio is extremely cautious when operating of its UAs and will not "create a hazard to users of the national airspace system or the public."[6] Given the small size

and weight of Foto Pros Studio UAs, they fall well within Congress's contemplated safety zone when it promulgated the Reform Act and the corresponding directive to integrate UAs into the national airspace system. Foto Pros Studio UAs, utilized in hobby flight, has a demonstrable safety record and do not pose any threat to the general public or national security.

[5] Intelligent Orientation Control (IOC) Flight (with GPS & compass module) includes safe circle for operation, position hold, self-leveling, altitude command, GPS, return home feature, and safety control to return home or land in the event of communication interruption between RC transmitter and UAS. See Exhibit "1" – DJI Phantom2Vision+http://download.dji-innovations.com/downloads/phantom_2_vision_plus/en/Phantom_2_Vision_Plus_User_Manual_v1.6_en.pdf. [6] 112 P.L. 95 § 333 (b).

FOTO PROS STUDIO REQUEST WILL BENEFIT THE PUBLIC AT LARGE

Aerial videography and photography for geographical awareness and for commercial/real estate marketing and promotion has been around for a long time through the use of manned fixed wing aircraft and helicopters. The challenge for smaller real estate companies and average landowners is that the expense related to manned videography and photography is cost prohibitive. Typically, only large businesses, large high end real estate companies and high net worth landowners are able to absorb such an enormous expense. This deprives non-luxury landowners and small revenue real estate companies from the enjoying the benefit of this valuable marketing and promotional tool. Manned aircraft pose a clear threat to the general public through potential catastrophic crashes that may occur. There are many documented events where a manned aircraft has crashed into populated areas with the size and combustibility of these manned aircraft causing large property damage, human injuries and loss of life. Foto Pros Studio UAs pose no such threat since size and lack of combustible fuel alleviates any of these potential threat to the public.

With the passage of the Reform Act, Congress has already proclaimed that it is in the public's interest to integrate commercially flown UAs into the national airspace system. The grant of the exemption request by Foto Pros Studio furthers the public interest through academic and visual awareness of the geographical benefits of certain areas and by making this cost effective alternative available to small real estate companies and the average landowner. Foto Pros Studio ultralight UAs are battery powered and create no emissions that may harm the environment. In the unlikely event of a Foto Pros Studio UA crash, the consequence is far less than a full size helicopter or fixed wing aircraft, which are heavy and contain combustible fuel, crashing and causing catastrophic devastation to the public.

The public's interest is furthered as Foto Pros Studio minimizes ecological and crash

Foto Pros Studio, 200 Grand Ave., Spencer, Iowa 51301
Phone: (712) 260-7148

threat by permitting aerial videography and photography captured through Foto Pros Studio battery operated ultralight UA's. Permitting Foto Pros Studio to immediately fly within national air space furthers not only public safety but economic growth. Granting Foto Pros Studio exemption request substantially furthers the economic impact for any community and for companies looking to relocate or build in a certain community as well as individuals looking to relocate to a community for career advancement through academic and geographical awareness provided by Foto Pros Studio. In the end, the granting of this exemption to Foto Pros Studio will serve as a benefit and stimulus to any community.

FOTO PROS STUDIO EXEMPTION WILL NOT ADVERSELY AFFECT SAFETY AND WILL PROVIDE A LEVEL OF SAFETY AT LEAST EQUAL TO EXISTING FAA STANDARDS

Foto Pros Studio exemption will not adversely affect safety, as it will in fact enhance safety. Foto Pros Studio ability to log significant, controlled and monitored flight time in FAA controlled airspace will allow Foto Pros Studio to contribute to the innovation and implementation of new, novel and undiscovered safety protocols for realtors that may be embraced by the NAR[2] through consistent and ongoing cooperation with the FAA. Additionally, the FAA may utilize the new safety protocols for the use of UAs in FAA controlled airspace for all industries.

Foto Pros Studio submits the following representations of enhancements to current aerial videography and photography:

- Foto Pros Studio UAs weigh less than 5 pounds (2.26796 Kg) complete with the camera and gimbal assembly;
- Foto Pros Studio will only operate its UAs below three hundred (300) feet which is well within the four hundred (400) feet ceiling having been established by the Reform Act of 2012;
- Foto Pros Studio UAs only operate for fifteen (15) minutes per flight; Foto Pros Studio lands its UAs prior to manufacturer's recommended minimum level of battery power;
- Foto Pros Studio pilots operate the UAs through Visual Line of Sight only;

[2] National Association of Realtors, http://www.realtor.org/

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- Foto Pros Studio UAs have a GPS flight safety feature whereby the UA hovers and then slowly lands if communication with the pilot is lost;
- Foto Pros Studio actively analyzes its flight data and other sources of information to constantly update and enhance its safety protocols;
- Foto Pros Studio only operates in reasonably safe environments which are strictly controlled and away from power lines, elevated lights, airports and actively populated areas;
- Foto Pros Studio conducts extensive pre-flight inspections and protocol to ensure safety remains the primary concern;
- Foto Pros Studio always obtains all necessary permissions from the FAA and landowners prior to the operation its UAs and;
- Foto Pros Studio has established safety procedures in place to abort flights in the event of safety breaches or any potential danger.

Foto Pros Studio safety protocols provide a level of safety equal to or exceeding existing FAA rules. It is important to note that absent the integration of commercial UAs into our national airspace system, manned fixed wing airplanes and helicopters are the primary means of aerial videography and photography for community awareness and real estate uses. While the safety record of such helicopters is outstanding, there have been incidents involving loss of life as well as extensive property damage due to crashes of these manned aircraft and it is far safer and less expensive to operate a battery powered Foto Pros Studio ultralight UAs to accomplish the same task. The potential for loss of life is great diminished with a UA as Foto Pros Studio UAs carry no people or fuel on board and the UAs are also very small and versatile which allows Foto Pros Studio to avoid hazards quickly and safely.

Accordingly, Foto Pros Studio respectfully requests that the FAA grant the requested exemption without delay.

AIRCRAFT AND EQUIVALENT LEVEL OF SAFETY

Foto Pros Studio proposes that the exemption requested herein apply to civil aircraft that have the characteristics and that operate with the limitations listed herein. These limitations provide for at least an equivalent or even higher level of safety to operations under the current regulatory structure because the proposed operations represent a safety enhancement to the operations conducted with conventional aircraft. The FAA has noted in past exemptions that "Conventional aerial video operations, using jet or piston-powered aircraft present risks associated with aircraft that weigh in the neighborhood of 5,000 to 7,000 pounds or more, carry large

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quantities of fuel, passengers, and, in some cases, cargo. Such aircraft must fly to and from the survey location. Please see FAA Exemption 11110.

These limitations and conditions to which Foto Pros Studio agrees to be bound when conducting all operations under an FAA issued exemption include:

1. The UAs will weigh less than five (5) pounds (2.26796 Kg).
2. Maximum total flight time for each operational flight will be fifteen (15) minutes. Flights will be terminated at thirty percent (30%) battery power reserve should that occur prior to the fifteen (15) minute limit.
3. Flights will be operated at an altitude of no more than three hundred (300) feet AGL.
4. Minimum crew for each operation will consist of the UA Pilot and a Visual Observer ("**VO**").
5. The UAs will only operate within a safe area.
6. A briefing will be conducted with regard to the planned UA operations prior to flight operations. It will be mandatory that all personnel who will be performing duties with regard to the flight operations be present for this briefing.
7. The Pilot and VO will have been trained in operation of UAs generally and received up-to-date information on the particular UA to be operated and the UA will be operated in conformity with Foto Pros Studio protocols.
8. The PILOT and VO will at all times be able to communicate via voice communication.
9. Written and/or oral permission from the relevant property holder(s), or their authorized representative(s), will be obtained.
10. All required permissions and permits will be obtained from territorial, state, county or city jurisdictions, including local law enforcement, fire, or other appropriate governmental agencies.
11. If the UA loses communications or loses its GPS signal, the UA will return to the launch site of the UA, or another more appropriate site, and land.
12. The UA will have the capability to abort a flight in case of unpredicted obstacles or emergencies.

14 C.F.R. PART 21, SUBPART H: AIRWORTHINESS CERTIFICATES 14 C.F.R. §91.203 (A) (1)

Subpart H, entitled Airworthiness Certificates, establishes the procedural requirements for the issuance of airworthiness certificates as required by FAR §91.203 (a) (1). Given the size and limited operating area associated with the aircraft to be utilized by Foto Pros Studio, an exemption from Part 21 Subpart H meets the requirements of an equivalent level of safety under

Part 11 and Section 333 of the Reform Act. The Federal Aviation Act (49 U.S.C.§44701 (f)) and Section 333 of the Reform Act both authorize the FAA to exempt aircraft from the requirement for an airworthiness certificate, upon consideration of the size, weight, speed, operational capability, and proximity to airports and populated areas of the particular UA. In all cases, an analysis of these criteria demonstrates that the UA operated without an airworthiness certificate, in the restricted environment and under the conditions proposed will be at least as safe, or safer, than a conventional aircraft (fixed wing or rotorcraft) operating with an airworthiness certificate without the restrictions and conditions proposed.

The UAs to be operated hereunder is less than five (5) pounds (2.26796 Kg) fully loaded, carries neither a pilot nor passenger, carries no explosive materials or flammable liquid fuels, and operates exclusively within a secured area. Unlike other civil aircraft, operations under this exemption will be tightly controlled and monitored by both the operator, and under the requirements and in compliance with local public safety requirements, to provide security for the area of operation as is now done with conventional aerial videography and photography. Lastly, application of these same criteria demonstrates that there is no credible threat to national security posed by the UAs, due to its size, speed of operation, location of operation, lack of explosive materials or flammable liquid fuels, and inability to carry a substantial external load.

14 C.F.R. § 45.23 (B). MARKING OF THE AIRCRAFT

The regulation requires:

> When marks include only the Roman capital letter "N" and the registration number is displayed on limited, restricted or light-sport category aircraft or experimental or provisionally certificated aircraft, the operator must also display on that aircraft near each entrance to the cabin, cockpit, or pilot station, in letters not less than 2 inches nor more than 6 inches high, the words "limited," "restricted," "light-sport," "experimental," or "provisional," as applicable.

Even though the UAs will have no airworthiness certificate, an exemption may be needed as the UAs will have no entrance to the cabin, cockpit or pilot station on which the words "limited," "restricted," "light-sport," "experimental," or "provisional," may be placed. Given the size of the UAs, two-inch lettering will be impossible. The word “experimental,” or any other term as is so required, will be placed on the fuselage of the UAs in compliance with §45.29 (f).

The equivalent level of safety will be provided by having the UAs marked on its fuselage as required by §45.29 (f) where the pilot, observer and others working with the UAs will see the identification of the UAs as “Experimental.” The FAA has issued the following exemptions to this regulation to Exemptions Nos. 10700, 8738, 10167 and 10167A.

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14 C.F.R. § 61.113(A) & (B); 61.133(A): PRIVATE PILOT PRIVILEGES ANDLIMITATIONS: PILOT IN COMMAND: COMMERCIAL PILOT PRIVILEGES AND LIMITATIONS: PILOT IN COMMAND

Section 61.113(a) & (b) limit private pilots to non-commercial operations. Unlike a conventional aircraft that carries a pilot, passengers, and cargo, the UA in this case is remotely controlled with no passengers or property of others on board. Section 61.133(a) requires an individual with a commercial pilot's license to be pilot in command of an aircraft for compensation or hire. Foto Pros Studio respectfully proposes that operator requirements should take into account the characteristics of the particular UA. Foto Pros Studio UAs have various built-in technical capabilities that strictly limit the potential for operation outside of the operating conditions set forth in the exemption application including a fly back to launch point to terminate the flight. Since hobbyists are not required to have a pilot license, Foto Pros Studio requests exemption for the need of the pilot to be licensed as a pilot by the FAA.

- Detection of lost GPS or of insufficient satellites initiates an immediate return to launch location.
- Low power on the aircraft triggers escalating alarms at 30% and 15% levels.
- The aircraft weighs less than five (5) pounds (2.26796 Kg), fully loaded.

Given these safety features, Foto Pros Studio proposes that operators of the UAs should only be required to hold a private pilot's license and not a commercial pilot's license. The primary operator Robert Bates is an FAA licensed private pilot.

Foto Pros Studio notes that the FAA has found that safety factors permitted operation of UAs by operators with these qualifications in the case of operations pursuant to public COAs where the mandatory operating conditions specified above are present. Please see Federal Aviation Administration, Notice N-8900.227, Unmanned Aircraft Systems (UAS) Operational Approval, at 20-21 (July 30, 2013). The FAA has the statutory authority, granted at 49 U.S.C.§44701(f) to waive the pilot requirements for commercial operations.

Given these conditions and restrictions, an equivalent level of safety will be provided by allowing operation of Foto Pros Studio UAs without a commercial pilot's license, under the conditions set forth herein.

The risks associated with the operation of Foto Pros Studio UAs (given its size, speed, operational capabilities, and lack of combustible fuel) are so diminished from the level of risk

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associated with private pilot operations or commercial operations contemplated by Part 61 with conventional aircraft (fixed wing or rotorcraft), that allowing operations of the UAs as set forth above meets or exceeds the present level of safety provided under 14 C.F.R. § 61.113(a) & (b) and does not rise to the level of requiring a commercial pilot to operate the aircraft under §61.133(a).

Sections 61.113 (a) & (b) limit private pilots to non-commercial operations. Because the UAs will not carry a pilot or passengers, the proposed operations can achieve the equivalent level of safety of current operations by requiring the PILOT operating the aircraft to have a private pilot's license rather than a commercial pilot's license to operate these small UAs. Unlike a conventional aircraft that carries the pilot and passengers, the UAs are remotely controlled with no living thing on board. The area of operation is controlled and restricted, and all flights are planned and coordinated in advance. The level of safety provided by Foto Pros Studio exceeds that provided by a single individual holding a commercial pilot's certificate operating a conventional aircraft. The risks associated with the operation of the UAs are so diminished from the level of risk associated with commercial operations contemplated by Part 61 when drafted, that allowing operations of the UAs as requested with a private pilot as the PILOT exceeds the present level of safety achieved by 14 C.F.R. §61.113 (a) & (b).

14 C.F.R. §91.7(A): CIVIL AIRCRAFT AIRWORTHINESS

The regulation requires that no person may operate a civil aircraft unless it is in airworthy condition. As there will be no airworthiness certificate issued for the aircraft, should this exemption be granted, no FAA regulatory standard will exist for determining airworthiness. Given the size of the aircraft and the requirements for maintenance and use of safety check lists prior to each flight.

14 C.F.R. § 91.9 (B) (2): CIVIL AIRCRAFT FLIGHT MANUAL IN THE AIRCRAFT

Section 91.9 (b) (2) provides:

> No person may operate a U.S. registered civil aircraft …
>
> (2) For which an Airplane or Rotorcraft Flight Manual is not required by §21.5 of this chapter, unless there is available in the aircraft a current approved airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof.

The UAs, given their size and configuration has no ability or place to carry such a flight manual on the aircraft, not only because there is no pilot on board, but because there is no room or capacity to carry such an item on the aircraft.

The equivalent level of safety will be maintained by keeping at the ground control point where the pilot flying the UAs will have immediate access to it. The FAA has issued the following exemptions to this regulation: Please see FAA Exemption Nos. 8607, 8737, 8738, 9299, 9299A, 9565, 9565B, 10167, 10167A, 10602, 32827, and 10700.

14 C.F.R. § 91.103: PREFLIGHT ACTION

This regulation requires each pilot in command to take certain actions before flight to insure the safety of flight. As FAA approved rotorcraft flight manuals will not be provided for the aircraft an exemption will be needed. An equivalent level of safety will be provided. The PILOT will take all actions including reviewing weather, flight battery requirements, landing and takeoff distances and aircraft performance data before initiation of flight.

14 C.F.R. §91.109: FLIGHT INSTRUCTION

Section 91.109 provides that no person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functioning dual controls.

UAs and remotely piloted aircraft, by their design do not have fully functional dual controls. Flight control is accomplished through the use of a control box that communicates with the aircraft via radio communications. The FAA has approved exemptions for flight training without fully functional dual controls for a number of aircraft and for flight instruction in experimental aircraft. Please see FAA Exemption Nos. 5778K & 9862A. The equivalent level of safety is provided as neither a pilot nor passengers will be carried in the aircraft and by the size and speed of the aircraft.

14 C.F.R. §91.119: MINIMUM SAFE ALTITUDES

Section 91.119 establishes safe altitudes for operation of civil aircraft. Section 91.119(d) allows helicopters to be operated at less than the minimums prescribed, provided the person operating the helicopter complies with any route or altitudes prescribed for helicopters by the FAA. As this exemption is for UAs that are a helicopter and the exemption requests authority to operate at altitudes up to three hundred (300) feet AGL, an exemption may be needed to allow such operations. As set forth herein, except for the limited conditions, the UAs will never operate at higher than three hundred (300) feet AGL. It will however be operated in a restricted area with

security perimeter, where buildings and people will not be exposed to operations without their pre-obtained consent.

The equivalent level of safety will be achieved given the size, weight, speed of the UAs as well as the location where it is operated. No flight will be taken without the permission of the property owner or local officials. Because of the advance notice to the property owner(s), or their authorized representative(s), all affected individuals will be aware of the planned flight operations. When one compares the flight operations proposed herein with aircraft or rotorcraft weighing far in excess of the less than five (5) pounds (2.26796 Kg) and the lack of flammable fuel, any risk associated with these proposed operations is far less than those presently presented with conventional aircraft operating at or below five hundred (500) feet AGL. In addition, the low-altitude operations of the UAs will ensure separation between these small UAs operations and the operations of conventional aircraft that must comply with Section 91.119.

14 C.F.R. §91.121 ALTIMETER SETTINGS

This regulation requires each person operating an aircraft to maintain cruising altitude by reference to an altimeter that is set "…to the elevation of the departure airport or an appropriate altimeter setting available before departure." As the UA may not have a barometric altimeter, but instead a GPS altitude read out, an exemption may be needed. An equivalent level of safety will be achieved by the operator, confirming the altitude of the launch site shown on the GPS altitude indicator before flight.

14 C.F.R. § 91.151(A): FUEL REQUIREMENTS FOR FLIGHT IN VFR CONDITIONS

Section 91.151 (a) prohibits an individual from beginning "a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing, and, assuming normal cruising speed – (1) During the day, to fly after that for at least 30 minutes; or (2) At night, to fly after that for at least 45 minutes."

Foto Pros Studio believes that an equivalent level of safety can be achieved by limiting flights to fifteen (15) minutes or thirty percent (30%) of battery power whichever happens first. This restriction would be more than adequate to return the UAs to their planned landing zone from anywhere in its limited operating area.

Similar exemptions have been granted to other operations, including Exemptions 2689F, 5745, 10673, and 10808.

14 C.F.R. §91.203 (A) AND (B): CARRYING CIVIL AIRCRAFT CERTIFICATION AND REGISTRATION

The regulation provides in pertinent part:

(a) Except as provided in § 91.715, no person may operate a civil aircraft unless it has within it the following:

(1) An appropriate and current airworthiness certificate. . . .

(b) No person may operate a civil aircraft unless the airworthiness certificate required by paragraph (a) of this section or a special flight authorization issued under §91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew.

The UAs fully loaded weight is no greater than five (5) pounds (2.26796 Kg) and is operated without an onboard pilot. As such, there is no ability or place to carry certification and registration documents or to display them on the UA.

An equivalent level of safety will be achieved by keeping these documents at the ground control point where the pilot flying the UA will have immediate access to them to the extent they are applicable to the UA. The FAA has issued numerous exemptions to this regulation. A representative sample of other exceptions includes Exemption Nos. 9565, 9665, 9789, 9789A, 9797, 9797A, 9816A, and 10700.

14 C.F.R. §91.405 (A); 407 (A) (1); 409 (A) (2); 417(A) & (B): MAINTENANCE INSPECTIONS

These regulations require that an aircraft operator or owner "shall have that aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter...," and others shall inspect or maintain the aircraft in compliance with Part 43.

Given that these section and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to Foto Pros Studio. Maintenance will be accomplished by the operator pursuant to the flight manual and operating handbook. An equivalent level of safety will be achieved because these small UAs are very limited in size and will carry a small payload and operate only in restricted areas for limited periods of time. If mechanical issues arise the UAs may land immediately and will be operating from no higher than three-hundred (300) feet AGL.

The operator will ensure that the UAs are in working order prior to initiating flight, perform required maintenance, and keep a log of any maintenance performed. Moreover, the operator is the person most familiar with the aircraft and best suited to maintain the aircraft in an airworthy condition to provide the equivalent level of safety.

****

Pursuant to 14 C.F.R. Part 11, the following summary is provided for publication in the Federal Register, should it be determined that publication is needed:

Foto Pros Studio seeks an exemption from the following rules:

14 C.F.R. §21, subpart H; 14 C.F.R 45.23(b);14 C.F.R. §§ 61.113(a) & (b);91.7 (a); 91.9 (b) (2);91.103(b);91.109; 91.119; 91.121; 91.151(a);91.203(a) and (b); 91.405 (a); 91.407 (a) (1); 91.409 (a) (2); 91.409 (a) (2) and 91.417 (a) & (b) to operate commercially a small unmanned vehicle weighing less than fifty-five (55) pounds (25 Kg) in its operations.

Approval of exemptions allowing commercial operations of UAs in the purposes outlined above (or similar operations) will enhance safety by reducing risk. Conventional aerial videography and photography operations, using jet or piston power aircraft, operate at extremely low altitudes just feet from the object being photographed and often in extreme proximity to people and structures; and present the risks associated with vehicles that weigh in the neighborhood of four thousand (4,000) pounds, carrying large amounts of jet A or other fuel (one hundred and forty (140) gallons for jet helicopters). Such aircraft must fly to and from the site's location. In contrast, a UA weighing less than five (5) pounds (2.26796 Kg) pounds and powered by batteries eliminates virtually all of that risk given the reduced mass and lack of combustible fuel carried on board. The UA is carried to the site of the purposes outlined above (or similar operations) and not flown to the site. The UA will carry no passengers or crew and, therefore, will not expose them to the risks associated with manned aircraft flights.

The operation of small UAs, weighing less than five (5) pounds (2.26796 Kg), conducted in the strict conditions outlined above, will provide an equivalent level of safety supporting the grant of the exemptions requested herein, including exempting Foto Pros Studio from the requirements of Part 21 and allowing commercial operations. These lightweight aircraft operate at slow speeds, close to the ground, and in a sterile environment and, as a result, are far safer than conventional operations conducted with turbine helicopters operating in close proximity to the ground and people.

PRIVACY

All flights will occur over private, controlled or approved property with the property

owner's, or their authorized representative, prior consent and knowledge. The aerial videography and photography will be of structures and property whose owner, or authorized representative, has consented to the aerial videography and photography or otherwise have agreed to be in the area where aerial videography and photography will take place. The grant of this exemption request will provide improved safety in all operations.

Satisfaction of the criteria provided in Section 333 of the Reform Act of 2012 - size, weight, speed, operating capabilities, proximity to airports and populated areas and operation within visual line of sight and national security – provide more than adequate justification for the granting of the requested exemptions allowing commercial operation of Michael's Drone Photography's UAs.

SUMMARY OF FOTO PROS STUDIO REQUEST FOR AN FAA EXEMPTION

1. Foto Pros Studio UAs must weigh less than five (5) pounds (2.26796 Kg), including energy source(s) and equipment. Operations authorized by the grant of an exemption are limited to the following aircraft: Foto Pros Studio UA aircraft variant, bearing serial #PH645496608 V3.0 onward as additional UAs are utilized by Foto Pros Studio provided the additional UAs are of the same or similar specifications as the UA bearing serial #PH645496608 V3.0. Any proposed operations of any other aircraft will require a new petition or a petition to amend this grant.

2. Foto Pros Studio UAs may not be flown at a ground speed exceeding thirty (30) knots.

3. Foto Pros Studio flights must be operated at an altitude of no more than three hundred (300) feet above ground level (AGL), as indicated by the procedures. All altitudes reported to ATC must be in feet AGL.

4. Foto Pros Studio UAs must be operated within the VLOS of the PILOT at all times. This requires the PILOT to be able to use human vision unaided by any device other than corrective lenses.

5. All Foto Pros Studio operations must utilize a VO. The VO may be used to satisfy the VLOS requirement as long as the PILOT always maintains VLOS capability. The VO and PILOT must be able to communicate verbally at all times.

6. Prior to each flight the PILOT must inspect the UA to ensure it is in a condition for safe flight. If the inspection reveals a condition that affects the safe operation of the UA, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UA is

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found to be in a condition for safe flight. A Ground Control Station, if utilized, must be included in the preflight inspection. All maintenance and alterations must be properly documented in the aircraft records.

7. Any UA that has undergone maintenance or alterations that affect the UA's operation or flight characteristics, e.g. replacement of a flight critical component, must undergo a functional test flight. The PILOT who conducts the functional test flight must make an entry in the UA's aircraft records of the flight.

8. Foto Pros Studio must follow the manufacturer's UA aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements. When unavailable, aircraft maintenance/component/overhaul, replacement, and inspection/maintenance requirements must be established and identified. At a minimum, requirements for the following may be included in protocols and controls to be established by Foto Pros Studio:

a. Actuators/Servos;
b. Transmission (single rotor);
c. Power plant (motors);
d. Propellers;
e. Electronic speed controller;
f. Batteries;
g. Mechanical dynamic components (single rotor);
h. Remote command and control;
i. Ground control station (if used); and
j. Any other components as determined by Foto Pros Studio.

10. Prior to operations conducted for the purposes outlined above (or similar operations), the PILOT must have accumulated and logged, in a manner consistent with 14 CFR § 61.51(b), a minimum of twenty-five (25) hours of total time as a UA rotorcraft pilot (single blade or multi-rotor) and at least ten (10) hours logged as a UA pilot with multi-rotor UA which is similar to the UA to be utilized pursuant to this exemption. Prior documented flight experience that was obtained in compliance with applicable regulations may satisfy this requirement. Training, proficiency, and experience-building flights must be conducted under an exemption to accomplish the required flight cycles and flight time. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PILOT must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

11. Prior to operations conducted for the purposes outlined above (or similar operations), the PILOT must have accumulated and logged, in a manner consistent with 14 CFR § 61.51(b), a minimum of five (5) hours as a UA pilot operating the make and model of UAs to be utilized for operations under the exemption and three (3) take-offs and three (3) landings in the preceding ninety (90) days. Training, proficiency, experience-building, and take-off and landing currency flights can be conducted under the grant of exemption to accomplish the required flight time and ninety (90) day currency. During training, proficiency, experience-building, and take-off and landing currency flights all persons not essential for flight operations are considered nonparticipants, and the PILOT must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

12. Foto Pros Studio shall not permit the PILOT to operate the UAS for the purpose of aerial videography or photography (or similar operations), unless the PILOT has demonstrated and logged in a manner consistent with 14 CFR 61.51(b), the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures.

13. The UA may not be operated directly over any person, except authorized and consenting personnel and persons, below an altitude that is hazardous to persons or property on the surface in the event of a UA's failure or an emergency.

14. At all times, those persons must be essential to the purposes outlined above (or similar operations). Because these procedures are specific to participating persons, no further FSDO or aviation safety inspector approval is necessary for reductions to the distances specified in Foto Pros Studio manuals.

15. Foto Pros Studio flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:

a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately and/or;
b. The aircraft is operated near vessels, vehicles or structures where the owner/controller of such vessels, vehicles or structures has granted permission

and the PILOT has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard, and;

c. Operations nearer to the PILOT, VO, operator trainees or essential persons do not present an undue hazard to those persons per § 91.119(a).

16. If the UAs lose communications or loses its GPS signal, the UAs must return to a pre-determined location within the security perimeter and land or be recovered.

17. The UAs must abort the flight in the event of unpredicted obstacles or emergencies.

18. Each UA operation must be completed within fifteen (15) minutes flight time or with thirty percent (30%) battery power remaining, whichever occurs first.

19. Foto Pros Studio must obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations under this grant of exemption. This COA will also require Foto Pros Studio to request a Notice to Airman (NOTAM) not more than seventy-two (72) hours in advance, but not less than forty- eight (48) hours prior to the operation.

20. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N-Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

21. Foto Pros Studio has developed procedures to document and maintain a record of the UA's maintenance, preventative maintenance, alterations, status of replacement/overhaul component parts, and the total time in service of the UAs.

22. Each UA operated under this exemption must comply with all manufacturer Safety Bulletins.

23. The preflight inspection section in Foto Pros Studio Confidential Protocols and Controls Exhibit includes the following requirement: The preflight inspection must account for all discrepancies, i.e. inoperable components, items, or equipment, not covered in the relevant preflight inspection.

24. Before conducting operations, the radio frequency spectrum used for operation and control of the UA must comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

25. The documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PILOT at the Ground Control Station, if utilized, of the UA at any time the UA is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

26. Foto Pros Studio UAs must remain clear and yield the right of way to all other manned operations and activities at all times (including, but not limited to, ultralight vehicles, parachute activities, parasailing activities, hang gliders, etc.).

27. Foto Pros Studio UA operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

28. Foto Pros Studio UAs may not be operated by the PILOT from any moving device or vehicle.

29. Foto Pros Studio UAs may not be operated less than five-hundred (500) feet below or less than two-thousand (2,000) feet horizontally from a cloud or when visibility is less than three (3) statute miles from the PILOT.

30. Foto Pros Studio UA may not operate in Class B, C, or D airspace without written approval from the FAA. The UA may not operate within five (5) nautical miles of the geographic center of a non-towered airport as denoted on a current FAA-published aeronautical chart unless a letter of agreement with that airport's management is obtained, and the operation is conducted in accordance with a NOTAM as required by the Foto Pros Studio COA. The letter of agreement with the airport management must be made available to the Administrator upon request.

31. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UA Integration Office (AFS-80) within twenty-four (24) hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

32. Foto Pros Studio UAs, the UA's PILOT, and the UA's operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

As mentioned above, the FAA has already granted a previous exemption which is essentially identical to the exemption being sought by Foto Pros Studio in this petition for an exemption. Please see FAA Exemption No. 11138.

Therefore, Foto Pros Studio respectfully requests the FAA grant an exemption pursuant to its application as outlined above.

Sincerely,

Robert J. Bates,
Owner/Manager
Foto Pros Studio

Exhibit "1" Please see pages 24-28 below

Foto Pros Studio, 200 Grand Ave., Spencer, Iowa 51301
Phone: (712) 260-7148

Category A Safety Zone

(1) The category A "safety zone" is comprised of a small "no-fly zone" and a range of "restricted-altitude zones". Flight is prevented in the "no-fly zone" but can continue with height restrictions in the restricted-altitude zone.
(2) 1.5 miles (2.4 km) around a designated safety zone is a no-fly zone, inside which takeoff is prevented.
(3) 1.5 miles (2.4 km) to 5 miles (8 km) around restricted areas are altitude restricted, with maximum altitude going from 35 feet (10.5 m) at 1.5 miles (2.4 km) to 400 feet (120 m) at 5 miles (8 km).
(4) A "warning zone" has been set around the safety zone. When you fly within 320 feet (100m) of the safety zone, a warning message will appear on the DJI Vision app.

Category B Safety Zone

(1) Category B "safety zone" is comprised of a "no-fly zone" and a "warning zone".
(2) 0.6 miles (1 km) around the safety zone is a designated "no-fly zone".
(3) A "warning zone" has been set around the safety zone. When you fly within 0.6 miles (1Km) of this zone, a warning will appear on the DJI Vision app.

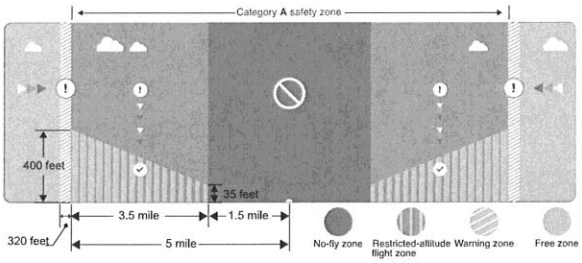


Figure 59:Category A

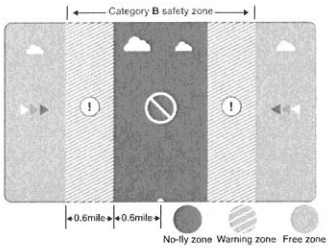


Figure 60: Category B

Ready to Fly Ⓖ ····· Green flashing			
Zone	Restriction	DJI VISION App Notification	Rear LED Flight Indicator
No-fly Zone	Motors will not start.	Warning: You are in a No-fly zone. Take off prohibited.	Ⓡ ····· Red flashing
	If the Phantom enters the restricted area in Ready to Fly (non-GPS) mode but Ready to Fly mode activates, the Phantom will automatically descend to land then stop its motors after landing.	Warning: You are in a No-fly zone, automatic landing has begun. (If you are within 1.5 mile radius)	
Restricted-altitude flight zone	If the Phantom enters a restricted area in Ready to Fly (non-GPS) mode and Ready to Fly mode activates, it will descend to a safe altitude and hover 15 feet below the safe altitude.	Warning: You are in a restricted zone. Descending to safe altitude. (If you are between the range of 1.5 mile and 5 mile radius) Warning: You are in a restricted zone. Max flight height restricted to between 10.5m and 120m. Fly Cautiously.	
Warning zone	No flight restriction applies, but there will be warning message.	Warning: You are approaching a restricted zone, Fly Cautiously.	
Free zone	No restrictions.	None.	None.

Semi-automatic descent: All stick commands are available except the throttle stick command during the descent and landing process. Motors will stop automatically after landing. Users must toggle the S1 switch to regain control. This is the same as regaining control during Failsafe. Please refer to Regaining Control During Failsafe Procedure (Page28).

- When flying in the safety zone, LED flight indicators will blink red Ⓡ ·····quickly and continue for 3 seconds, then switch to indicate current flying status and continue for 5 seconds at which point it will switch back to red blinking.
- For safety reasons, please do not fly close to airports, highways, railway stations, railway lines, city centers and other special areas. Try to ensure the aircraft is visible.

⚠ • When the Rear LED Flight Indicator blinks yellow rapidly during flight, the aircraft has entered Failsafe mode. Refer to Failsafe Function(Page 27) for details.
• A low battery level warning is indicated by the Rear LED Flight Indicator blinking red slowly or rapidly during flight. Refer to the Low Battery Level Warning Function(Page 28) for details.
• View tutorials about flight for more flight information:www.dji.com/phantom2visionplus/training.
• Aircraft and battery performance is subject to environmental factors such as air density and temperature. Be very careful when flying 3000 meters (9800 feet) or more above sea level, as battery and aircraft performance may be reduced.

3.2 Video Suggestions and Tips

(1) Work through the check list before each flight.
(2) Set the gimbal working mode to Stabilized.
(3) Aim to shoot when flying in Ready to Fly only.
(4) Always fly in good weather, such as sunny or windless days.
(5) Change camera settings to suit you. These include FOV, photo format and exposure compensation.
(6) Take flight tests to establish flight routes and scenes.
(7) Push the sticks gently to make aircraft movements stable and smooth.

4 Failsafe Function

The Phantom will enter Failsafe mode when its connection to the Remote Control is lost. The Flight Control System will automatically control the aircraft to return to home and land to prevent injury or damage.

Home Point: When the Phantom enters 'Ready to Fly' from the 'Ready to Fly status (non-GPS)', the GPS coordinates will be recorded and set as the home point.
• When Remote Control signal is lost, the aircraft will return to the recorded home point coordinates and land.
• Home point coordinates are used to calculate the horizontal distance of the aircraft (shown as "Distance" on the GUI of the DJI VISION App).
• After successfully record the home point, rear LED flight indicators blink fast green.
Dynamic Home Point: The Home point will be reset to position of the mobile device at specific time intervals.
• Enable dynamic home point in DJI Vision app or Phantom 2 Assistant.
• Dynamic home point is only available to the GPS-enabled mobile device. Turn on GPS and data service to obtain higher accuracy of the mobile device position.
• Dynamic home point is useful in situations when you are in motion and require a Home point that is different from the takeoff point.

4.1 When Will Failsafe Activate?

(1) The Remote Control is powered off.
(2) The Phantom has flown out of effective remote control range.
(3) The signal between the Remote Control and the Phantom has been blocked.
(4) There is interference causing a signal problem with the Remote Control.

4.2 Failsafe Procedure

Initiating the Failsafe mode from different flying statuses will results in different landing processes.
Ready to Fly(non-GPS)— Automatic landing
The Flight Control System will keep the aircraft level during descent and landing. It may be drift during the descent and landing process.
Ready to Fly— Automatic go home and land
The Flight Control System will automatically control the aircraft to fly back to the home point and land.

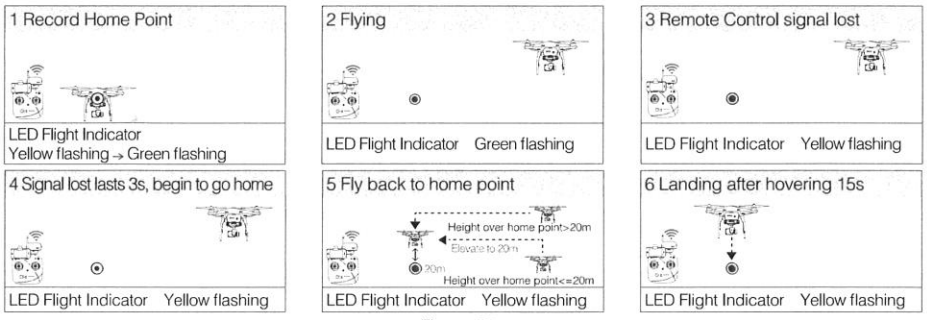


Figure 52

- To ensure the aircraft successful return to home after Failsafe activation, aim to only fly in Ready to Fly mode.
- The Phantom will automatically descend during the Failsafe process if there are less than 6 GPS satellites detected for more than 20 seconds.
- Aircraft cannot navigate around vertical obstacles on its return home course during Failsafe. However, you can set return home altitude value in Phantom Assistant to avoid hitting vertical obstacles through DJI Phantom Assistant.

Quickly flipping the S2 switch of the Remote Control from top to bottom 5 times or more will reset the current aircraft position as a new home point. Rear LED flight indicators will blink green rapidly when successful.

Failsafe on the DJI VISION App

The DJI VISION App will provide information during Failsafe.

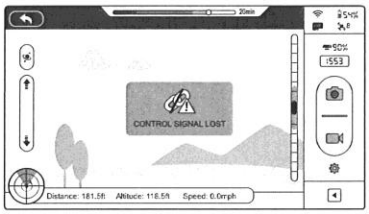


Figure 53

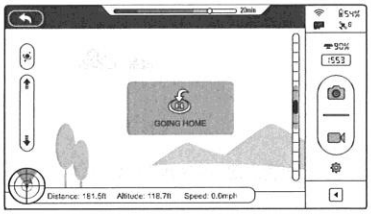


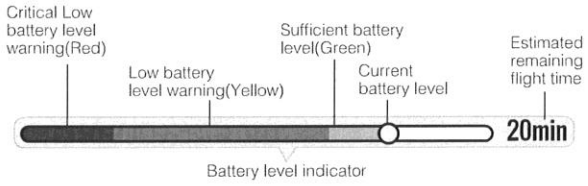
Figure 54

4.3 Regaining Control During Failsafe Procedures

Position of Switch S1	Position-1	Position-2	Position-3
How to regain control	When the S1 switch is switched to Position-1, toggle the S1 switch to any other position once to regain control. If the Remote Control signal is recovered, control is returned to the pilot.	Regain control as soon as signal is recovered.	

5 Low Battery Level Warning Function

If the DJI smart battery is depleted to a point that may affect the safe return of the aircraft, the low battery level warning notifies users to take action. Users are advised to land the aircraft immediately when they observe these warnings. The thresholds for these warnings are automatically determined based on the current aircraft altitude and its distance from the Home point. Details of the battery level warning are listed below:



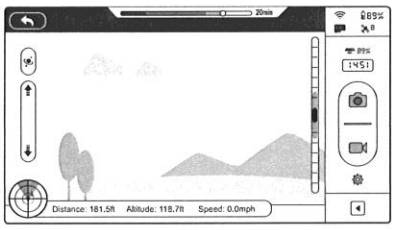
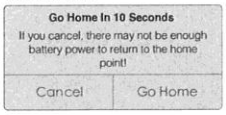


Figure 55

Battery Level Warning	Remark	Rear LED Flight Indicator	DJI VISION App	Flight Instructions
Sufficient battery level	Sufficient battery level	Green LED blinks slowly	No message prompts	Operating normally, no specific action needed
Low battery level warning	The battery power is low. Please land the aircraft.	Red LED blinks slowly.	When "Go-Home" is selected in the Phantom Assistant, this message will appear:  Tap "Go-home" to have the aircraft return to the Home point and land automatically, or "Cancel" to resume normal flight. If no action is taken, the aircraft will automatically go home and land after 10 seconds.	Fly the Phantom 2 Vision+ back and land it as soon as possible, then stop the motors and replace the battery.
Critical Low battery level warning	The aircraft must land immediately.	Red LED blinks quickly.	The DJI Vision App screen will flash red and aircraft starts to descend.	The Phantom 2 Vision+ will begin to descend and land automatically.
Estimated remaining flight time	Estimated remaining flight based on current battery level.	N/A	N/A	N/A

Color zones on the battery level indicator  20min reflect estimated remaining flight time and are adjusted automatically, according to the aircraft's current status.
When the critical battery level warning activates and the aircraft is descending to land automatically, you may push the throttle upward to hover the aircraft and navigate it to a more appropriate location for landing.

⚠ When these warnings are triggered, please bring the aircraft back to the Home point or land to avoid losing power during flight.

Low Battery Level Warning on the DJI VISION App

Battery level warnings will show on the camera page of the DJI VISION App when the battery level is low.
(1) A red light will flash along the edges of the app screen.
(2) Audible alarm. Make sure sound is turned on and volume is turned up on your mobile device.
(3) The aircraft battery icon will turn red.

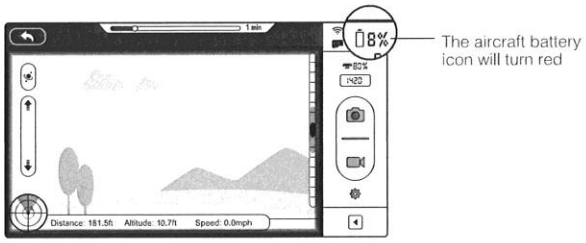


Figure 56

6 Flight Limits

All unmanned aerial vehicle (UAV) operators should abide by all regulations from such organizations as the ICAO (International Civil Aviation Organization) and their own national airspace regulations. For safety reasons, the flight limits function is enabled by default to help users use this product safely and legally. The flight limits function includes height, distance limits and No Fly Zones.
In Ready to Fly mode, height, distance limits and No Fly Zones work together to manage flight. In Ready to Fly (non-GPS) status, only height limits work and flights cannot go higher than 120m.

Default parameters in Assistant are compliant within the definitions of class G ruled by ICAO. (Refer to Airspace Definition to get more details). As each country has its own rules, make sure to configure these parameters to comply with these rules before flying.

6.1 Max Height & Radius Limits

Max Height & Radius limits flying height and distance. Configuration can be done in the Phantom 2 Vision+ Assistant (Figure 57). Once complete, your Phantom will fly in a restricted cylinder (Figure 58).

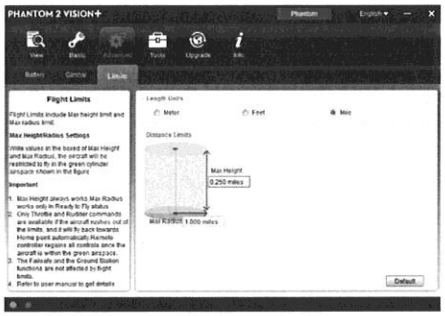


Figure 57

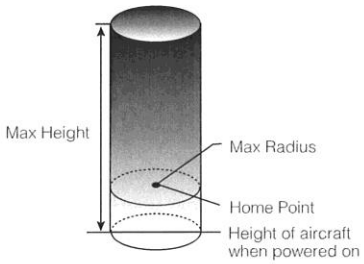


Figure 58

Ready to Fly (G) ····· Green flashing			
	Limits	DJI VISION App	Rear LED flight indicator
Max Height	Flight height must be under the set height.	Warning: Height limit reached.	None.
Max Radius	Flight distance must be within the max radius.	Warning: Distance limit reached.	Rapid red flashing (R) ····· when close to the max radius limit.

Ready to Fly(non-GPS) (Y) ····· Yellow flashing			
	Flight Limits	DJI VISION App	Rear LED flight indicator
Max Height	Flight height restricted to 120m and under.	Warning: Height limit reached.	None.
Max Radius	No limits		

- If you fly out of the limit, you can still control the Phantom, but cannot fly it further.
- If the Phantom flies out of the max radius in Ready to Fly (non-GPS) mode, it will fly back within range automatically.

6.2 Flight Restriction of Restricted Areas

Restricted areas include airports worldwide. All restricted areas are listed on the DJI official website at http://www.dji.com/fly-safe/category-mc. Restricted areas are divided into category A and category B. Category A areas cover major international airport such as LAX and Heathrow, while category B areas includes smaller airports.

