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

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

September 24, 2015

Exemption No. 12977
Regulatory Docket No. FAA−2015−2783

Mr. Matthew Stallings
6508 Blackwood Lane
Waxhaw, NC 28173

Dear Mr. Stallings:

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 letters dated June 8 and 15, 2015, you petitioned the Federal Aviation Administration (FAA) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct photography and videography of commercial and residential properties.

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 UASs proposed by the petitioner are the DJI Phantom 3 Professional and 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, Mr. Matthew Stallings 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

[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.

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.

Conditions and Limitations

In this grant of exemption, Mr. Matthew Stallings 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 3 Professional and 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 October 31, 2017, unless sooner superseded or rescinded.

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

Enclosures

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June 8, 2015

US Department of Transportation, Docket Operations

West Building, Ground Floor, Rm. W12-140

1200 New Jersey Ave, SE

Washington, DC 20590

Re: FAA Exemption Rulemaking Section 333 of the FA Reform Act and Part 11- 14 C.F.R. § 45.23(b); 14 C.F.R. Part 21; 14 C.F.R. 61.113(a) & (b); 91.7(a); 91.9(b) (2); 91.103(b); 91.109; 119.121; 91.151(a); 91.203(a) & (b) 91.405(a); 91.407(a) (1); 91.409(a) (2); 91.417(a) & (b)

Dear **Sir or Madam**:

I, Matthew Stallings, a certified Private Pilot- Airplane Single Engine Land (Appendix A), am requesting an exemption from the Federal Aviation Regulations ("FARs") listed below and pursuant to the FAA Modernization and Reform Act of 2012 and the procedures contained within 14 C.F.R. 11 so that I may commercially operate a small ultra lightweight unmanned aircraft system ("UAS"), specifically the DJI Phantom 3 Professional and DJI Phantom 2 Vision +, quad-copter Unmanned Aircraft or equivalent and ground station-based equipment and crew for the purpose of photography/videography of commercial and residential properties.

I have been an FAA-certified Private Pilot since June 28, 2008 and have been a UAS hobbyist for the past 4 years, both without incident. I am applying for this exemption to allow me to legally perform aerial photography/videography contract work for real estate agencies, private individuals, photography/videography organizations, and any other entity that may desire aerial photography/videography. As a Private Pilot, I understand the importance of pre-flight, in-flight, and post-flight safety measures to ensure public safety. As a pilot of a UAS, all UAS-pertinent safety and risk management measures as specified in the FAA's Risk Management Handbook shall be complied with.

A grant of my exemption request by the FAA would permit operation of the above-specified UAS in predetermined areas away from the general public, airports, heliports, and vehicular traffic; primarily over individual properties/communities for the purpose of recording real-estate listings. All flights shall be logged and recorded to minimally include the date and time of flight, name of pilot (PIC) and Visual Observer (VO), address or location of the flight, duration of flight, weather conditions, and "flight notes" to include the maximum altitude and speed along with signatures of the PIC and VO. A copy of the images shall also be retained for a minimum of 12 months from the date of flight.

In summary and in accordance with this request of exemption as authorized and outlined by the FAA under section 333(c) of the Reform Act specified for use of UAS' for "Real Estate" purposes, I Matthew Stallings will adhere to all FAA regulations at all times and shall conduct all flight operations in strict compliance and safety protocols as mandated and required by regulations and best practices. I request the grant of exemption to operate the above-specified UAS for commercial purposes as described in this request and as allowable by law. This grant of exemption will allow me to offer my services to real estate agencies, private individuals, and any other organization requiring aerial photography/videography who do not have the required knowledge, experience, or certifications to operate a UAS safely and in compliance with FAA regulations. The essence of this application is that I, Matthew Stallings, meet and exceed the FAA's expected competency for piloting my UAS for commercial purposes and that my UAS meets and exceeds the safety requirements set forth by the Secretary of Transportation therby prompting my request for COA under section 333.

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1. **Contact Information:**

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2. **The specific sections of 14 C.F.R. I seek exemption from are:**

   - 14 CFR 21;
   - 14 C.F.R. 45.23(b);
   - 14 CFR 61.113 (a) & (b);
   - 14 C.F.R. 91, et seq.;
   - 14 CFR 407 (a) (1);
   - 14 CFR 409 (a) (2); and,
   - 14 CFR 417 (a) & (b)

3. **The extent and reason of relief I seek:**

   I, Matthew Clark Stallings, am seeking relief from existing FARs that currently prohibit my use of UASs from operating commercially for the purpose of aerial photography/videography in accordance with the FAA Modernization and Reform Act of 2012 112 P.L. 95 § 331-334. The Reform Act Subtitle B: Unmanned Aircraft Systems – (Sec. 332) "Requires the Secretary to develop a plan to accelerate safely the integration by September 30, 2015, of civil unmanned aircraft systems (UASes, or drones) into the national airspace system." Accordingly, I attest that my personal qualifications as well as my ultra lightweight UAS meets the definition of such approved drones (UAS) as defined in Section 331 and allows for exemption status consideration. Further, I humbly request that I be allowed to commercially operate my UAS during the time period the FAA is further establishing rules and regulations governing the operations of such craft.
   The Secretary of Transportation has been asked by Congress to, among other things, consider whether certain unmanned aircraft systems may operate safely in the national airspace system 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 UASs do not create a hazard to users of the National Airspace System or the public or pose a threat to national security in light of the following:

   - The UAS's size, weight, speed, and operational capability;
   - Operation of the UAS in close proximity to airports and populated areas;

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and

• Operation of the UAS within visual line of sight (VLOS) of the Pilot and VO

Accordingly, all flights will be conducted by a PIC and a VO in accordance with FAA Policy N 8900.227 Section 14 "Operational Requirements for UASs" and with the following restrictions:

a. All aircraft will be made with a UA Gross weight of less than 55 pounds (my exemption request is for an aircraft less than 5 lbs.)

b. All flights will occur only during daylight hours.

c. All flights will occur at or below 400 feet AGL

d. 5 nautical miles from an airport having an operational control tower; or

e. 3 NM from an airport with a published instrument flight procedure, but not an operational tower; or

f. 2 NM from an airport without a published instrument flight procedure or an operation tower; or

g. 2 NM from a heliport with a published instrument flight procedure.

h. For safety, no flight with winds over 10 mph.

i. Flight only in GPS mode that allows UAS to hover in place when radio controls are released. All operations to be conducted in GPS mode only

4. **How my request will benefit the public as a whole:**

Aerial photography is a critical component of marketing commercially available property. With today's high-tech internet market and ever-demanding consumer, it is more important than ever for realtors to stay ahead of the curve by utilizing any and all available technology to grab the attention of the consumer. The use of UAS for these photography/videography services is much safer and more cost-efficient than attempting to capture these photos/videos via use of manned aircraft. Further, there are not enough certified UAS pilots to cover the demand for these photos/videos, which ultimately results in untrained/unqualified operators and increased risk due to lack of safety knowledge.

5. **Reasons why the exemption would not adversely affect safety; or how the exemption would provide a level for safety at least equal to the existing rule:**

An exemption would not adversely affect safety because this application applies only to aircraft characteristics and applications within FAA specified limitations. These limitations provide for at least an equivalent safety standard. However, my experience as a certified Private Pilot allows me to utilize my experience in UAS operations thereby exceeding safety and improving airspace operations by allowing aerial imaging clients to choose an experienced pilot that has the knowledge and skills necessary to pilot an aircraft safely and within regulated limits. In addition, by providing unmanned services to the market place, there will be less of a demand for manned operations, which will provide for safer and quieter residential photography.

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As previously stated, all flights will be conducted by a PIC and VO in accordance with FAA Policy N 8900.227 Section 14 “Operational Requirements for UASs” and with the following restrictions:

a. All aircraft will be made with a UA gross weight of less than 55 pounds
b. All flights will occur only during daylight hours
c. All flights will occur at or below 400 feet AGL
d. 5 nautical miles from an airport having an operational tower; or
e. 3 nautical miles from an airport with a published instrument flight procedure, but not an operational tower; or
f. 2 nautical miles from an airport without a published instrument flight procedure or operational tower; or
g. 2 nautical miles from a heliport with a published instrument flight procedure.
h. Maximum total flight time for each operational flight will be 20 minutes. Flights will be terminated at 25% battery power reserve should that occur prior to the 20 minute limit
i. Extensive, pre-flight briefings are required between the PIC and VO
j. A flight plan is required prior to each flight
k. All aircraft operations must be conducted within manufacturer recommended specifications
l. All site permissions must be obtained prior to flight

6. **A summary that the FAA may publish in the Federal Register:**

a. 14 C.F.R. 21 and 14 C.F.R. 91: Airworthiness Certificates, Manuals and The Like.

14 C.F.R. 21, Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary airworthiness certificates in relation to FAR §91.203(a)(1). The size, weight and enclosed operational area of my UAS permit exemption from Part 21 because my UAS meets (and exceeds) an equivalent level of safety pursuant to Section 333 of the Reform Act. The FAA is authorized to exempt aircraft from the airworthiness certificate requirement under both the Act (49 U.S.C. § 44701 (f)) and Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt UAS's from the airworthiness certificate requirement in consideration of the weight, size, speed, maneuverability and proximity to areas such as airports and dense populations. My current and projected UAS's meet or exceed each of the elements.

14 C.F.R. 91.7(a) prohibits the operation of an aircraft without an airworthiness certificate. As no such certificate will be applicable in the form contemplated by the FARs, this Regulation is inapplicable.

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14 C.F.R. § 91.9 (b) (2) requires an aircraft flight manual in the aircraft. As there are no on board pilots or passengers, and given the size of the UAS's, this Regulation is inapplicable. An equivalent level of safety will be achieved by maintaining such manuals on location with the Pilot. The FAA has previously issued exemptions to this regulation in Exemption Nos. 8607, 8737, 8738, 9299, 9299A, 9565, 9565B, 10167, 10167A, 10602, 10700 and 32827.

14 C.F.R. § 91.121 regarding altimeter settings is inapplicable insofar as my UAS utilizes electronic global positioning systems with a barometric sensor.

14 C.F.R. § 91.203 (a) and (b) provides for the carrying of civil aircraft certifications and registrations. They are inapplicable for the same reasons described above. The equivalent level of safety will be achieved by maintaining any such required certifications and registrations with the Pilot.

b. 14 C.F.R. § 45.23: Marking of The Aircraft.

Applicable Codes of Federal Regulation require aircraft to be marked according to certain specifications. My UAS are, by definition, unmanned. They therefore do not have a cabin, cockpit or pilot station on which to mark certain words or phrases. Further, two-inch lettering is difficult to place on such small aircraft with dimensions smaller that minimal lettering requirement. Regardless, I will mark its UASs in the largest possible lettering by placing the word “EXPERIMENTAL” on its fuselage as required by 14 C.F.R. §45.29 (f) so that I the pilot, or anyone assisting me as a spotter with the UAV will see the markings. The FAA has previously issued exemptions to this regulation through Exemptions Nos. 8738, 10167, 10167A and 10700.

c. C. 14 C.F.R. § 61.113: Private Pilot Privileges and Limitations: PIC.

Pursuant to 14 C.F.R. §§ 61.113 (a) & (b), private pilots are limited to non-commercial operations. I, Edward Thomas Zakarian, can achieve an equivalent level of safety as achieved by current Regulations because my UAS does not carry any pilots or passengers. Further, I do possess an FAA pilot certificate, which helps my remote control piloting skills and factors in my experience in assessing any flight risks. The risks attended to the

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operation of my UAS is far less than the risk levels inherent in the commercial activities outlined in 14 C.F.R. § 61, et seq. Thus, allowing me to operate my UAS and meet and exceed current safety levels in relation to 14 C.F.R. §61.113 (a) & (b).

d. D. 14 C.F.R. 91.119: Minimum Safe Altitudes.

14 C.F.R. § 91.119 prescribes safe altitudes for the operation of civil aircraft. It allows helicopters to be operated at lower altitudes in certain conditions. My UAS will never operate at an altitude greater than 400 ft AGL. I will also operate my UAS
in safe areas away from public and traffic, providing a level of safety at least equivalent to or below those in relation to minimum safe altitudes. Given the size, weight, maneuverability and speed of my UAS, an equivalent or higher level of safety will be achieved.

e. E. 14 C.F.R. 91.405 (a); 407 (a) (1); 409 (a) (2); 417(a) & (b):

Maintenance Inspections.

The above-cited Regulations require, amongst other things, aircraft owners and operators to “have [the] 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. . . ”

These Regulations only apply to aircraft with an airworthiness certificate. They will not, therefore, apply to my UAS. However, as a safety precaution I inspect my UAS before and after each flight.

A Summary the FAA May Publish in the Federal Register: A. 14 C.F.R. 21 and 14 C.F.R. 91: Airworthiness Certificates, Manuals and The Like. 14 C.F.R. 21, Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary airworthiness certificates in relation to FAR § 91.203(a)(1). The size, weight and enclosed operational area of my UAS permit exemption from Part 21 because my UAS meets an equivalent level of safety pursuant to Section 333 of the Reform Act. The FAA is authorized to exempt aircraft from the airworthiness certificate requirement under both the Act (49 U.S.C. § 44701 (f)) and Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt UAS's from the airworthiness certificate requirement in consideration of the weight, size, speed, maneuverability and proximity to areas such as airports and dense populations. My UAS meets or exceeds each of the elements. 14 C.F.R. 91.7(a) prohibits the operation of an aircraft without an airworthiness certificate. As no such certificate will be applicable in the form contemplated by the FARs, this Regulation is inapplicable. 14 C.F.R. § 91.9 (b) (2) requires an aircraft flight manual in the aircraft. As there are no pilots or passengers, and given the size of the UAS's, this Regulation is inapplicable. An equivalent level of safety will be achieved by maintaining a manual. The FAA has previously issued exemptions to this regulation in Exemption Nos. 8607, 8737, 8738, 9299, 9299A, 9565, 9565B, 10167, maintenance program that involves regular software updates and curative measures for any damaged hardware. Therefore, an equivalent level of safety will be achieved.

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7. **In Summary:**

   I, Matthew Clark Stallings, request that the FAA grant my exemption request and further volunteer any information gathered during flights in the event the FAA is interested in live field data. I do agree to attest to adhere to any further limitations the FAA imposes, now or in the future. Satisfaction of the current 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 grant of the requested exemptions allowing commercial operation of my UAS for commercial purposes. I look forward to support the FAA and UAS community in its quest to establish proper regulations and protocols for the safe introduction of unmanned aircraft into the national airspace.

Sincerely,

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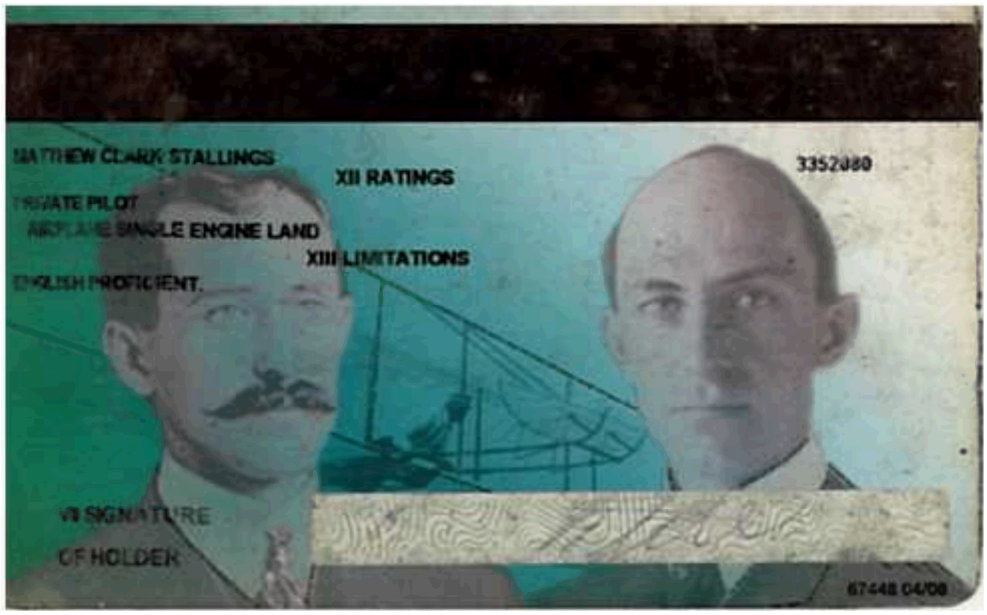
Appendix A

Private Pilot License



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June 15, 2015

US Department of Transportation, Docket Operations

West Building, Ground Floor, Rm. W12-140

1200 New Jersey Ave, SE

Washington, DC 20590

Re: FAA Exemption Rulemaking Section 333 of the FA Reform Act and Part 11- 14 C.F.R. § 45.23(b); 14 C.F.R. Part 21; 14 C.F.R. 61.113(a) & (b); 91.7(a); 91.9(b) (2); 91.103(b); 91.109; 119.121; 91.151(a); 91.203(a) & (b) 91.405(a); 91.407(a) (1); 91.409(a) (2); 91.417(a) & (b)

Dear **Sir or Madam**:

I, Matthew Stallings, a certified Private Pilot- Airplane Single Engine Land (Appendix A), am requesting an exemption from the Federal Aviation Regulations ("FARs") listed below and pursuant to the FAA Modernization and Reform Act of 2012 and the procedures contained within 14 C.F.R. 11 so that I may commercially operate a small ultra lightweight unmanned aircraft system ("UAS"), specifically the DJI Phantom 3 Professional and DJI Phantom 2 Vision +, quad-copter Unmanned Aircraft or equivalent and ground station-based equipment and crew for the purpose of general contract photography/videography, cinematography, inspections, and surveying.

I have been an FAA-certified Private Pilot since June 28, 2008 and have been a UAS hobbyist for the past 4 years, both without incident. I am applying for this exemption to allow me to legally perform aerial photography/videography contract work for real estate agencies, private individuals, photography/videography organizations, and any other entity that may desire aerial photography/videography. As a Private Pilot, I understand the importance of pre-flight, in-flight, and post-flight safety measures to ensure public safety. As a pilot of a UAS, all UAS-pertinent safety and risk management measures as specified in the FAA's Risk Management Handbook shall be complied with.

A grant of my exemption request by the FAA would permit operation of the above-specified UAS in predetermined areas and within the limits and specifications set forth in this document. All flights shall be logged and recorded to minimally include the date and time of flight, name of pilot (PIC) and Visual Observer (VO), address or location of the flight, duration of flight, weather conditions, and "flight notes" to include the maximum altitude and speed along with signatures of the PIC and VO. A copy of the images shall also be retained for a minimum of 12 months from the date of flight.

In summary and in accordance with this request of exemption as authorized and outlined by the FAA under section 333(c) of the Reform Act specified for use of UAS' for general contract purposes, I Matthew Stallings will adhere to all FAA regulations at all times and shall conduct all flight operations in strict compliance and safety protocols as mandated and required by regulations and best practices. I request the grant of exemption to operate the above-specified UAS for commercial purposes as described in this request and as allowable by law. This grant of exemption will allow me to offer my services to real estate agencies, private individuals, and any other organization requiring aerial photography/videography who do not have the required knowledge, experience, or certifications to operate a UAS safely and in compliance with FAA regulations. The essence of this application is that I, Matthew Stallings, meet and exceed the FAA's expected competency for piloting my UAS for commercial purposes and that my UAS meets and exceeds the safety requirements set forth by the Secretary of Transportation therby prompting my request for COA under section 333.

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1. **Contact Information:**

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2. **The specific sections of 14 C.F.R. I seek exemption from are:**

   - 14 CFR 21;
   - 14 C.F.R. 45.23(b);
   - 14 CFR 61.113 (a) & (b);
   - 14 C.F.R. 91, et seq.;
   - 14 CFR 407 (a) (1);
   - 14 CFR 409 (a) (2); and,
   - 14 CFR 417 (a) & (b)

3. **The extent and reason of relief I seek:**

   I, Matthew Clark Stallings, am seeking relief from existing FARs that currently prohibit my use of UASs from operating commercially for the purpose of aerial photography/videography in accordance with the FAA Modernization and Reform Act of 2012 112 P.L. 95 § 331-334. The Reform Act Subtitle B: Unmanned Aircraft Systems – (Sec. 332) "Requires the Secretary to develop a plan to accelerate safely the integration by September 30, 2015, of civil unmanned aircraft systems (UASes, or drones) into the national airspace system." Accordingly, I attest that my personal qualifications as well as my ultra lightweight UAS meets the definition of such approved drones (UAS) as defined in Section 331 and allows for exemption status consideration. Further, I humbly request that I be allowed to commercially operate my UAS during the time period the FAA is further establishing rules and regulations governing the operations of such craft.
   The Secretary of Transportation has been asked by Congress to, among other things, consider whether certain unmanned aircraft systems may operate safely in the national airspace system 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 UASs do not create a hazard to users of the National Airspace System or the public or pose a threat to national security in light of the following:

   - The UAS's size, weight, speed, and operational capability;
   - Operation of the UAS in close proximity to airports and populated areas;

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and

• Operation of the UAS within visual line of sight (VLOS) of the Pilot and VO

Accordingly, all flights will be conducted by a PIC and a VO in accordance with FAA Policy N 8900.227 Section 14 "Operational Requirements for UASs" and with the following restrictions:

a. All aircraft will be made with a UA Gross weight of less than 55 pounds (my exemption request is for an aircraft less than 5 lbs.)

b. All flights will occur only during daylight hours.

c. All flights will occur at or below 400 feet AGL

d. 5 nautical miles from an airport having an operational control tower; or

e. 3 NM from an airport with a published instrument flight procedure, but not an operational tower; or

f. 2 NM from an airport without a published instrument flight procedure or an operation tower; or

g. 2 NM from a heliport with a published instrument flight procedure.

h. For safety, no flight with winds over 10 mph.

i. Flight only in GPS mode that allows UAS to hover in place when radio controls are released. All operations to be conducted in GPS mode only

4. **How my request will benefit the public as a whole:**

Aerial photography is a critical component of marketing commercially available property, safer commercial inspections, and general photography. With today's high-tech internet market and ever-demanding consumer, it is more important than ever for realtors to stay ahead of the curve by utilizing any and all available technology to grab the attention of the consumer. The use of UAS for these photography/videography services is much safer and more cost-efficient than attempting to capture these photos/videos via use of manned aircraft. Further, there are not enough certified UAS pilots to cover the demand for these photos/videos, which ultimately results in untrained/unqualified operators and increased risk due to lack of safety knowledge.

5. **Reasons why the exemption would not adversely affect safety; or how the exemption would provide a level for safety at least equal to the existing rule:**

An exemption would not adversely affect safety because this application applies only to aircraft characteristics and applications within FAA specified limitations. These limitations provide for at least an equivalent safety standard. However, my experience as a certified Private Pilot allows me to utilize my experience in UAS operations thereby exceeding safety and improving airspace operations by allowing aerial imaging clients to choose an experienced pilot that has the knowledge and skills necessary to pilot an aircraft safely and within regulated limits. In addition, by providing unmanned services to the market place, there will be less of a demand for manned operations, which will provide for safer and quieter residential photography.

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As previously stated, all flights will be conducted by a PIC and VO in accordance with FAA Policy N 8900.227 Section 14 “Operational Requirements for UASs” and with the following restrictions:

a. All aircraft will be made with a UA gross weight of less than 55 pounds
b. All flights will occur only during daylight hours
c. All flights will occur at or below 400 feet AGL
d. 5 nautical miles from an airport having an operational tower; or
e. 3 nautical miles from an airport with a published instrument flight procedure, but not an operational tower; or
f. 2 nautical miles from an airport without a published instrument flight procedure or operational tower; or
g. 2 nautical miles from a heliport with a published instrument flight procedure.
h. Maximum total flight time for each operational flight will be 20 minutes. Flights will be terminated at 25% battery power reserve should that occur prior to the 20 minute limit
i. Extensive, pre-flight briefings are required between the PIC and VO
j. A flight plan is required prior to each flight
k. All aircraft operations must be conducted within manufacturer recommended specifications
l. All site permissions must be obtained prior to flight

6. **A summary that the FAA may publish in the Federal Register:**

a. 14 C.F.R. 21 and 14 C.F.R. 91: Airworthiness Certificates, Manuals and The Like.

14 C.F.R. 21, Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary airworthiness certificates in relation to FAR §91.203(a)(1). The size, weight and enclosed operational area of my UAS permit exemption from Part 21 because my UAS meets (and exceeds) an equivalent level of safety pursuant to Section 333 of the Reform Act. The FAA is authorized to exempt aircraft from the airworthiness certificate requirement under both the Act (49 U.S.C. § 44701 (f)) and Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt UAS's from the airworthiness certificate requirement in consideration of the weight, size, speed, maneuverability and proximity to areas such as airports and dense populations. My current and projected UAS's meet or exceed each of the elements.

14 C.F.R. 91.7(a) prohibits the operation of an aircraft without an airworthiness certificate. As no such certificate will be applicable in the form contemplated by the FARs, this Regulation is inapplicable.

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14 C.F.R. § 91.9 (b) (2) requires an aircraft flight manual in the aircraft. As there are no on board pilots or passengers, and given the size of the UAS's, this Regulation is inapplicable. An equivalent level of safety will be achieved by maintaining such manuals on location with the Pilot. The FAA has previously issued exemptions to this regulation in Exemption Nos. 8607, 8737, 8738, 9299, 9299A, 9565, 9565B, 10167, 10167A, 10602, 10700 and 32827.

14 C.F.R. § 91.121 regarding altimeter settings is inapplicable insofar as my UAS utilizes electronic global positioning systems with a barometric sensor.

14 C.F.R. § 91.203 (a) and (b) provides for the carrying of civil aircraft certifications and registrations. They are inapplicable for the same reasons described above. The equivalent level of safety will be achieved by maintaining any such required certifications and registrations with the Pilot.

b. 14 C.F.R. § 45.23: Marking of The Aircraft.

Applicable Codes of Federal Regulation require aircraft to be marked according to certain specifications. My UAS are, by definition, unmanned. They therefore do not have a cabin, cockpit or pilot station on which to mark certain words or phrases. Further, two-inch lettering is difficult to place on such small aircraft with dimensions smaller that minimal lettering requirement. Regardless, I will mark its UASs in the largest possible lettering by placing the word “EXPERIMENTAL” on its fuselage as required by 14 C.F.R. §45.29 (f) so that I the pilot, or anyone assisting me as a spotter with the UAV will see the markings. The FAA has previously issued exemptions to this regulation through Exemptions Nos. 8738, 10167, 10167A and 10700.

c. C. 14 C.F.R. § 61.113: Private Pilot Privileges and Limitations: PIC.

Pursuant to 14 C.F.R. §§ 61.113 (a) & (b), private pilots are limited to non-commercial operations. I, Matthew Stallings, can achieve an equivalent level of safety as achieved by current Regulations because my UAS does not carry any pilots or passengers. Further, I do possess an FAA pilot certificate, which helps my remote control piloting skills and factors in my experience in assessing any flight risks. The risks attended to the

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operation of my UAS is far less than the risk levels inherent in the commercial activities outlined in 14 C.F.R. § 61, et seq. Thus, allowing me to operate my UAS and meet and exceed current safety levels in relation to 14 C.F.R. §61.113 (a) & (b).

d. D. 14 C.F.R. 91.119: Minimum Safe Altitudes.

14 C.F.R. § 91.119 prescribes safe altitudes for the operation of civil aircraft. It allows helicopters to be operated at lower altitudes in certain conditions. My UAS will never operate at an altitude greater than 400 ft AGL. I will also operate my UAS in safe areas, providing a level of safety at least equivalent to or below those in relation to minimum safe altitudes. Given the size, weight, maneuverability and speed of my UAS, an equivalent or higher level of safety will be achieved.

e. E. 14 C.F.R. 91.405 (a); 407 (a) (1); 409 (a) (2); 417(a) & (b):

Maintenance Inspections.

The above-cited Regulations require, amongst other things, aircraft owners and operators to “have [the] 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. . . ”

These Regulations only apply to aircraft with an airworthiness certificate. They will not, therefore, apply to my UAS. However, as a safety precaution I inspect my UAS before and after each flight.

A Summary the FAA May Publish in the Federal Register: A. 14 C.F.R. 21 and 14 C.F.R. 91: Airworthiness Certificates, Manuals and The Like. 14 C.F.R. 21, Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary airworthiness certificates in relation to FAR § 91.203(a)(1). The size, weight and enclosed operational area of my UAS permit exemption from Part 21 because my UAS meets an equivalent level of safety pursuant to Section 333 of the Reform Act. The FAA is authorized to exempt aircraft from the airworthiness certificate requirement under both the Act (49 U.S.C. § 44701 (f)) and Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt UAS's from the airworthiness certificate requirement in consideration of the weight, size, speed, maneuverability and proximity to areas such as airports and dense populations. My UAS meets or exceeds each of the elements. 14 C.F.R. 91.7(a) prohibits the operation of an aircraft without an airworthiness certificate. As no such certificate will be applicable in the form contemplated by the FARs, this Regulation is inapplicable. 14 C.F.R. § 91.9 (b) (2) requires an aircraft flight manual in the aircraft. As there are no pilots or passengers, and given the size of the UAS's, this Regulation is inapplicable. An equivalent level of safety will be achieved by maintaining a manual. The FAA has previously issued exemptions to this regulation in Exemption Nos. 8607, 8737, 8738, 9299, 9299A, 9565, 9565B, 10167, maintenance program that involves regular software updates and curative measures for any damaged hardware. Therefore, an equivalent level of safety will be achieved.

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7. **In Summary:**

   I, Matthew Clark Stallings, request that the FAA grant my exemption request and further volunteer any information gathered during flights in the event the FAA is interested in live field data. I do agree to attest to adhere to any further limitations the FAA imposes, now or in the future. Satisfaction of the current 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 grant of the requested exemptions allowing commercial operation of my UAS for commercial purposes. I look forward to support the FAA and UAS community in its quest to establish proper regulations and protocols for the safe introduction of unmanned aircraft into the national airspace.

Sincerely,

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Appendix A

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