

## ERRATA SHEET

**SUBJECT:** Change 2 to FAA Order JO 7210.3BB, Facility Operation and Administration, effective July 16, 2020.

This errata sheet transmits the revised pages to the subject order.

REMOVE PAGE	DATED	INSERT PAGE	DATED
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. . . . .		Appendix 6-9 through 6-12 . . . . .	7/16/20
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## Appendix 6. Commercial Space LOA Sample Templates

[Name(s) of affected Air Traffic Control Facilities (lead facility listed first)], Air Traffic Control System Command Center Space Operations, [Operator]

Letter of Agreement

Effective:

Subject: Coordination of [Operator] Launch/Reentry Operations from [name and location of Launch and (if applicable) Reentry site]

### 1. Purpose:

State the purpose of the Letters of Agreement (LOA), type of operation (launch, launch with reentry), and location of operation (name and location of launch and (if applicable) Reentry site). If LOA is for a one-time operation, state that.

*Sample text:*

This Letters of Agreement (LOA) provides procedures for the integration and appropriate coordination of [licensed/permitted] [Vehicle Type: horizontal/vertical] [launch/launch with reentry/hover-test] operations into the National Airspace System (NAS) from [name and location of launch and (if applicable) Reentry site].

### 2. Cancellation:

Include any previous LOA canceled by this one [Subject and Effective Date of LOA being cancelled]. State agreement to review LOA annually.

*Sample text:*

This LOA will remain in effect until cancelled by any signatory entity and will be reviewed annually throughout the life of the [license/permit] or when modifications are made to the [license/permit].

### 3. Scope:

List the pertinent ATC facilities, Operator, and any additional stakeholders, including Air Traffic Control System Command Center (ATCSCC) Space Operations, Federal Ranges, and military facilities as applicable. State distribution of the LOA. The distribution should include, at a minimum, all signatories and the Office of Commercial Space Transportation (AST).

*Sample Text:*

This LOA is pertinent to [ATC facilities], [additional stakeholders], and [Operator]. It is to be distributed to all signatories and stakeholders].

### 4. Responsibilities:

State the responsibilities of the Operator, lead ATC facility, and as needed, any other stakeholders and/or affected facilities.

- a. Operator must fulfill requirements provided in the Sample Text for this section.
- b. Lead ATC facility must fulfill requirements provided in the Sample Text for this section and
  1. Fill out the Points of Contact Table (Attachment B).
  2. Fill out the Actions Timetable (Attachment C)
- c. (As needed) Other stakeholders and affected facilities must:
  1. Ensure appropriate personnel are aware of the provisions of this agreement.

*Sample text:*

a. [Operator] must:

1. Ensure all Operator [and their designees] personnel operating within the scope of this agreement are knowledgeable of, understand, and comply with the provisions of this agreement.

2. Establish, make available, and be prepared to execute approved contingency plan(s).

a) Unless an established contingency plan has been approved by all necessary parties, [Operator] must coordinate requirements and get approval from [lead ATC facility] for contingency plan(s) at least [XX] calendar days prior to each operation.

3. Follow the procedures in Section 5 and the Action Timetable (Attachment C) with regards to communications and notifications.

4. Notify the parties in the Points of Contact Table (Attachment B) immediately if scheduled operations are cancelled.

5. *(As needed)* Develop separate agreements with foreign Air Navigation Service Providers when airspace coordination outside of the U.S. Flight Information Region is needed for the operation.

b. [Lead ATC facility] must:

1. Ensure all personnel responsible for providing air traffic service within the scope of this agreement are knowledgeable of, understand, and comply with the provisions of this agreement. This includes notification to other affected facilities.

2. Ensure appropriate [lead ATC facility] personnel are aware of and prepared to execute approved contingency plan(s).

3. Communicate with necessary facilities and ascertain their readiness to execute approved contingency plan(s).

4. Except when real time notifications of actual start of activity and end of activity times are provided to the facility via ATCSCC coordination, take appropriate actions to restrict airspace use during the effective times of the aircraft hazard area(s).

5. Take additional measures for public safety deemed necessary by 14 CFR Parts 400–460.

c. *(As needed)* [Other stakeholders and affected facilities] must:

1. Ensure appropriate personnel are aware of the provisions of this agreement.

2. Ensure appropriate personnel are aware of and prepared to execute approved contingency plan(s).

d. Deviations from responsibilities and/or procedures established in this LOA must be coordinated prior to each operation, and responsibilities must be clearly defined in each case.

## 5. Procedures:

Specify timeline and details for activities to take place prior to, during, and upon completion of operation.

Specify frequency of proposed operations and any limitations when considering dates and times of operations. Include any restrictions on days of week and/or times of day operations that may or may not occur. Restrictions may include times when military operations require use of certain airspace.

Specify procedure(s) for handling anomalies and emergencies. Information conveyed should include the location of event (latitude and longitude, represented as degree–minute–second), vehicle state, projected time the hazard will no longer be present, and any other pertinent details.

*Sample text:*

a. [Operator] must:

1. Provide a Launch/Reentry Forecast Package to the parties specified in the Points of Contact Table (Attachment B), except CARF, at least once every [XX] months. These forecasts will include a best estimate of all anticipated launches for the upcoming [XX] months.

2. Provide [lead ATC facility] a pre–planning package a minimum of [XX] calendar days prior to the planned operation. At a minimum, the package should include:

a) The launch/reentry window.

b) The best estimate of the geographic definition of the hazard area(s) (latitude and longitude, represented as degree–minute–second) for the primary date and any back–up date(s).

c) *(As needed)* Any support aircraft's type and call sign.

## Instructions for Letter of Agreement Template: Launch and Reentry Site

### Letter of Agreement

Effective:

Subject: Operations at [Name and location of Launch and Reentry Site]

#### 1. Purpose:

State the purpose of the Letters of Agreement (LOA), type(s) of anticipated operation (*if launch*: [horizontal/vertical]) [launch/reentry], frequency of proposed operation(s) (if known), and name and location of Launch and Reentry Site.

##### *Sample text:*

This LOA establishes a framework for the coordination and planning of procedures for [licensed/permitted] (*if launch*: [horizontal/vertical]) [launch/reentry] operations into the National Airspace System from [name and location of Launch and Reentry Site].

#### 2. Cancellation:

Include any previous LOA canceled by this one [Subject and Effective Date of LOA being cancelled]. State agreement to review LOA annually.

##### *Sample text:*

This LOA will remain in effect until cancelled by any signatory entity and will be reviewed annually throughout the life of the license or when modifications are made to the license.

#### 2. Scope:

List the affected ATC facilities; Launch/Reentry Site Operator; and any additional stakeholders, including Air Traffic Control System Command Center (ATCSCC) Space Operations, Federal Ranges, and military facilities, as applicable.

State that this LOA does not guarantee the approval of operations from the Launch and Reentry Site. Once a Vehicle Operator has been identified and its operations approved, responsibilities and procedures will be outlined in a separate letter of agreement with each Vehicle Operator.

State that this LOA does not confer any proprietary, property, or exclusive right in the use of airspace or outer space referenced in Code of Federal Regulation (CFR) 420.41.

State distribution of the LOA. The distribution should include, at a minimum, all signatories.

##### *Sample text:*

This LOA is pertinent to [ATC facilities and stakeholders; including Air Traffic Control System Command Center (ATCSCC) Space Operations] and [Launch/Reentry Site Operator]. It does not guarantee the approval of operations from the Launch/Reentry Site. Once a Vehicle Operator has been identified and its operations approved, responsibilities and procedures will be outlined in a separate LOA with each Vehicle Operator.

This LOA does not confer any proprietary, property, or exclusive right in the use of airspace or outer space referenced in Code of Federal Regulation (CFR) 420.41.

This LOA is to be distributed to the signatories, additional stakeholders, and the Office of Commercial Space Transportation (AST).

#### 4. Responsibilities:

State the responsibilities of the Site Operator, lead ATC Facility, and as needed, any other stakeholders and/or affected facilities. All parties named within this letter of agreement will work collaboratively to develop the following:

a. Procedures for notification and scheduling of operations, to include procedures for the issuance of Notices to Airmen, Altitude Reservations and Special Activity Airspace access.

b. Plans for communication between the operator and the FAA as necessary, before, during, and after a scheduled operation.

**[Name(s) of affected Air Traffic Control Facilities (lead facility listed first)], Air Traffic Control System Command Center Space Operations, [Launch and Reentry Site Operator]**

- c. Plans and procedures for cancellations, contingencies, and emergencies.
- d. Plans and procedures for any other measures deemed necessary by the FAA to ensure public health and safety.

*Sample text:*

- a. [Launch/Reentry Site Operator] is responsible for the management, operation, and maintenance of the Launch/Reentry Site. This includes the coordination with users of its facility and the responsibility for ensuring all necessary information regarding operations is provided to the appropriate ATC facilities.
- b. The FAA is responsible for the safe, orderly, and expeditious flow of known air traffic under its control. It is also responsible for the dissemination of pertinent information to the aviation community.
- c. All parties named in this LOA will work collaboratively to develop procedures and other such measures deemed necessary to protect public health and safety.

**5. Attachments**

State the responsibilities of the Site Operator, lead ATC Facility, and as needed, any other stakeholders and/or affected facilities. All parties named within this letter of agreement will work collaboratively to develop the following:

- A. Signatures
- B. Points of Contact Table
- C. Graphics/Maps
  - Physical Site Description/Map
  - Airspace Description/Map(s)



**[Name(s) of affected Air Traffic Control Facilities (lead facility listed first)], Air Traffic Control System Command Center Space Operations, [Launch and Reentry Site Operator]**

**Attachment A: Signatures**

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[Lead ATC Facility]

---

[Launch/Reentry Site Operator]

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[ATCSCC Space Operations]

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[As appropriate, other stakeholders, including Federal Ranges and military facilities.]

**[Name(s) of affected Air Traffic Control Facilities (lead facility listed first)], Air Traffic Control System Command Center Space Operations, [Launch and Reentry Site Operator]**

**Attachment B: Points of Contact Table**

The following table should be completed by the [lead ATC facility] and the information should be verified prior to every operation.

Office	Phone #	Email	Responsibility
[Primary ATC Facility] Airspace and Procedures Office			
[Primary ATC Facility] Traffic Management Unit			
ATCSCC Space Operations			
[Launch and Reentry Site Operator]			

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**1. PARAGRAPH NUMBER AND TITLE: 2–6–7. BASIC WATCH SCHEDULE**

**2. BACKGROUND:** The negative impacts and interaction of insufficient sleep and circadian trough on mental performance are well documented. Sufficient time off is necessary to recover from accumulated sleep debt. Since uninterrupted nighttime sleep affords the most efficient means of recovering from fatigue, the collaborative ATO Fatigue Safety Steering Committee recommends air traffic employees working operational positions be afforded a minimum 30 consecutive hours off-duty within each seven-day period to ensure at least one uninterrupted eight-hour nighttime period to accomplish sleep recovery. Situations have been reported to the ATO Fatigue Safety Steering Committee where controllers at some facilities were having less than the optimal time off to recuperate from accumulating sleep debt. For example, when a controller works a midnight shift ending at 0600, and is required to return to work in 24 hours (current rules) for a day shift starting at 0600, their nighttime sleep prior to the day shift is truncated by their morning routine and commute to the facility. A 30-hour break allows enough time for a full nighttime sleep period and the beneficial reduction in accumulated sleep debt.

**3. CHANGE:****OLD****2–6–7. BASIC WATCH SCHEDULE**Title through **b11**

Add

**b12** and **b13****NEW****2–6–7. BASIC WATCH SCHEDULE**

No Change

**12. Have at least 30 consecutive hours off-duty within each seven-day period.**Renumber **b13** and **b14****1. PARAGRAPH NUMBER AND TITLE: 2–9–6. VISIBILITY CHARTS**

**2. BACKGROUND:** A facility operations evaluation conducted in 2019 identified the potential for misinterpretation of the requirement in FAA Order JO 7210.3, paragraph 2–9–6, to prepare and maintain visibility charts. The paragraph as currently written, excludes tower visibility observations from the types of observations that require specific visibility chart design criteria as outlined in the paragraph. The paragraph does not clearly indicate that all facilities that perform tower visibility observations are required to follow the stated visibility chart criteria.

**3. CHANGE:****OLD****2–9–6. VISIBILITY CHARTS**

a. Where facilities provide backup/augmentation of automated weather observations, or manual observations, the facility air traffic manager will select a designee that will prepare and maintain visibility charts in accordance with the following:

**NEW****2–9–6. VISIBILITY CHARTS**

a. **Air Traffic Managers at** facilities **that** provide backup/augmentation of automated weather observations, manual observations, **and/or tower visibility observations, must** select a designee **to** prepare and maintain visibility charts **as follows:**

Add	<b><u>4. Within 60 NM of the preferred radar when using ASR-9 with Mode S or ASR-11 MSSR Beacon; or</u></b>
Add	<b><u>5. When the facility is operating in track-based display mode.</u></b>
Add	<b><u>NOTE-</u></b> <b><u>1. ADS-B allows the expanded use of 3 NM separation in approved areas. It is not required for and does not affect the use of radar for 3 NM separation.</u></b>
Add	<b><u>2. The Surveillance Services Directorate provides maps to facilities depicting the geographic areas and altitudes where ADS-B has been validated for 3 NM separation.</u></b>

### 1. PARAGRAPH NUMBER AND TITLE:

4-3-3. DEVELOPING AN LOA

4-3-6. COMMERCIAL SPACE LOAs

Appendix 6. Commercial Space LOA Sample Templates

**2. BACKGROUND:** This document proposes incorporation of commercial space Letters of Agreement (LOA) guidance into FAA Order JO 7210.3. This proposal also identifies the ATO Service Center OSGs as the office responsible for facilitating commercial space LOAs. FAA Order JO 7400.2, Chapter 31, has been the sole source of guidance for LOAs that pertain to commercial space licensing. As the commercial space industry has grown and more ATC facilities have been involved in developing these types of LOAs, it has been determined that the guidance for commercial space LOAs should be incorporated into FAA Order 7210.3.

### 3. CHANGE:

<b><u>OLD</u></b>	<b><u>NEW</u></b>
<b>4-3-3. DEVELOPING LOA</b>	<b>4-3-3. DEVELOPING LOA</b>
Air traffic managers must take the following action when developing a LOA: (See FIG 4-3-1 and FIG 4-3-2.)	Air traffic managers must take the following action when developing <u>an</u> LOA: (See FIG 4-3-1 and FIG 4-3-2. <b><u>For commercial space example LOAs, see Appendix 6.</u></b> )
<b><u>OLD</u></b>	<b><u>NEW</u></b>
Add	<b>4-3-6. COMMERCIAL SPACE LOAs</b>
Add	<b><u>LOAs exist between ATC facilities and commercial space launch/reentry site, launch, and/or reentry operations proponents. FAA Order JO 7400.2, Procedures for Handling Airspace Matters contains responsibilities and procedures for Commercial Space operations. The following lists the roles and responsibilities of organizations and individuals involved in the commercial space LOA process:</u></b>
Add	<b><u>a. The respective ATO Service Center OSG will serve as facilitator of the LOA development.</u></b>

Add	<b><u>b. ATO Service Center OSG will coordinate with the appropriate Service Area, ATCSCC, the Office of Commercial Space Transportation (AST), the Office of Airports, and other offices having responsibilities in accordance with the operation.</u></b>
Add	<b><u>c. Each LOA must include, but is not limited to:</u></b>
Add	<b><u>1. Names and contact information for all parties involved.</u></b>
Add	<b><u>2. For launch/reentry operation LOAs: Description of operation to include vehicle type and characteristics; anticipated frequency of operations; and requested airspace, altitude, vehicle positioning data transmittal, and Aircraft Hazard Area (AHA) information.</u></b>
Add	<b><u>3. For launch/reentry site LOAs: Brief description of the launch/reentry site, types of anticipated operations, and anticipated frequency of proposed operations.</u></b>
Add	<b><u>4. Operating procedures to include communications, real-time coordination, NOTAM content issuance, contingency, and emergency.</u></b>
<b><u>4-3-6</u></b> through <b><u>4-3-8</u></b>	Renumber <b><u>4-3-7</u></b> through <b><u>4-3-9</u></b>

## Instructions for Letter of Agreement Template: Launch and Reentry Site

### Letter of Agreement

Effective:

Subject: Operations at [Name and location of Launch and Reentry Site]

#### 1. Purpose:

State the purpose of the Letters of Agreement (LOA), type(s) of anticipated operation (*if launch*: [horizontal/vertical]) [launch/reentry], frequency of proposed operation(s) (if known), and name and location of Launch and Reentry Site.

##### *Sample text:*

This LOA establishes a framework for the coordination and planning of procedures for [licensed/permitted] (*if launch*: [horizontal/vertical]) [launch/reentry] operations into the National Airspace System from [name and location of Launch and Reentry Site].

#### 2. Cancellation:

Include any previous LOA canceled by this one [Subject and Effective Date of LOA being cancelled]. State agreement to review LOA annually.

##### *Sample text:*

This LOA will remain in effect until cancelled by any signatory entity and will be reviewed annually throughout the life of the license or when modifications are made to the license.

#### 2. Scope:

List the affected ATC facilities; Launch/Reentry Site Operator; and any additional stakeholders, including Air Traffic Control System Command Center (ATCSCC) Space Operations, Federal Ranges, and military facilities, as applicable.

State that this LOA does not guarantee the approval of operations from the Launch and Reentry Site. Once a Vehicle Operator has been identified and its operations approved, responsibilities and procedures will be outlined in a separate letter of agreement with each Vehicle Operator.

State that this LOA does not confer any proprietary, property, or exclusive right in the use of airspace or outer space referenced in Code of Federal Regulation (CFR) 420.41.

State distribution of the LOA. The distribution should include, at a minimum, all signatories.

##### *Sample text:*

This LOA is pertinent to [ATC facilities and stakeholders; including Air Traffic Control System Command Center (ATCSCC) Space Operations] and [Launch/Reentry Site Operator]. It does not guarantee the approval of operations from the Launch/Reentry Site. Once a Vehicle Operator has been identified and its operations approved, responsibilities and procedures will be outlined in a separate LOA with each Vehicle Operator.

This LOA does not confer any proprietary, property, or exclusive right in the use of airspace or outer space referenced in Code of Federal Regulation (CFR) 420.41.

This LOA is to be distributed to the signatories, additional stakeholders, and the Office of Commercial Space Transportation (AST).

#### 4. Responsibilities:

State the responsibilities of the Site Operator, lead ATC Facility, and as needed, any other stakeholders and/or affected facilities. All parties named within this letter of agreement will work collaboratively to develop the following:

a. Procedures for notification and scheduling of operations, to include procedures for the issuance of Notices to Airmen, Altitude Reservations and Special Activity Airspace access.

b. Plans for communication between the operator and the FAA as necessary, before, during, and after a scheduled operation.

**[Name(s) of affected Air Traffic Control Facilities (lead facility listed first)], Air Traffic Control System Command Center Space Operations, [Launch and Reentry Site Operator]**

- c. Plans and procedures for cancellations, contingencies, and emergencies.
- d. Plans and procedures for any other measures deemed necessary by the FAA to ensure public health and safety.

*Sample text:*

a. [Launch/Reentry Site Operator] is responsible for the management, operation, and maintenance of the Launch/Reentry Site. This includes the coordination with users of its facility and the responsibility for ensuring all necessary information regarding operations is provided to the appropriate ATC facilities.

b. The FAA is responsible for the safe, orderly, and expeditious flow of known air traffic under its control. It is also responsible for the dissemination of pertinent information to the aviation community.

c. All parties named in this LOA will work collaboratively to develop procedures and other such measures deemed necessary to protect public health and safety.

**5. Attachments**

State the responsibilities of the Site Operator, lead ATC Facility, and as needed, any other stakeholders and/or affected facilities. All parties named within this letter of agreement will work collaboratively to develop the following:

- A. Signatures
- B. Points of Contact Table
- C. Graphics/Maps
  - Physical Site Description/Map
  - Airspace Description/Map(s)



**[Name(s) of affected Air Traffic Control Facilities (lead facility listed first)], Air Traffic Control System Command Center Space Operations, [Launch and Reentry Site Operator]**

**Attachment A: Signatures**

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[Lead ATC Facility]

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[Launch/Reentry Site Operator]

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[ATCSCC Space Operations]

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[As appropriate, other stakeholders, including Federal Ranges and military facilities.]

**[Name(s) of affected Air Traffic Control Facilities (lead facility listed first)], Air Traffic Control System Command Center Space Operations, [Launch and Reentry Site Operator]**

**Attachment B: Points of Contact Table**

The following table should be completed by the [lead ATC facility] and the information should be verified prior to every operation.

Office	Phone #	Email	Responsibility
[Primary ATC Facility] Airspace and Procedures Office			
[Primary ATC Facility] Traffic Management Unit			
ATCSCC Space Operations			
[Launch and Reentry Site Operator]			

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# 1. PARAGRAPH NUMBER AND TITLE: 4-4-2. USE OF AIRCRAFT CALL SIGNS

**2. BACKGROUND:** Paragraph 4-4-2, Use of Aircraft Call Signs, in FAA Order JO 7210.3, Facility Operation and Administration, was in need of an update to reflect the June 6, 2018 publication of FAA Order JO 7610.12, Assignment and Authorization of Call Sign Designators and Associated Telephonies.

## 3. CHANGE:

### OLD

#### 4-4-2. USE OF AIRCRAFT CALL SIGNS

**a.** Local call sign/telephony designators are used only for local flight operations as specified in a letter of agreement (LOA) between the local air traffic control (ATC) facility and the requesting aircraft operator. LOAs concerning the use of aircraft call signs by local flight operators must conform with the following standards:

**1.** Local call signs must not be assigned a three-letter designator. This ensures local call signs will not conflict with call signs using three-letter ICAO-approved designators. Local call signs may be assigned 2, 4, 5, and 6 letter call sign designators.

**2.** Local call sign/telephony designators must not conflict with call signs and/or telephonies in use by military aircraft and other aircraft that operate in the local area. All law enforcement call sign/telephony designators must be verified through System Operations Security (9-ATOR-HQ-IFOS@faa.gov).

Add

**3.** Local call signs are only used for communications and operations with local ATC facilities that are signatories on the LOA.

**4.** Local call signs are not used in filing flight plans outside the local area designated in the LOA.

#### **NOTE-**

Aircraft operators (for example, flight schools, aircraft manufacturers, law enforcement, etc.) may request a special call sign/telephony designator that would enable IFR flight operations outside the designated local area.

### NEW

#### 4-4-2. USE OF AIRCRAFT CALL SIGNS

Local call sign/telephony designators are **authorized for use** only for local flight operations as specified in a letter of agreement (LOA) between the local air traffic control (ATC) facility **(ies)** and the requesting aircraft operator. LOAs concerning the use of aircraft call signs by local flight operators must conform with the following standards:

**a.** Local call signs must not be assigned a three-letter designator **to ensure they do not conflict with ICAO three-letter designators (ICAO 3LDs).** Local call signs may be assigned 2, 4, 5, and 6 letter call sign designators.

**b.** Local call sign/telephony designators must not conflict with call signs and/or telephonies in use by military aircraft and other aircraft that operate in the local area.

#### **NOTE-**

According to Army Regulation (AR) 95-2, Air Traffic Control, Airfield/Heliport, and Airspace Operations, U.S. Army aviation units are not authorized to obtain call signs or enter into call sign agreements with local or regional ATC agencies (i.e., local FAA ATC facilities). The point of contact for U.S. Army aviation units requesting a call sign is the U.S. Army Aeronautical Services office via email at [usarmy.belvoir.tradoc.list.usaasaops@mail.mil](mailto:usarmy.belvoir.tradoc.list.usaasaops@mail.mil).

**c.** Local call signs are only used for communications and operations with local ATC facilities that are signatories on the LOA.

**d.** Local call signs are not used in filing flight plans outside the local area designated in the LOA.

#### **NOTE-**

Certain aircraft operators, such as aircraft manufacturers or law enforcement, may request a U.S. special call sign/telephony designator that would enable IFR flight operations outside the designated local area.

Add

b. Special call sign/telephony designators are authorized and assigned by the FAA for governmental or other aircraft operations to enable special handling by ATC within the continental United States. Special designators can be used for filing flight plans and may be issued for a designated area of operation corresponding to the duration of an event or circumstances requiring special handling. Special designators are authorized for use by ATO System Operations Security (9-ATOR-HQ-IFOS@faa.gov) and are published in FAA Order 7110.67 and FAA Order 7340.2.

**REFERENCE-**  
FAA Order JO 7110.67, Air Traffic Management Security Services for Special Activities  
FAA Order JO 7340.2, Contractions

c. ICAO three-letter designators (3LD) are published in FAA Order JO 7340.2, Contractions. 3LDs are authorized for use by the following ATO offices:

1. Aeronautical Information Service (AIS) (callsigns@faa.gov) for non-governmental aircraft operators; and

2. System Operations Security (9-ATOR-HQ-IFOS@faa.gov) for governmental aircraft operators.

**REFERENCE-**  
AC 120-26, Assignment of Aircraft Call Signs and Associated Telephonies.

Delete

Delete

Delete

Delete

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Delete

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**1. PARAGRAPH NUMBER AND TITLE:** 5-3-4. ATMOSPHERE SAMPLING FOR NUCLEAR CONTAMINATION

**2. BACKGROUND:** Communications with the Department of Energy (DOE) Aviation Office disclosed DOE no longer conducts Atmosphere Sampling Missions, but instead now refers to these type of missions as Aerial Sampling/Surveying. This Document Change Proposal (DCP) updates the type of the DOE mission.

**3. CHANGE:****OLD****5-3-4. ATMOSPHERE SAMPLING FOR NUCLEAR CONTAMINATION**

a. Following a foreign nuclear weapons test, a planned arrival sampling schedule is established by the USAF. Although sampler aircraft are flight planned to the suspected atmosphere area of nuclear contamination, the aircraft are likely to require altitude and route changes which cannot be anticipated prior to departure. The purpose of those altitude and route changes is to permit direct contact with and sampling of the *cloud* debris whose exact location and altitude distribution cannot be accurately predicted.

b. To afford these operations optimum flexibility during in-flight profiles, ATC facilities must honor in-flight clearance requests for altitude and route changes to the maximum extent possible. If necessary, other IFR traffic may be re-cleared so that requests by sampler aircraft are honored. However, in no case must the separation minima outlined in FAA Order JO 7110.65, Air Traffic Control, be compromised.

c. USAF aircraft engaged in aerial sampling missions must use the call sign “SAMP” followed by the last three digits of the aircraft’s serial number.

**REFERENCE-**

FAA Order JO 7110.65, Para 9-2-18, SAMP.

FAA Order JO 7610.4, Para 12-4-3, Atmospheric Sampling for Nuclear Contamination.

**NEW****5-3-4. AERIAL SAMPLING/SURVEYING FOR NUCLEAR CONTAMINATION**

a. The USAF, Department of Energy (DOE), or other U.S. Government agencies perform aerial sampling/surveying of suspected foreign or domestic nuclear, chemical, or hazardous material contamination. A planned aerial sampling/surveying schedule is established by the USAF. Although sampler/survey aircraft are flight planned to the suspected area of nuclear contamination, the aircraft are likely to require altitude and route changes which cannot be anticipated prior to departure. The purpose of those altitude and route changes is to permit direct contact with and sampling/surveying of the *cloud* debris whose exact location and altitude distribution cannot be accurately predicted.

b. To afford these operations optimum flexibility during in-flight profiles, ATC facilities must honor in-flight clearance requests for altitude and route changes to the maximum extent possible. If necessary, other IFR traffic may be re-cleared so that requests by sampler/survey aircraft are honored. However, in no case must the separation minima outlined in FAA Order JO 7110.65, Air Traffic Control, be compromised.

c. USAF aircraft engaged in aerial sampling/surveying missions must use the call sign “SAMP” followed by the last three digits of the aircraft’s serial number.

**REFERENCE-**

FAA Order JO 7110.65, Para 9-2-18, SAMP.

FAA Order JO 7610.4, Para 12-4-3, Aerial Sampling/Surveying for Nuclear Contamination.

**1. PARAGRAPH NUMBER AND TITLE: 5-3-6. WEATHER RECONNAISSANCE FLIGHTS**

**2. BACKGROUND:** Altitude Reservations (ALTRV) are no longer coordinated or issued for winter season missions. The U.S. Air Force Reserve (AFRES) 53<sup>rd</sup> Weather Reconnaissance Squadron (53WRS) and the National Oceanic and Atmospheric Administration (NOAA) Aircraft Operations Center (AOC) now coordinate these missions directly with the Air Route Traffic Control Centers (ARTCC). Therefore, it is necessary to remove the obsolete procedures concerning the Central Altitude Reservation Function (CARF) and ALTRVs and update with current winter season mission procedures. This Document Change Proposal (DCP) provides an update that aligns this paragraph with procedures contained in the 2019 National Winter Season Operations Plan (NWSOP). The NWSOP was formerly known as the National Winter Storm Operations Plan.

**3. CHANGE:****OLD****5-3-6. WEATHER RECONNAISSANCE FLIGHTS**

The Air Force Reserve (AFRES) 53rd Weather Reconnaissance Squadron (53WRS) and the National Oceanic & Atmospheric Administration (NOAA) Aircraft Operations Center (AOC) have responsibility for flying winter storm, hurricane, and tropical storm reconnaissance missions. When conducting these missions, aircraft from the 53WRS will utilize the call-sign "TEAL," and aircraft from the AOC will utilize the call\*sign "NOAA." Due to the unique nature of these missions it is necessary to provide a degree of special handling to ensure that sufficient meteorological data is collected. The routes flown are dictated by storm movement, not traffic flows. The nature of these weather phenomena may result in very little time between the filing of a flight plan and the actual departure.

**a. WINTER STORM MISSIONS.**

**1.** Winter storm missions are flown in support of the National Winter Storm Operations Plan (NWSOP). Routes will normally follow published tracks as delineated in the Winter Storm Tracks LOA between CARF and AFRES.

Add

Add

Add

Add

Add

Add

**NEW****5-3-6. WEATHER RECONNAISSANCE FLIGHTS**

The U.S. Air Force Reserve (AFRES) 53rd Weather Reconnaissance Squadron (53WRS) and the National Oceanic & Atmospheric Administration (NOAA) Aircraft Operations Center (AOC) are responsible for flying weather reconnaissance/re-search missions. 53WRS aircraft conducting these missions will utilize the call-sign "TEAL," and aircraft from NOAA AOC will utilize the call\*sign "NOAA." Due to the unique nature of these missions it is necessary to provide a degree of special handling to ensure that sufficient meteorological data is collected. The routes flown are dictated by storm movement, not traffic flows. The nature of these weather phenomena may result in very little time between the filing of a flight plan and the actual departure.

**a. WINTER SEASON MISSIONS.**

**1.** Winter season missions are flown in support of the National Winter Season Operations Plan (NWSOP). The NWSOP states the 53WRS and NOAA AOC will:

**(a) Ensure the appropriate ARTCC(s) has access to the Winter Season Plan of the Day (WSPOD) prior to the mission:**

**NOTE-**

The WSPOD describes the mission and includes, for example, type aircraft call sign, departure airfield, and route of flight.

**(b) Coordinate the mission directly with the ARTCC(s) upon receipt of the mission tasking:**

**NOTE-**

The 53WRS and NOAA AOC are responsible for coordinating airspace access directly with DOD for missions on the U.S. east coast.

**(c) File a flight plan as soon as practicable prior to departure time:**

**(d) Request a NOTAM by filing directly with the U.S. NOTAM office:**

Add

**(e) Coordinate dropsonde instrument releases with ATC prior to release and broadcast on 121.5 and 243.0 to advise any traffic in the area of the pending drop:**

Add

**NOTE–**

**1. A dropsonde is a cardboard cylinder weighing less than a pound, that has a parachute attached, and is used for collecting weather data.**

Add

**2. ATC responsibilities pertaining to dropsonde releases are described in FAA Order JO 7110.65, Paragraph 9–2–20, Weather Reconnaissance Flights.**

**2. Prior to a NWSOP mission, the 53WRS Current Operations or AOC must submit an Altitude Reservation Approval Request (ALTRV APREQ) for a published or adhoc winter storm track to CARF and include the following data:**

**2. TEAL or NOAA flights may request the Chief, Aerial Reconnaissance Coordinator, All Hurricanes (CARCAH) to relay an en route clearance request to the ARTCC if the flight is unable to contact ATC.**

Add

**NOTE–**

**ATC responsibilities pertaining to clearance requests via CARCAH are described in FAA Order JO 7110.65, Paragraph 9–2–20, Weather Reconnaissance Flights.**

**(a) Mission call–sign.**

Delete

**(b) Estimated time over start fix.**

Delete

**(c) Storm track to be flown.**

Delete

**(d) Location of dropsonde release points.**

Delete

**(e) Requested altitude(s) if other than FL290B310.**

Delete

**(f) Any requests to deviate from published routes.**

Delete

**NOTE–**

Delete

**1. The passing of this data does not pre–empt the mission commander's responsibility to file a flight plan, nor does it constitute an ATC clearance.**

**2. A dropsonde is a cylinder shaped 18–inch long metal weather sensor, weighs 3 and 1/2 pounds, and has a parachute attached. The flight will release dropsondes at pre–designated points along the published track. The aircraft commander will want to follow a specific pressure gradient (as opposed to altimeter setting of 29.92) when flying these missions. The correct pressure for dropsondes release is normally found at altitudes between FL290 and FL310. These dropsondes are configured to fall at an average rate of 1,000 feet per minute.**

Delete

**3. Flight between departure airport and ALTRV ingress point, as well as between ALTRV egress and destination airport will be via normal flight plan filing.**

Delete

3. CARF must pass this information to impacted facilities and upon receipt of this data, appropriate facility personnel must ensure that the information is properly distributed to all control positions involved.

4. Requests to permanently change a published winter storm track or drop site must be coordinated with CARF and impacted facilities. Requests to change any other portion of the NWSOP must be coordinated with System Operations and Safety.

3. ATC will provide TEAL and NOAA aircraft priority handling in accordance with FAA Order JO 7110.65, Paragraph 2-1-4, Operational Priority.

Delete

### 1. PARAGRAPH NUMBER AND TITLE:

Section 5. 14 CFR Part 91, UAS Operations

5-5-1. TYPES AND AUTHORITY

5-5-2. OPERATIONS

5-5-3. RESPONSIBILITIES

5-5-4. OPERATIONS IN CLASS A AIRSPACE

5-5-5. OPERATIONS IN TERMINAL RADAR SERVICE AREA (TRSA)

5-5-6. OPERATIONS IN CLASS B AIRSPACE

5-5-7. OPERATIONS IN CLASS C AIRSPACE

5-5-8. OPERATIONS IN CLASS D AIRSPACE

5-5-9. OPERATIONS IN CLASS E AIRSPACE

5-5-10. OPERATIONS IN CLASS G AIRSPACE

5-5-11. LETTERS OF AGREEMENT (LOA)/MEMORANDUMS

**2. BACKGROUND:** A workgroup consisting of AJT-3, AJR-2, and legacy AJV-115 and AJV-8 (now realigned into AJV-P) was created to determine if certain Unmanned Aircraft Systems (UAS) policies contained in FAA Order JO 7200.23 UAS, could be relocated into FAA Order JO 7210.3, Facility Operations and Administration. The workgroup felt the policy relating to 14 CFR Part 91, UAS OPERATIONS, would be better suited in FAA Order JO 7210.3, Chapter 5 Special Flight Handling, Section 5 14 CFR Part 91. The change describes UAS operations under 14 CFR Part 91 and the rules and regulations that affect these operations.

### 3. CHANGE:

#### OLD

Add

#### NEW

Section 5. 14 CFR Part 91, UAS Operations

#### OLD

Add

Add

Add

#### NEW

5-5-1. TYPES AND AUTHORITY

a. Public aircraft operating under Part 91.

1. Public aircraft operations are defined in 14 CFR, Part 1, Definitions & Abbreviations and 49 U.S.C. § 40102, 40125.



- Add 2. For UAS operating (including tethered/moored UAS) as public aircraft, the authority is the Certificates of Waiver or Authorization (COA) or as specified in a Memorandum of Agreement (MOA), or Memorandum of Understanding (MOU) between the using agency and FAA Headquarters. These types include:
- Add (a) Standard COA.
- Add (b) Blanket COA.
- Add b. UAS (including tethered/ moored UAS) operating as civil aircraft operating under Part 91.
- Add 1. Any operation that does not meet the statutory criteria for a public aircraft operation is considered a civil aircraft operation and must be conducted in accordance with all FAA regulations applicable to the operation.
- Add 2. For UAS operating as civil aircraft the authority is a special airworthiness certificate, restricted category aircraft (21.25), Type Certificate, or a Section 44807 exemption with COAs.
- Add 3. When the Section 44807 exemption is granted, the petitioner will be issued a Blanket COA. If the operation cannot be conducted under the provisions of the Blanket COA, the proponent must apply for a Standard COA. A waiver request to a Blanket COA will not be approved.

**OLD****NEW**

- Add **5-5-2. OPERATIONS**
- Add a. UAS operating under Part 91 COA can be VFR or IFR.
- Add b. The UAS Pilot-in-Command (PIC) is to give way to all manned aircraft, except when operating under IFR.
- Add c. UAS operations should not impede, delay, or divert manned aircraft operations, except as directed by ATC for operational necessity.
- Add d. If a Part 91 operation is conducted entirely at or below 400 ft. AGL then any ATC services will be contained in a Letter of Agreement or ATC Memorandum.

- Add e. Flights below Flight Level (FL) 180 must have a dedicated observer or a waiver to 14 CFR 91.113. These duties will be performed by a ground-based observer or chase plane. UAS pilots and observers must be responsible for only one UA at a time unless authorized in the COA.
- Add 1. Daisy chaining of observers or observers on a moving platform may be approved on a case-by-case basis and as authorized in the COA.
- Add 2. When a ground-based/chase plane observer is required, a pilot may not perform concurrent duties as the pilot and an observer.
- Add f. Procedures for non-joint-use Department of Defense (DOD) airfield operations will be specified by the DOD.

**OLD****NEW**

Add

**5-5-3. RESPONSIBILITIES**

Add

a. UAS flying under IFR should be handled in the same manner as manned IFR aircraft, however, consideration should be given to the possibility of unique UAS performance characteristics.

Add

b. Lost Link Procedures will vary based upon the type of UAS and must be included in the COA. ATC specialists must have access to all coordinated information available in its simplest form, to determine the actions a UAS will take in these scenarios. The Operations Supervisor/Controller-in-Charge (OS/CIC) should ensure that coordinated information is available, and if known, that the controller has a method of contacting the appropriate UAS PIC. In the event of a UAS lost link, procedures outlined in FAA Order JO 7110.65, Paragraph 5-2-9, Unmanned Aircraft Systems (UAS) Lost Link, will be followed.

Add

c. The following operations are not authorized for UAS:

Add

1. Instructions to visually follow another aircraft.

Add

2. Opposite Direction Operations (ODO).

Add

3. Special VFR operations.

Add

4. Operations requiring UAS to maintain visual separation.

- Add d. The use of sequencing as indicated in FAA Order JO 7110.65, Chapter 3, Section 8, is authorized with the exception of issuing instruction to follow another aircraft or to maintain visual separation.
- Add e. In the event of a UAS emergency, procedures outlined in FAA Order JO 7110.65, Air Traffic Control, Chapter 10, will be followed.
- Add f. Air traffic facility management at facilities where UAS operations are being conducted are required to ensure air traffic controllers are familiar with the contents of each COA and any applicable LOAs impacting their area of specialization.
- Add g. Operational communication with any UAS PIC must be on a recorded line, when available.

**OLD****NEW**

- Add **5-5-4. OPERATIONS IN CLASS A AIRSPACE**
- Add a. UAS must operate on an IFR flight plan and a standard COA.
- Add b. UAS must comply with the provision of § 91.135.
- Add c. ATC must provide separation and ATC services per FAA Order JO 7110.65 with consideration given to UAS performance characteristics and potential latency issues.

**OLD****NEW**

- Add **5-5-5. OPERATIONS IN TERMINAL RADAR SERVICE AREA (TRSA)**
- Add a. If TRSA services are provided, they will be in accordance with FAA Order JO 7110.65, Chapter 7.
- Add b. If it is determined that ATC will provide services in the TRSA for UAS operating entirely at or below 400 ft. AGL, those services will be specified in an LOA or ATC Memorandum.

**OLD****NEW**

- Add **5-5-6. OPERATIONS IN CLASS B AIRSPACE**
- Add a. If Class B services are provided, they will be in accordance with FAA Order JO 7110.65, Chapter 7.

Add b. If it is determined that ATC will provide services in the Class B for UAS operating entirely at or below 400 ft. AGL, those services will be specified in an LOA or ATC Memorandum.

Add c. UAS must operate on a standard COA or in accordance with using agency/FAA UAS MOA/MOU.

**OLD****NEW**

Add

**5-5-7. OPERATIONS IN CLASS C AIRSPACE**

Add

a. If Class C services are provided, they will be in accordance with FAA Order JO 7110.65, Chapter 7.

Add

b. If it is determined that ATC will provide services in the Class C for UAS operating entirely at or below 400 ft. AGL, those services will be specified in an LOA or ATC Memorandum.

**OLD****NEW**

Add

**5-5-8. OPERATIONS IN CLASS D AIRSPACE**

Add

UAS must operate on a standard COA or in accordance with using agency/FAA DOD Class D notification per the using agency/FAA UAS MOA/MOU.

**OLD****NEW**

Add

**5-5-9. OPERATIONS IN CLASS E AIRSPACE**

Add

UAS must comply with provisions of § 91.127 unless otherwise authorized by the jurisdictional ATC facility.

**OLD****NEW**

Add

**5-5-10. OPERATIONS IN CLASS G AIRSPACE**

Add

a. UAS must comply with provisions of § 91.126 unless otherwise authorized by the jurisdictional ATC facility.

Add

b. UAS must operate on a standard or blanket COA in accordance with using agency/FAA UAS MOA/MOU.

**OLD****NEW**

Add

**5-5-11. LETTERS OF AGREEMENT  
(LOA)/MEMORANDUMS**

Add

**a. LOAs should be developed in accordance with FAA Order JO 7210.3, Facility Operation and Administration.**

Add

**b. LOAs should address contingency procedures, if not contained in the COA, including but not limited to:**

Add

**1. Lost Link, to include flight termination points.**

Add

**2. Flyaway.**

Add

**3. Lost Sight of UAS by the visual observer.**

Add

**4. Any specific altitude limitations, geographic boundary limitations, preferred route assignments, and periods of operation(s). This information must be provided to the ATC facility involved in the LOA via graphical depiction.**

Add

**5. Weather requirements for operations.**

Add

**6. ATC facilities responsibilities.**

Add

**7. UAS proponent responsibilities.**

Add

**NOTE-****LOAs may be used in conjunction with COAs when the ATM deems it necessary; they cannot be used in lieu of COAs.****1. PARAGRAPH NUMBER AND TITLE:**

9-1-5. USE OF AUTOMATED COUNTS

9-1-6. FAA FORM 7230-14, ARTCC OPERATIONS DAILY SUMMARY

9-1-7. INSTRUCTIONS FOR COMPLETING FAA FORM 7230-14

**2. BACKGROUND:** Automated traffic counts have largely replaced manual traffic counts. Form 7230-14 is no longer widely used. The paragraphs requiring Form 7230-14 to be used are outdated and cause confusion.

**3. CHANGE:****OLD****9-1-5. USE OF AUTOMATED COUNTS**

ARTCCs may elect to use a computer counting routine or a combination of manual and automated counting procedures. For example, a computer count may be used for typical airline Departures and Overs, while the more unique military Overs are added in manually. The accuracy of computer counts must be verified periodically to be within plus/minus 3 percent of the actual traffic count.

**OLD****9-1-6. FAA FORM 7230-14, ARTCC OPERATIONS DAILY SUMMARY**

The FAA Form 7230-14 is a monthly form which must be used by ARTCCs and CERAPs for reporting their daily and monthly operational traffic counts. The front side of the form is for Domestic operations and VFR advisory count. This side will meet the normal requirements of most facilities. The back of the form is for Oceanic operations and must be filled out by those facilities having oceanic airspace. In addition, the areas might be used by any or all facilities. Any time the back of the form is used, the facility must fill in the month and the year blocks and the facility's location identifier. This provision ensures proper identification in the case of multiple copies. Forms forwarded as the official facility traffic count must be neat and readable as each column will be keypunched for computer processing and storage.

**OLD****9-1-7. INSTRUCTIONS FOR COMPLETING FAA FORM 7230-14**

**a. FRONT SIDE:** Enter the facility's name and location. Use two digits each for the month and the year (March 2004 would be 03, 04), and fill in the facility's three-letter identifier.

**NEW****9-1-5. USE OF AUTOMATED COUNTS**

ARTCCs may elect to use **automated counting procedures, manual counting procedures, or both.** For example, a computer count may be used for Departures and Overs, while military **and oceanic** Overs are added manually. The accuracy of computer counts must be verified periodically to be within plus/minus 3 percent of the actual traffic count.

**NEW****9-1-6. FAA FORM 7230-14, ARTCC OPERATIONS DAILY SUMMARY**

**When using manual counting procedures,** FAA Form 7230-14 is a monthly form which must be used by ARTCCs and CERAPs for reporting their daily and monthly operational traffic counts. The front side of the form is for Domestic operations and VFR advisory counts. This side will meet the normal requirements of most facilities. The back of the form is for Oceanic operations and must be filled out by those facilities having oceanic airspace. Forms forwarded as the official facility traffic count must be neat and readable as each column will be **entered into the** computer **for** processing and storage.

**NEW****9-1-7. INSTRUCTIONS FOR COMPLETING FAA FORM 7230-14**

**a. FRONT SIDE:** Enter the facility's name and location. Use two digits for the month and the year (March 2019 would be 03, 19), and fill in the facility's three-letter identifier.

**1. Domestic Operations:** Each day record by category the count for Departures, Arrivals, and Overs. These columns are added across to get the “Domestic Aircraft Handled” column. Those facilities not using an arrival count must leave those columns blank, enter the actual number of departures in the departure column, and reflect departures multiplied by 2 plus overs in the “Domestic Aircraft Handled” column. Safety and Operations Support does not keypunch the “Domestic Aircraft Handled” column. Rather, it uses a computer routine to add the individual entries, and that column is provided only for the convenience of the facilities and the Service Area office. At the bottom of the form, a row marked “TOTAL” is for the monthly total of each column. Below that row, and at the very bottom, is a row marked “1,” which may be used any way the facility desires to use it.

**2. VFR Advisories:** The far right-hand column is for the VFR Advisories count. The count is used in various studies of expanded ARTCC service and is required of all facilities.

**b. REVERSE SIDE:** Facilities which are required to use the back side for any reason must repeat the entries for the month, the year, and the facility location identifier.

**1. Oceanic Operations:** The primary use of the back of the form is for Oceanic operations. If a facility has oceanic airspace, Oceanic operations must be filled in each day by category. If a category has no Oceanic operations for a day, leave it blank, do not use a zero. These columns are added across to get the “TOTAL” Oceanic operations column. At the bottom of the form, a row marked “TOTAL” is for the monthly total of each column.

**2. Grand Total:** For the convenience of the facility (it is not keypunched), this column provides JO 7210.3AA 10/12/17 9-1-4 Operational Count Data space to add the Domestic total to the Oceanic total to get a grand total for the day. The form is designed to be folded so that the three columns are side by side and folding instructions are printed on the form.

No Change

**2. VFR Advisories:** The far right-hand column is for the VFR Advisories count. The count is used in various studies of expanded ARTCC service.

**b. REVERSE SIDE:** Facilities that need to use the back of the form must repeat the entries for the month, the year, and the facility location identifier.

**1. Oceanic Operations:** The primary use of the back of the form is for Oceanic operations. If a facility has oceanic airspace, unless reported by other means, Oceanic operations must be filled in each day by category. If a category has no Oceanic operations for a day, leave it blank, (do not use a zero). These columns are added horizontally to get the “TOTAL” Oceanic operations column. At the bottom of the form, a row marked “TOTAL” is for the monthly total of each column.

**2. Grand Total:** Add the Domestic total to the Oceanic total to get a grand total for the day. The form is designed to be folded so that the three columns are side by side. Folding instructions are printed on the form.

**1. PARAGRAPH NUMBER AND TITLE:**

Chapter 12, Section 2. Automated Terminal Tracking Systems (ATTS)

12-2-1. OPERATIONAL USE

12-2-2. DATA ENTRIES

12-2-3. DISPLAY DATA

12-2-4. USE OF MODIFY AND QUICK LOOK FUNCTIONS

12-2-5. AUTOMATION PROGRAM CHANGES

12-2-6. AUTOMATIC ACQUISITION/TERMINATION AREAS

12-2-7. MINIMUM SAFE ALTITUDE WARNING (MSAW), CONFLICT ALERT (CA), AND MODE C INTRUDER (MCI)

12-2-8. MAGNETIC VARIATION OF VIDEO MAPS/GEO MAPS AT ARTS FACILITIES

12-2-9. MSAW DTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION

12-2-10. DIGITAL MAP VERIFICATION

12-7-7. MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA)

12-7-9. MSAW GTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION

**2. BACKGROUND:** As of September 22, 2019, all remaining ATTS facilities in the NAS were converted into or consolidated into Standard Terminal Automation Replacement Systems (STARS) facilities. As a result, this paragraph is no longer necessary and will be removed. Additionally, references to now obsolete paragraphs are being removed, and office designations are revised due to a recent reorganization.

**3. CHANGE:**

<u>OLD</u>	<u>NEW</u>
<u>Section 2. Automated Terminal Tracking Systems (ATTS)</u>	Delete
<u>12-2-1. OPERATIONAL USE</u>	Delete
<u>a. Do not use ATTS data when the system, or that portion of the systems, is released to Technical Operations technicians.</u>	Delete
<u>b. Verify the operational status of all ATTS components daily prior to operational use.</u>	Delete
<u>c. Advise effected facilities when ATTS equipment will not be operational at normal startup time, when it fails, is shut down, resumes operation, or when interfacility mode is lost/regained.</u>	Delete



**OLD****12-2-2. DATA ENTRIES**

Facility directives must prescribe the use of the Scratch Pad and the specific responsibility for entering the current ATIS alpha character, the current General System Information (GSI), and the System Altimeter Setting. When an ATIS facility serves more than one controlled airport, an average of the altimeter settings for those airports may be specified as the System Altimeter Setting. A remote altimeter setting may be used in accordance with para 2-10-4, Comparison Checks, in the event that all local altimeter indicators fail. Do not use this procedure whenever conditions indicate the probability of a steep pressure gradient between two locations.

**NOTE-**

The ARTS II system does not provide a GSI area; however, it does provide the capability to enter and display an assigned altitude.

**NEW**

Delete

Delete

Delete

**OLD****12-2-3. DISPLAY DATA**

a. When a malfunction causes repeated discrepancies of 300 feet or more between the automatic altitude readouts and pilot reported altitudes, request authorized personnel to inhibit the automatic altitude report (Mode C) display until the malfunction has been corrected.

b. If available, operate the field inhibit/select switches in the select position for the leader line, ACID, altitude, and handoff fields. The control position symbol and other full data block fields must be selected/inhibited in accordance with facility directives.

**NEW**

Delete

Delete

Delete

c. Display Mode C on untracked (unassociated) targets within each controller's area of responsibility by setting the altitude filters to encompass all altitudes within the controller's jurisdiction. Set the upper limits no lower than 1,000 feet above the highest altitude for which the controller is responsible. In those stratified positions, set the upper and lower limit to encompass at least 1,000 feet above and below the altitudes for which the controller is responsible. When the position's area of responsibility includes down to an airport field elevation, the facility will normally set the lower altitude filter limit to encompass the field elevation, so that provisions of FAA Order JO 7110.65, Air Traffic Control, para 2-1-6, Safety Alert, and subpara 5-2-17a2, Validation of Mode C Readout, may be applied. Air traffic managers may authorize the temporary suspension of this requirement when target clutter is excessive.

Delete

**REFERENCE-**

FAA Order JO 7110.65, Para 5-2-24, Altitude Filters.

Delete

**OLD**

**NEW**

**12-2-4. USE OF MODIFY AND QUICK LOOK FUNCTIONS**

Delete

a. Where ATTS data from a system common to the TRACON and the tower is presented on a CTRD, and if operational benefits will accrue by using the MODIFY or QUICK LOOK functions, a facility directive or a LOA must be prepared specifying:

Delete

1. Procedures for data transfer between the TRACON and the tower cab.

Delete

2. Communications changeover points.

Delete

3. Transfer of control points.

Delete

4. Hours or conditions under which facility policy prohibits use of these functions.

Delete

5. The responsibility of the local control position to determine whether use of MODIFY or QUICK LOOK functions is satisfactory or some other mode of data transfer is to be used; e.g., voice call or computer handoff.

Delete

b. Factors to be considered by the controller in determining use of the MODIFY or QUICK LOOK functions and by the facilities for prohibiting their use include, but are not limited to, light on the face of the CTRD, traffic volume, other duties requiring the controller's attention, and the number of controllers available in the tower.

Delete

### **OLD**

#### **12-2-5. AUTOMATION PROGRAM CHANGES**

### **NEW**

The air traffic manager of automated facilities must:

Delete

a. Approve all requests for automation changes sent to the respective Operational Support Facility via the National Automation Request form, FAA Form 6000-14.

Delete

Delete

b. Review each SITE PROGRAM BULLETIN (TERMINAL) issued by the Terminal Automation Support for local program functionality and changes to the data base to determine any operational/procedural impact. When necessary:

Delete

1. Issue a facility directive describing the functional change/s and any resulting procedural change/s.

Delete

2. Coordinate any functional, procedural, and airspace change/s with the ARTCC providing automation interface.

Delete

c. Ensure that operational suitability acceptance for software modifications is recorded on FAA Form 7230-4.

Delete

**EXAMPLE-**

Delete

**ARTS IIIA:**

“A3.06, National Patch Level P operational suitability testing completed, acceptable.”

**COMMON ARTS:**

“A605, REV 20 operational suitability testing completed, acceptable.”

“A2.09, REV 20 operational suitability testing completed, acceptable.”

**MICRO EARTS:**

“M4.08R, operational suitability testing completed, acceptable.”

**OLD**

**NEW**

**12-2-6. AUTOMATIC**

Delete

**ACQUISITION/TERMINATION AREAS**

**a. Facility air traffic managers must:**

Delete

1. Establish automatic acquisition areas for arrivals and overflights at ranges permitting auto-acquisition of targets prior to the ARTCC/ATTS-to-ATTS automatic handoff area when the center is in the surveillance data processing (SDP) mode.

Delete

2. Coordinate with the adjacent automated facilities to ensure that computer handoffs will be initiated only after the aircraft is within their facility's automatic acquisition area. Where this is not feasible due to airspace assignment, facility directives must require use of an appropriate procedure specified in FAA Order JO 7110.65, Air Traffic Control, to confirm the identity of all aircraft handed off prior to ATTS auto-acquisition.

Delete

3. Establish Automatic Acquisition Areas for departing aircraft 1 mile or less from the runway end.

Delete

4. Establish Automatic Termination Areas for arriving aircraft 1 mile or less from the runway threshold or, at satellite airports, the minimum radar coverage range/altitude whichever is greater.

Delete

5. Prescribe in a facility directive the operating position responsibility for determining if automatic acquisition of a departure track has occurred.

Delete

**NOTE-**

This is intended for operations where automatic acquisition responsibility could be confused, e.g., uncontrolled airports within a single sector, or between different radar sectors that serve the same airport.

Delete

**b. Terminal Operations Service Area Directors may authorize a distance greater than specified in subparas a3 and 4 above, where the operational conditions dictate.**

Delete

**OLD****NEW**

**12-2-7. MINIMUM SAFE ALTITUDE WARNING (MSAW), CONFLICT ALERT (CA), AND MODE C INTRUDER (MCI)**

Delete

**a. MSAW, CA and MCI values must be set in accordance with the standards specified in the Standards and Guidelines for CARTS Appendix D, Standards and Guidelines for ARTS IIIA, and Standards and Guidelines for MEARTS. Any instances of requests for values outside the standards must require a waiver from Vice President, Terminal Services.**

Delete

**b. When their continued use would adversely impact operational priorities, air traffic managers may temporarily inhibit the MSAW, the Approach Path Monitor portion of MSAW, and/or the CA and/or MCI functions. Except when equipment or site adaptation problems preclude these functions being used, a brief written report must be sent to the appropriate Service Area Director of Air Traffic Operations whenever they are inhibited. A copy of the report must be sent to Director of Operations-Headquarters.**

Delete

**c. Facility air traffic managers are authorized to inhibit CA at specific operating positions if an operational advantage will occur.**

Delete

**d. Facility air traffic managers must ensure that:**

Delete

**1. MSAW and CA nuisance alarms are minimized by monitoring alarm frequency and location and forwarding suspected problem areas to the servicing Operational Support Facility along with any supporting documentation, via a National Automation Request (NAR) form.**

Delete

2. A visual inspection and aural test of the MSAW speakers located in the operational quarters by supervisory personnel is included as part of the equipment check list required during each watch. The purpose of this inspection is to ensure the aural alarm is functioning and audible to the appropriate operational personnel.

Delete

3. The operational support facility has adapted the software functionality to ensure the aural alarms operate in the ATCT.

Delete

4. Aural alarms are received in the ATCT upon transfer of communications.

Delete

5. Controllers are aware of the towers geographic locations where aural alarms sound. (MSAW aural alarm areas.)

Delete

6. Tower aural alarm areas are identified.

Delete

### **OLD**

#### **12-2-8. MAGNETIC VARIATION OF VIDEO MAPS/GEO MAPS AT ARTS FACILITIES**

### **NEW**

Delete

Air traffic managers must ensure that:

Delete

a. The magnetic variation of radar video maps/geo maps, MSAW, DTMs/GTMs and radar site settings coincide and is verified annually.

Delete

b. Affected map or maps are recompiled when the official magnetic variation of record is changed/implemented.

Delete

#### **NOTE-**

Delete

1. The video map is the primary reference for maintaining radar antenna alignment.

2. The DTM is constructed to align with the radar antenna offset for magnetic north. Consequently, any change in antenna offset will result in a corresponding change in the relative positions of the terrain points and obstacles used to determine DTM bin altitude assignments. This will require generating and verifying a new DTM.

Delete

3. The GTM is constructed to align with true north offset by the site adaptable radar antenna magnetic variation. Consequently, any change in antenna offset will result in a corresponding change in the relative position of bin locations.

Delete

4. In both cases, DTM or GTM, any change in antenna offset will result in re-adaptation of the MSAW and CA databases; e.g., airport areas, inhibit volume areas, capture boxes, etc., to coincide with the changed declination.

Delete

**5. Technical Operations Aviation System Standards has the responsibility to assign and maintain the Magnetic Variation of record for navigational facilities and airports.**

Delete

**REFERENCE–**

FAA Order JO Para 12–2–9, MSAW DTM Cartographic Certification, Updates, and Recompilation.  
FAAO 8260.19, Flight Procedures and Airspace.

Delete

**OLD**

**NEW**

**12–2–9. MSAW DTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION**

Delete

**a. System Operations Airspace and Aeronautical Information, must be responsible for assuring that the National Aeronautical Charting Office (NACO) performs the certification of the terrain elevations and the obstacle elevations. Each new or recompiled MSAW DTM must be certified by the NACO through the AT/NACO Precise Geographic Position and Elevation Program (PREGPEP). Also, NACO must certify the periodic update of the MSAW obstacle elevation files.**

Delete

**b. The MSAW DTM must be recompiled by NACO if:**

Delete

**1. The ASR antenna on which the map is based is relocated more than 300 feet away from its original position and/or,**

Delete

**2. The magnetic variation of the site changes by two degrees or more.**

Delete

**NOTE–**

Requests for new or recompiled DTMs are routed to System Operations Airspace and Aeronautical Information.

Delete

**OLD**

**NEW**

**12–2–10. DIGITAL MAP VERIFICATION**

Delete

Verification of the accuracy of new or modified digital maps must be accomplished through the use of “targets of opportunity” flying over displayed fixes, navigational aids, etc. Any observed discrepancies must be documented to indicate the observed direction and displacement. If any identified error cannot be corrected or if a facility is otherwise dissatisfied with the results from “targets of opportunity,” a request may be made through the FICO for a flight inspection.

Delete

**Section 3 through Section 10**

**Renumber Section 2 through Section 9**

**OLD****12-7-7. MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA)**Title through **d**

**1.** The magnetic variation of the facility's MSAW GTM coincides with the magnetic variation of the facility's adapted radar site settings.

**NOTE-**

*The DTM is constructed to align with the radar antenna offset for magnetic north. Consequently, any change in antenna offset will result in a corresponding change in relative positions of the terrain points and obstacles used to determine DTM bin altitude assignments. This will require not only generating and verifying a new DTM, but also readapting the MSAW and CA data bases; e.g., airport areas, inhibit volume areas, capture boxes, etc., to coincide with the changed declination.*

**REFERENCE-**

*FAA Order JO 7210.3, Para 12-2-8, Magnetic Variation of Video Maps/Geo Maps at ARTS Facilities.*

**NEW****12-6-7. MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA)**

No Change

No Change

No Change

Delete

**OLD****12-7-9. MSAW GTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION**

**a.** Aeronautical Information Services, Air Traffic Support Team (AJV-A2) performs the certification of the terrain elevations and the obstacle elevations. Each new or recompiled MSAW GTM must be certified by AJV-A2.

**NEW****12-6-9. MSAW GTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION**

**a.** Aeronautical Information Services, Radar Video Map Team (AJV-A2) performs the certification of the terrain elevations and the obstacle elevations. Each new or recompiled MSAW GTM must be certified by AJV-A2.

**1. PARAGRAPH NUMBER AND TITLE:**

12-8-3. MONITOR ALERTS AND ENSURE CORRECTIVE ACTION

**2. BACKGROUND:** It was discovered that FAA Order JO 7210.3, Facility Operation and Administration, 12-8-3, Monitor Alerts and Ensure Corrective Action, lacked direction to the FAA Order JO 7210.632, Air Traffic Organization Occurrence Reporting, in the paragraph. This change will address that shortfall.



**3. CHANGE:****OLD****12–8–3. MONITOR ALERTS AND ENSURE CORRECTIVE ACTION****Title through a**

**b.** All Safety Logic System alerts generated must be documented on FAA Form 7230–4. If unable to determine the origin of an alert, treat the alert as false and notify Technical Operations so that the corrective action can be taken.

**REFERENCE–**

*Pilot/Controller Glossary Term– Safety Logic System Alerts.*

**NEW****12–7–3. MONITOR ALERTS AND ENSURE CORRECTIVE ACTION****No Change**

**b.** All Safety Logic System Alerts generated must be documented on FAA Form 7230–4. If unable to determine the origin of an alert, treat the alert as false and notify Technical Operations so that the corrective action can be taken.

**REFERENCE–**

*Pilot/Controller Glossary Term– Safety Logic System Alerts.*

*FAA Order JO 7210.632, Chapter 2, Reporting Requirements.*

*FAA Order JO 7210.632, Appendix A, Mandatory Occurrence Report Criteria.*

**1. PARAGRAPH NUMBER AND TITLE:**

Section 10. UAS Facility Maps (UASFM)

12–10–1. POLICY

12–10–2. RESPONSIBILITY

12–10–3. ASSUMPTIONS

12–10–4. AUTHORIZATION MAP DESIGN PROCEDURES CLASS B/C/D AIRSPACE

12–10–5. UAS FACILITY MAP (UASFM) DESIGN

12–10–6. PART 107 OPERATION APPROVALS

**2. BACKGROUND:** A workgroup consisting of AJR–2, AJT–3, and the legacy AJV–8 and AJV–115 (now realigned into AJV–P) was created to determine if certain Unmanned Aircraft Systems (UAS) policies contained in FAA Order JO 7200.23 UAS, could be relocated into the FAA Order JO 7210.3, Facility Operations and Administration. The workgroup felt the policy relating to UAS Facility Maps (UASFM), would be better suited in a new section in FAA Order JO 7210.3, Chapter 12 National Programs, Section 11 UASFM. The UASFM play a critical role in the analysis of UAS operations within airspace that require an ATC authorization. The maps identify altitudes at or below which the facility has evaluated and that the FAA can automatically authorize Part 107 operations (provided they otherwise comply with regulations). That is, the FAA can authorize operations within the UASFMs automatically, requiring far less time and human effort than manually processed authorizations.

**3. CHANGE:****OLD**

Add

**NEW**

**Section 10. UAS Facility Maps (UASFM)**

**OLD****NEW**

Add

**12-10-1. POLICY**

Add

**a. UASFM must be developed in accordance with FAA Order JO 7210.3, Chapter 12, Section 10.**

Add

**b. The ATM will review the maps annually, or whenever modifications are necessary. Reasons for modifications include, but are not limited to:**

Add

**1. Airspace changes.**

Add

**2. Runway or airport property changes.**

Add

**3. Changes in procedures.**

Add

**4. Changes in volume of traffic.**

Add

**c. If changes need to be made to the UASFM, forward your request to [uasfm@faa.gov](mailto:uasfm@faa.gov).**

**OLD****NEW**

Add

**12-10-2. RESPONSIBILITY**

Add

**The ATM will designate a primary and secondary UASFM Point of Contact (POC). When there are changes to the POCs, notify Headquarters at [uasfm@faa.gov](mailto:uasfm@faa.gov).**

Add

**NOTE–**

**Facilities may use the facility group email address as their POC.**

**OLD****NEW**

Add

**12-10-3. ASSUMPTIONS**

Add

**a. There are portions of each facility's airspace at very low altitudes that a sUAS could operate without impacting IFR or VFR operations.**

Add

**b. Part 107 operations by rule are exempt from the Part 91 rules that define VFR and IFR operations. Therefore, Part 107 operations are not defined as VFR or IFR and require no separation or services by ATC.**

Add

**c. Evaluate each segment for the impact of the UAS flight to your operation (i.e., If a UAS flew in segment A1 at 400 feet, would that affect your operation? What about 300 feet or 200 feet?).**

Add

**d. All runways are in use for arrival and departure.**

Add

**e. Altitudes will be listed in 50-foot increments, starting at 0 feet (0, 50, etc.) and ending at 400 feet. Altitudes are listed as AGL.**

Add	<p><b><u>NOTE-</u></b>  <b><u>Part 107 allows operators to fly 400 feet AGL and if within a 400-foot radius of a structure/obstacle, they can fly to the height of the structure plus 400 feet. However, the maps will only be evaluated to 400 feet AGL. For any request above 400 feet AGL, regardless of proximity to a structure/obstacle, headquarters will coordinate with the facility.</u></b></p>
Add	<p><b><u>f. All UAS operations that are requested at or below the altitude listed for the segment for where the flight will occur will be approved without facility coordination. However, the facility will receive a copy of the authorization.</u></b></p>
Add	<p><b><u>g. Zero (0) altitude means no UA flights authorized without facility coordination.</u></b></p>
Add	<p><b><u>h. For UAS flights that take place in two or more segments, the lowest published altitude will be used.</u></b></p>
Add	<p><b><u>i. When a UA operation has been approved, the affected facilities will receive an email that will include the responsible person's contact information, location, altitude, time and date of UA operation.</u></b></p>
Add	<p><b><u>j. In the event two facilities overlap the same segment, the lowest altitude will be used for both facilities.</u></b></p>
Add	<p><b><u>k. Items to consider:</u></b></p>
Add	<p><b><u>1. Part 107 operators must comply with all parts of the Part 107 rule (i.e., Part 107 operators must maintain visual line of site with their UA, they must yield right-of-way to all aircraft, they are solely responsible for not operating in prohibited or restricted areas without prior permission, they are solely responsible for not operating in temporary flight restricted airspace, and they are solely responsible for not operating over nonparticipating people).</u></b></p>
Add	<p><b><u>2. Diverse vectoring areas (DVA) and aircraft performing minimum departure climbs at 200 feet per mile.</u></b></p>
Add	<p><b><u>3. Obstructions already present (i.e., a segment with 60-foot trees would allow UA to operate safely at 50 feet).</u></b></p>

- Add 4. Low altitude operations (i.e., helipads).
- Add 5. The UA operator is solely responsible for avoiding ground hazards, sensitive areas (e.g., nuclear power plants, critical infrastructure and federal facilities), and areas where drone operations are prohibited.

**OLD****NEW**

- Add **12-10-4. AUTHORIZATION MAP DESIGN PROCEDURES CLASS B/C/D AIRSPACE**
- Add a. Each facility must review the assumptions section.
- Add b. Each facility will work collaboratively with their workforce to develop the UA map. Each segment must be evaluated to determine the highest altitude a UA could operate without any coordination to the facility.
- Add c. Facilities must evaluate all segments for the maximum altitude they will allow without further coordination within their area of jurisdiction for flights between 0-400 feet in 50-foot increments.
- Add d. For partial segments, facilities only need to evaluate the area they have jurisdiction over but will show the altitude for the entire segment.
- Add e. For segments outside your area of jurisdiction, leave the segments on the spreadsheet blank.
- Add f. In areas where the overriding rule/law specifies no UAS operations (e.g., the DC FRZ), we are still asking facilities to complete the map as though operations could be permitted without the overriding regulations. There may be situations where law enforcement, DOD, etc. could ask for authorization under Part 107 and have the ability to operate in the area.
- Add g. Once you have finished the spreadsheets, email them to uasfm@faa.gov.

**OLD****NEW**

- Add **12-10-5. UAS FACILITY MAP (UASFM) DESIGN**
- Add a. Each facility will need three files: a facility map (.pdf), a Google Earth (.kmz) file, and a spreadsheet (.xls). To receive the files, send an email to uasfm@faa.gov.

Add

**b. The map will display the facility's airspace as defined in FAA Order JO 7400.9, Airspace Designations and Reporting Points. A latitude/longitude grid will be placed over the maps creating rectangular divisions, referred to as "segments". The map will have a satellite image as its background. (See FIG 12-10-1.)**

Add

**c. A .kmz file is a file that opens using Google Earth Pro. It is not a requirement to use a .kmz file, but the .kmz file may be easier to work with because of the program's zoom and pan feature. The facility map is a .pdf file of the .kmz. If the facility does not have Google Earth Pro, contact the IT department for program installation. The FAA facilities IT support number is 1-844-322-6948.**

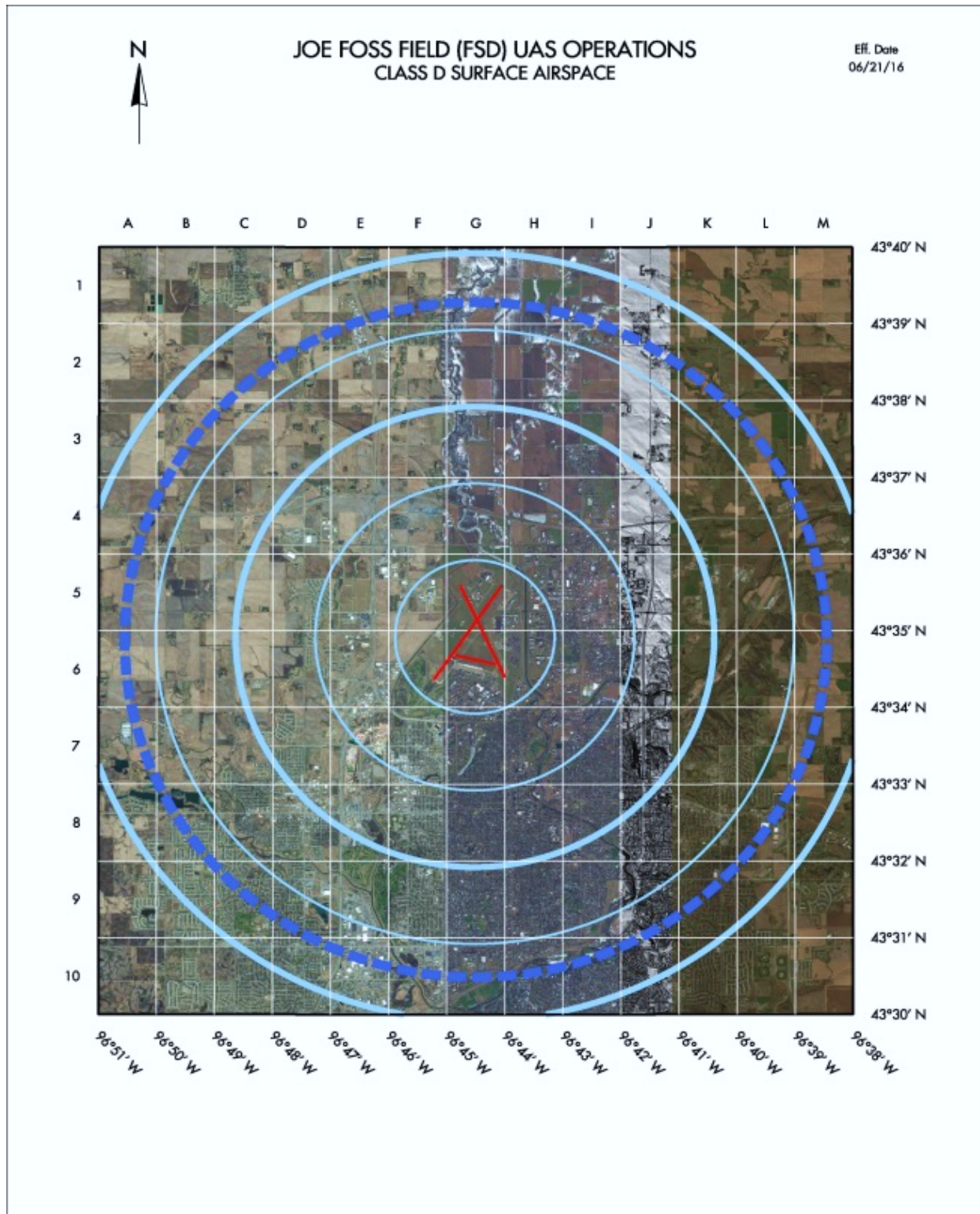
Add

**d. Each segment will be identified by a letter and number. The latitude segments will be labeled with letters and will increase by one for each segment (A, B, etc.). The longitude segments will be labeled with 1 and increase by one for each segment (1, 2, etc.).**

Add

**e. Assign each segment a value of 0-400 feet, in 50-foot increments. Only evaluate segments that are within the surface area of your Class B/C/D airspace. Leave the segments outside the surface area blank. In the event that a surrounding facility owns or abuts your surface area, you must work with that facility (i.e., TRACON owns 1 mile from the runway.) Only complete sheet 1 of the spreadsheet. Sheet 2 and sheet 3 self-populate and the data must not be changed. They will be used to develop a Google Earth graphical overlay. (See FIG 12-10-2.)**

Add

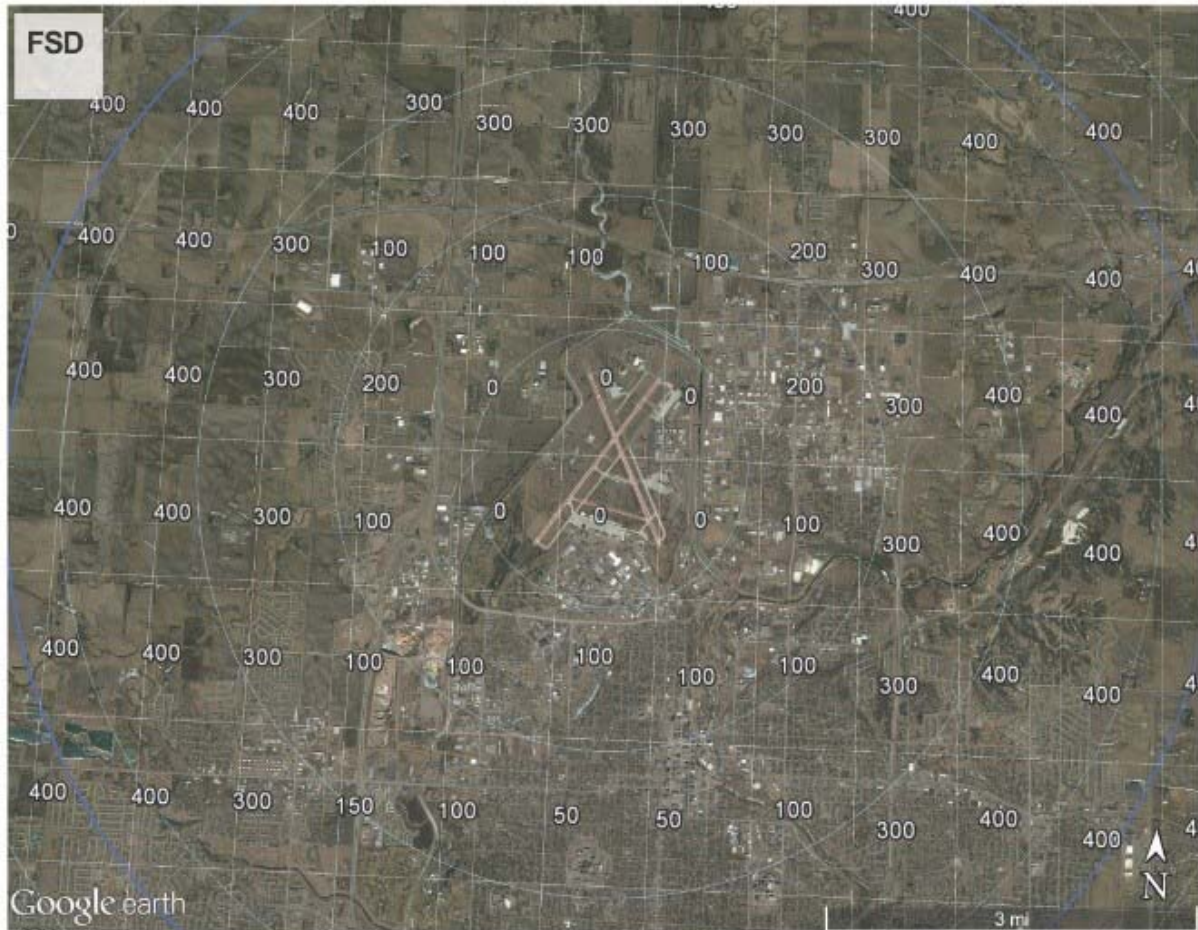
FIG 12-10-1**Background Satellite Image**



Add

*FIG 12-10-2*

**Google Earth Graphical Overlay**



Add

**f. UASFM Checklist.**

Add

**1. Request files from [uasfm@faa.gov](mailto:uasfm@faa.gov).**

Add

**2. Complete the spreadsheet, working collaboratively. Only input information onto sheet 1. Values must be 0–400 in 50-foot increments.**

Add

**3. Evaluate all segments that are fully or partially contained within the lateral boundary of your airspace.**

Add

**4. Save completed worksheet as XXX.xls, in which XXX is the facility ID.**

Add

**5. Return completed spreadsheet to [uasfm@faa.gov](mailto:uasfm@faa.gov).**

Add

**6. Include in the email:**

- Add (a) Use only your facility ID in the subject line.
- Add (b) Attach the spreadsheet.
- Add (c) List your Map POC(s) (Name, Email Address, Phone).
- Add (d) List your Authorization POC(s) (Name, Email Address, Phone).
- Add (e) Date UASFM completed.

**OLD****NEW**

- Add **12-10-6. PART 107 OPERATION APPROVALS**
- Add **a. The ATM will appoint a primary and secondary Facility UAS Authorization POC who will receive notification of the final authorization from Headquarters. Forward any changes to the Facility UAS Authorization POC to uasfm@faa.gov.**
- Add **NOTE–  
Facilities may use the facility group email address as their POC.**
- Add **b. If Part 107 operations cannot be authorized using the UASFM, facilities will be contacted by Headquarter/Service Center for coordination.**
- Add **c. Facilities will evaluate the request for authorization for impact to the operation. Waivers that list any mitigations pending approval by Headquarters/Service Centers will be included with the authorization request for the facility's consideration.**
- Add **d. If the facility deems the impact of the operation to be acceptable as proposed, the operation will be authorized.**
- Add **e. If the facility deems the impact to be unacceptable as proposed, they may prescribe mitigations on the operation, which may include but are not limited to:**
- Add **1. Limits on altitude.**
- Add **2. Adjusting times and dates of operation.**
- Add **3. Operator notification to the Facility (i.e., start, stop times).**
- Add **4. Adjusting Location.**



Add	<b><u>f. For operations on the airfield, procedures between the facility and the proponent are a prerequisite to obtaining an airspace authorization.</u></b>
Add	<b><u>g. If mitigations cannot be agreed upon, the operation will be denied.</u></b>

### 1. PARAGRAPH NUMBER AND TITLE:

Section 6. 14 CFR Part 107, sUAS Operations

19-6-1. GENERAL

19-6-2. LOW ALTITUDE AUTHORIZATION AND NOTIFICATION CAPABILITY (LAANC)

19-6-3. MANUAL AIRSPACE AUTHORIZATION PROCEDURES (VIA DRONEZONE)

19-6-4. HEADQUARTERS/SERVICE CENTER AIRSPACE WAIVER PROCESS

**2. BACKGROUND:** A workgroup consisting of AJR-2, AJT-3, and the legacy AJV-8 and AJV-115 (now realigned into AJV-P) was created to determine if certain Unmanned Aircraft Systems (UAS) policies contained in FAA Order JO 7200.23 UAS, could be relocated into the FAA Order JO 7210.3, Facility Operations and Administration. The workgroup felt the policy relating to 14 CFR PART 107, sUAS OPERATIONS, would be better suited in a new section in FAA Order JO 7210.3 Chapter 19, Waivers, Authorizations, and Exemptions, Section 6, 14 CFR PART 107, sUAS OPERATIONS. In line with Part 107, remote pilots can apply for UAS operations within airspace that require an ATC authorization or fly without authorization in uncontrolled (Class G) airspace if flying within approved conditions (e.g., daily operations below 400 feet). Remote pilots may also apply for waivers to operate under certain conditions generally not allowed under Part 107 (e.g., at night, beyond visual line of sight, or above 400 feet).

### 3. CHANGE:

<b><u>OLD</u></b>	<b><u>NEW</u></b>
Add	Section 6. 14 CFR Part 107, sUAS Operations
<b><u>OLD</u></b>	<b><u>NEW</u></b>
Add	<b><u>19-6-1. GENERAL</u></b>
Add	<b><u>a. No person may operate a small unmanned aircraft in Class B, Class C, or Class D airspace, or within the lateral boundaries of the surface area of Class E airspace designated for an airport unless that person has prior authorization from Air Traffic Control (ATC). Proponents requesting to operate under 14 CFR Part 107.41 within these classes of airspace must request an authorization through either the Low Altitude Authorization and Notification Capability (LAANC) or DroneZone.</u></b>
Add	<b><u>1. LAANC Operations:</u></b> <b><u><a href="https://faa.gov/go/laanc">https://faa.gov/go/laanc</a>.</u></b>
Add	<b><u>2. DroneZone: <a href="https://faadronezone.faa.gov/">https://faadronezone.faa.gov/</a>.</u></b>

Add **b. Letters of Agreement (LOA) may be used in conjunction with Part 107 airspace authorizations/waivers when the Air Traffic Manager (ATM) deems it necessary; they cannot be used in lieu of airspace authorization/waivers.**

Add **c. In the event a Part 107 operator contacts an ATC facility directly for authorization, the facility must not issue the authorization. The facility must direct the operator to the LAANC or DroneZone site.**

Add **d. 14 CFR Part 107.41 waiver applications can only be submitted through DroneZone.**

## **OLD**

Add

## **NEW**

### **19-6-2. LOW ALTITUDE AUTHORIZATION AND NOTIFICATION CAPABILITY (LAANC)**

Add **a. Automates Part 107 sUAS operator requests for access to airspace and to receive authorizations from UAS Service Suppliers.**

Add **REFERENCE—  
FAA Order JO 7210.3, Chapter 12, Section 11, UAS Facility Maps (UASFM).**

Add **b. ATC authorization granted through LAANC may not satisfy all of the requirements for UAS operations. Proponents requesting to operate in airspace requiring authorization under 14 CFR 107.41, must also meet the requirements set by any governing Notice to Airman (NOTAM) or Temporary Flight Restrictions (TFR).**

## **OLD**

Add

## **NEW**

### **19-6-3. MANUAL AIRSPACE AUTHORIZATION PROCEDURES (VIA DRONEZONE)**

Add **a. Headquarters/Service Centers will use the facility approved UASFM to evaluate Part 107 requests.**

Add **1. No facility coordination is required, if the requests can be authorized using the UASFM.**

Add **2. If the processor is unable to authorize the request using the UASFM, they must coordinate with the facility.**

- Add **b. If there is a facility approved UASFM for Class E airspace areas designated as a surface area for an airport, requests will be processed in accordance with the UASFM. If there is no facility approved UASFM, the Class E surface area designated for airport requests will be processed at Headquarters/Service Centers using the following criteria. Any requests outside of these parameters must be coordinated directly with the controlling facility prior to approval:**
- Add **1. Operations conducted from 0 to 2 nautical miles (NM) from the Airport Reference Point (ARP) will not be authorized by Headquarters/Service Center without prior coordination with the facility.**
- Add **2. Operations conducted from beyond 2 NM and up to 3 NM from the ARP will be authorized to operate at or below 100 feet above ground level (AGL).**
- Add **3. Operations conducted from beyond 3 NM and up to 4 NM from the ARP will be authorized to operate at or below 200 feet AGL.**
- Add **4. Operations conducted from beyond 4 nautical miles from the ARP will be authorized to operate at or below 400 feet AGL.**
- Add **5. A weather minimum of a 1000-foot ceiling.**
- Add **6. All authorization for Class C and D surface areas that revert to Class E surface area designated for an airport will be evaluated utilizing UASFM for the Class “C and D” surface area.**
- Add **NOTE–**
- Add **1. Headquarters/Service Centers are responsible for issuing waivers to the proponent. In instances where the authorization requires a waiver to 14 CFR Part 107.31 (Visual line of sight), 14 CFR Part 107.35 (Operations of multiple sUAS), 14 CFR Part 107.41 (Operation in certain airspace), 14 CFR Part 107.37 (Operation near aircraft; right of way rules), or 14 CFR Part 107.51(b) (Operating limitations for sUAS – altitude), pending waivers must be included with the authorization request and coordination will take place with the facility.**
- Add **2. The responsible person for the operation and their contact information will be listed in the authorization or waiver.**

- Add 3. With regards to Class E airspace, only airspace within the lateral boundaries of the surface area designated for an airport (Class E2) requires a Part 107 authorization or waiver.
- Add c. An automated message will be forwarded to the facility and the proponent of the approval, which will contain:
- Add 1. Waivers if applicable.
- Add 2. Description of the operational area.
- Add 3. Contact information for communication/recall.
- Add 4. Times of operation.
- Add d. If 14 CFR Part 107 operations cannot be authorized using the UASFM, ATC facilities will be contacted by Headquarters/Service Centers for coordination.
- Add e. If after coordinating with the ATC facility, the operation cannot be authorized, an automated message will be forwarded notifying the facility and the proponent of the denial.
- Add f. Special Governmental Interest (SGI), Part 107 authorizations/waivers will be managed by System Operations Security, AIR-2.

**OLD****NEW**

- Add 19-6-4. HEADQUARTERS/SERVICE CENTER AIRSPACE WAIVER PROCESS
- Add a. Applications for waivers are submitted to the Headquarters/Service Center through DroneZone.
- Add b. Under Headquarters/Service Center waiver process, ATO approval is required for the following waivers and will coordinate with Flight Standards Service (AFS), if needed:
- Add 1. Yielding the right of way (§ 107.37a).
- Add 2. Operations in Certain Airspace (§ 107.41).
- Add 3. Maximum altitude (§ 107.51b).
- Add c. Under Headquarters/Service Center waiver process, AFS may approve waivers requested for the following items and will coordinate with ATO, if needed:
- Add 1. Operations from a moving vehicle or aircraft (§ 107.25).
- Add 2. Daylight operation (§ 107.29).

- Add **3. Visual line of sight (§ 107.31).**
- Add **4. Visual observer (§ 107.33).**
- Add **5. Operations of multiple UASs (§ 107.35).**
- Add **6. Operation over people (§ 107.39).**
- Add **7. Maximum ground speed (§ 107.51a).**
- Add **8. Minimum flight visibility (§ 107.51c).**
- Add **9. Cloud minimum (§ 107.51d).**
- Add **d. Headquarters/Service Center will evaluate the waiver(s) for justification, including supporting data and documentation, as necessary, which establishes the proposed operation can be safely conducted under the terms of a certificate of waiver. Headquarters/Service Center will coordinate all waivers to 14 CFR Part 107.29, 14 CFR Part 107.31, 14 CFR Part 107.35, 14 CFR Part 107.37, 14 CFR Part 107.41, and 14 CFR Part 107.51(b) (except those covered below in paragraph e), with the affected facility to evaluate if the proposed operation can be safely conducted based on the proposed mitigation(s) and, if needed, apply any additional mitigations/limitations.**
- Add **e. Waivers in Class E surface areas and Class G airspace (excluding those waivers that take the aircraft into all other classes of airspace that are not in compliance with UASFMs) will be approved by Headquarters/Service Center. This approval authority does not preclude the facility from being coordinated with if Headquarters believes additional input from the facility is beneficial to the safety of the operation.**
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