

# ASA's 2024 FAR/AIM Update

Changes to the Federal Aviation Regulations occur via the *Federal Register*, which is published daily. The *Aeronautical Information Manual* is updated every 180 days, and Advisory Circulars are revised as the FAA deems necessary. ASA tracks all relevant changes to keep you current and informed: the ASA FAR/AIM Series is published annually, and all Updates are available at [asa2fly.com/farupdate](https://asa2fly.com/farupdate) and through a free email subscription service that notifies you of changes affecting the information printed in your books.

ASA's 2024 FAR/AIM book is current through June 19, 2023. With this Update, information is current through **April 1, 2024**.

The AIM changes (*AIM Change 1* effective October 5, 2023, and *AIM Change 2* effective March 21, 2024, to *AIM Basic* effective April 20, 2023) begin on page 16.



## TITLE 14: AERONAUTICS AND SPACE

### PART 43

#### MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND ALTERATION

- **Change Date:** October 17, 2023
- **Effective Date:** December 18, 2023
- **Source:** Amdt. 43–53, 88 FR 71476

Amend Appendix F to Part 43 by revising paragraphs (h) and (j) to read as follows:

#### APPENDIX F TO PART 43

##### ATC Transponder Tests and Inspections

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(h) Mode S All-Call Interrogations: Interrogate the Mode S transponder with the Mode S-only all-call format UF = 11 and verify that the correct address and capability are reported in the replies (downlink format DF = 11).

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(j) Squitter: Verify that the Mode S transponder generates a correct acquisition squitter approximately once per second.

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## PART 61

### CERTIFICATION: PILOTS, FLIGHT INSTRUCTORS, AND GROUND INSTRUCTORS

*Editorial Correction:* §61.23(d)(1)(iii) and §61.23 (d)(2)(i) should be changed in ASA's 2024 FAR/AIM print book to read as follows, effective May 22, 2023:

#### §61.23 Medical certificates: Requirement and duration.

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(d) \*\*\*

Medical Certificates: Requirement and Duration			
If you hold	And on the date of examination for your most recent medical certificate you were	And you are conducting an operation requiring	Then your medical certificate expires, for that operation, at the end of the last day of the
(1) A first-class medical certificate	(i) Under age 40	an airline transport pilot certificate for pilot-in-command privileges, or for second-in-command privileges in a flag or supplemental operation in part 121 requiring three or more pilots	12th month after the month of the date of examination shown on the medical certificate.
	(ii) Age 40 or older	an airline transport pilot certificate for pilot-in-command privileges, for second-in-command privileges in a flag or supplemental operation in part 121 requiring three or more pilots, or for a pilot flightcrew member in part 121 operations who has reached his or her 60th birthday.	6th month after the month of the date of examination shown on the medical certificate.
	(iii) Any age	a commercial pilot certificate (other than a commercial pilot certificate with a balloon rating when conducting flight training), a flight engineer certificate, or an air traffic control tower operator certificate.	12th month after the month of the date of examination shown on the medical certificate.
	(iv) Under age 40	a recreational pilot certificate, a private pilot certificate, a flight instructor certificate (when acting as pilot in command or a required pilot flight crewmember in operations other than glider or balloon), a student pilot certificate, or a sport pilot certificate (when not using a U.S. driver's license as medical qualification)	60th month after the month of the date of examination shown on the medical certificate
	(v) Age 40 or older	a recreational pilot certificate, a private pilot certificate, a flight instructor certificate (when acting as pilot in command or a required pilot flight crewmember in operations other than glider or balloon), a student pilot certificate, or a sport pilot certificate (when not using a U.S. driver's license as medical qualification)	24th month after the month of the date of examination shown on the medical certificate
(2) A second-class medical certificate	(i) Any age	an airline transport pilot certificate for second-in-command privileges (other than the operations specified in paragraph (d)(1) of this section), a commercial pilot certificate (other than a commercial pilot certificate with a balloon rating when conducting flight training), a flight engineer certificate, or an air traffic control tower operator certificate.	12th month after the month of the date of examination shown on the medical certificate.
	(ii) Under age 40	a recreational pilot certificate, a private pilot certificate, a flight instructor certificate (when acting as pilot in command or a required pilot flight crewmember in operations other than glider or balloon), a student pilot certificate, or a sport pilot certificate (when not using a U.S. driver's license as medical qualification)	60th month after the month of the date of examination shown on the medical certificate
	(iii) Age 40 or older	a recreational pilot certificate, a private pilot certificate, a flight instructor certificate (when acting as pilot in command or a required pilot flight crewmember in operations other than glider or balloon), a student pilot certificate, or a sport pilot certificate (when not using a U.S. driver's license as medical qualification)	24th month after the month of the date of examination shown on the medical certificate
(3) A third-class medical certificate	(i) Under age 40	a recreational pilot certificate, a private pilot certificate, a flight instructor certificate (when acting as pilot in command or a required pilot flight crewmember in operations other than glider or balloon), a student pilot certificate, or a sport pilot certificate (when not using a U.S. driver's license as medical qualification)	60th month after the month of the date of examination shown on the medical certificate
	(ii) Age 40 or older	a recreational pilot certificate, a private pilot certificate, a flight instructor certificate (when acting as pilot in command or a required pilot flight crewmember in operations other than glider or balloon), a student pilot certificate, or a sport pilot certificate (when not using a U.S. driver's license as medical qualification)	24th month after the month of the date of examination shown on the medical certificate

- **Change Date:** April 1, 2024
- **Effective Date:** May 31, 2024
- **Source:** Amdt. 61–153, 89 FR 22516

The authority citation for Part 61 is revised to read as follows:

**Authority:** 49 U.S.C. 106(f), 106(g), 40113, 44701–44703, 44707, 44709–44711, 44729, 44903, 45102–45103, 45301–45302; Sec. 2307 Pub. L. 114–190, 130 Stat. 615 (49 U.S.C. 44703 note); and sec. 318, Pub. L. 115–254, 132 Stat. 3186 (49 U.S.C. 44703 note).

Add §61.14 to read as follows:

#### §61.14 Incorporation by Reference.

Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR Part 51. All approved incorporation by reference

(IBR) material is available for inspection at the Federal Aviation Administration (FAA) and at the National Archives and Records Administration (NARA). Contact FAA, Training and Certification Group, 202-267-1100, [ACSPTSinquiries@faa.gov](mailto:ACSPTSinquiries@faa.gov). For information on the availability of this material at NARA, visit [www.archives.gov/federal-register/cfr/ibr-locations](http://www.archives.gov/federal-register/cfr/ibr-locations) or email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov). The material may be obtained from the Federal Aviation Administration, 800 Independence Avenue SW, Washington DC 20591, 866-835-5322, [www.faa.gov/training\\_testing](http://www.faa.gov/training_testing).

#### (a) Practical Test Standards.

(1) FAA-S-8081-3B, Recreational Pilot Practical Test Standards for Airplane Category and Rotorcraft Category, November 2023; IBR approved for §61.43 and appendix A to this part.

(2) FAA-S-8081-7C, Flight Instructor Practical Test Standards for Rotorcraft Category Gyroplane Rating, November 2023; IBR approved for §61.43 and appendix A to this part.

(3) FAA-S-8081-8C, Flight Instructor Practical Test Standards for Glider Category, November 2023; IBR approved for §61.43 and appendix A to this part.

(4) FAA-S-8081-9E, Flight Instructor Instrument Practical Test Standards for Airplane Rating and Helicopter Rating, November 2023; IBR approved for §61.43 and appendix A to this part.

(5) FAA-S-8081-15B, Private Pilot Practical Test Standards for Rotorcraft Category Gyroplane Rating, November 2023; IBR approved for §61.43 and appendix A to this part.

(6) FAA-S-8081-16C, Commercial Pilot Practical Test Standards for Rotorcraft Category Gyroplane Rating, November 2023; IBR approved for §61.43 and appendix A to this part.

(7) FAA-S-8081-17A, Private Pilot Practical Test Standards for Lighter-Than-Air Category, November 2023; IBR approved for §61.43 and appendix A to this part.

(8) FAA-S-8081-18A, Commercial Pilot Practical Test Standards for Lighter-Than-Air Category, November 2023; IBR approved for §61.43 and appendix A to this part.

(9) FAA-S-8081-20A, Airline Transport Pilot and Aircraft Type Rating Practical Test Standards for Rotorcraft Category Helicopter Rating, November 2023; IBR approved for §§61.43 and 61.58, and appendix A to this part.

(10) FAA-S-8081-22A, Private Pilot Practical Test Standards for Glider Category, November 2023; IBR approved for §61.43 and appendix A to this part.

(11) FAA-S-8081-23B, Commercial Pilot Practical Test Standards for Glider Category, November 2023; IBR approved for §61.43 and appendix A to this part.

(12) FAA-S-8081-29A, Sport Pilot and Sport Pilot Flight Instructor Rating Practical Test Standards for Airplane Category, Rotorcraft Category, and Glider Category, November 2023; IBR approved for §§61.43, 61.321, and 61.419, and appendix A to this part.

(13) FAA-S-8081-30A, Sport Pilot and Sport Pilot Flight Instructor Rating Practical Test Standards for Lighter-Than-Air Category, November 2023; IBR approved for §§61.43, 61.321, and 61.419, and appendix A to this part.

(14) FAA-S-8081-31A, Sport Pilot and Sport Pilot Flight Instructor Practical Test Standards for Powered Parachute Category and Weight-Shift-Control Aircraft Category, November 2023; IBR approved for §§61.43, 61.321, and 61.419, and appendix A to this part.

(15) FAA-S-8081-32A Private Pilot Practical Test Standards for Powered Parachute Category and Weight-Shift-Control Aircraft Category, November 2023; IBR approved for §61.43 and appendix A to this part.

**(b) Airman Certification Standards.**

(1) FAA-S-ACS-2, Commercial Pilot for Powered-Lift Category Airman Certification Standards, November 2023; IBR approved for §61.43 and appendix A to this part.

(2) FAA-S-ACS-3, Instrument Rating—Powered-Lift Airman Certification Standards, November 2023; IBR approved for §§61.43 and 61.57, and appendix A to this part.

(3) FAA-S-ACS-6C, Private Pilot for Airplane Category Airman Certification Standards, November 2023; IBR approved for §61.43 and appendix A to this part.

(4) FAA-S-ACS-7B, Commercial Pilot for Airplane Category Airman Certification Standards, November 2023; IBR approved for §61.43 and appendix A to this part.

(5) FAA-S-ACS-8C, Instrument Rating—Airplane Airman Certification Standards, November 2023; IBR approved for §§61.43 and 61.57, and appendix A to this part.

(6) FAA-S-ACS-11A, Airline Transport Pilot and Type Rating for Airplane Category Airman Certification Standards, November 2023; IBR approved for §§61.43 and 61.58, and appendix A to this part.

(7) FAA-S-ACS-13, Private Pilot for Powered-Lift Category Airman Certification Standards, November 2023; IBR approved for §61.43 and appendix A to this part.

(8) FAA-S-ACS-14, Instrument Rating—Helicopter Airman Certification Standards, November 2023; IBR approved for §§61.43 and 61.57, and appendix A to this part.

(9) FAA-S-ACS-15, Private Pilot for Rotorcraft Category Helicopter Rating Airman Certification Standards, November 2023; IBR approved for §61.43 and appendix A to this part.

(10) FAA-S-ACS-16, Commercial Pilot for Rotorcraft Category Helicopter Rating Airman Certification Standards, November 2023; IBR approved for §61.43 and appendix A to this part.

(11) FAA-S-ACS-17, Airline Transport Pilot and Type Rating for Powered-Lift Category Airman Certification Standards, November 2023; IBR approved for §§61.43 and 61.58, and appendix A to this part.

(12) FAA-S-ACS-25, Flight Instructor for Airplane Category Airman Certification Standards, November 2023; IBR approved for §61.43 and appendix A to this part.

(13) FAA-S-ACS-27, Flight Instructor for Powered-Lift Category Airman Certification Standards, November 2023; IBR approved for §61.43 and appendix A to this part.

(14) FAA-S-ACS-28, Flight Instructor—Instrument Rating Powered-Lift Airman Certification Standards, November 2023; IBR approved for §61.43 and appendix A to this part.

(15) FAA-S-ACS-29, Flight Instructor for Rotorcraft Category Helicopter Rating Airman Certification Standards, November 2023; IBR approved for §61.43 and appendix A to this part.

Amend §61.43 by revising paragraphs (a)(1) through (3) to read as follows:

**§61.43 Practical tests: General procedures.**

**(a) \* \* \***

(1) Performing the tasks specified in the areas of operation contained in the applicable Airman Certification Standards or Practical Test Standards (incorporated by reference, see §61.14) as listed in appendix A of this part for the airman certificate or rating sought;

(2) Demonstrating mastery of the aircraft by performing each task required by paragraph (a)(1) of this section successfully;

(3) Demonstrating proficiency and competency of the tasks required by paragraph (a)(1) of this section within the approved standards; and

\* \* \* \* \*

Amend §61.57 by revising paragraph (d)(1) introductory text to read as follows:

**§61.57 Recent Flight Experience: Pilot in Command.**

\* \* \* \* \*

**(d) \* \* \***

(1) Except as provided in paragraph (e) of this section, a person who has failed to meet the instrument experience requirements of paragraph (c) of this section for more than six calendar months may reestablish instrument currency only by completing an instrument proficiency check. The instrument proficiency check must include the areas of operation contained in the applicable Airman Certification Standards (incorporated by reference, see §61.14) as listed in appendix A of this part as appropriate to the rating held.

\* \* \* \* \*

Amend §61.58 by revising paragraph (d)(1) to read as follows:

**§61.58 Pilot in command proficiency check: Operation of an aircraft that requires more than one pilot flight crewmember or is turbojet-powered.**

\* \* \* \* \*

**(d)** \* \* \*

(1) A pilot-in-command proficiency check conducted by a person authorized by the Administrator, consisting of the areas of operation contained in the applicable Airman Certification Standards or Practical Test Standards (incorporated by reference, see §61.14); as listed in appendix A of this part appropriate to the rating held, in an aircraft that is type certificated for more than one pilot flight crewmember or is turbojet powered;

\* \* \* \* \*

Amend §61.157 by revising paragraphs (e) introductory text, and (e)(1) through (3) to read as follows:

**§61.157 Flight proficiency.**

\* \* \* \* \*

**(e) Areas of Operation.** A practical test will include normal and abnormal procedures, as applicable, within the areas of operation for practical tests for an airplane category and powered-lift category rating.

(1) For an airplane category—single engine class rating:

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Takeoffs and Landings;
- (iv) In-flight maneuvers;
- (v) Stall Prevention;
- (vi) Instrument procedures;
- (vii) Emergency operations; and
- (viii) Postflight procedures.

(2) For an airplane category—multiengine class rating:

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Takeoffs and Landings;
- (iv) In-flight maneuvers;
- (v) Stall Prevention.
- (vi) Instrument procedures;
- (vii) Emergency operations; and

- (viii) Postflight procedures.
- (3) For a powered-lift category rating:
  - (i) Preflight preparation;
  - (ii) Preflight procedures;
  - (iii) Takeoffs and Departure phase;
  - (iv) In-flight maneuvers;
  - (v) Instrument procedures;
  - (vi) Landings and approaches to landings;
  - (vii) Emergency operations; and
  - (viii) Postflight procedures.

\* \* \* \* \*

Amend §61.321 by revising paragraph (b) to read as follows:

**§61.321 How do I obtain privileges to operate an additional category or class of light-sport aircraft?**

\* \* \* \* \*

**(b)** Successfully complete a proficiency check from an authorized instructor, other than the instructor who trained you, consisting of the tasks in the appropriate areas of operation contained in the applicable Practical Test Standards (incorporated by reference, see §61.14) as listed in appendix A of this part for the additional light-sport aircraft privilege you seek;

\* \* \* \* \*

Amend §61.419 by revising paragraph (b) to read as follows:

**§61.419 How do I obtain privileges to provide training in an additional category or class of light-sport aircraft?**

\* \* \* \* \*

**(b)** Successfully complete a proficiency check from an authorized instructor, other than the instructor who trained you, consisting of the tasks in the appropriate areas of operation contained in the applicable Practical Test Standards (incorporated by reference, see §61.14) as listed in appendix A of this part for the additional category and class flight instructor privilege you seek;

\* \* \* \* \*

Add Appendix A to Part 61 to read as follows:

**Appendix A to Part 61—  
Airman Certification Standards and Practical Test Standards**

If you are seeking this certificate, rating, and/or privilege...	Then this ACS/PTS (incorporated by reference, see §61.14) is applicable:
Airline Transport Pilot Certificate; Airplane Category—Single-Engine Land Rating, Airplane Category—Single-Engine Sea Rating, Airplane Category—Multiengine Land Rating, Airplane Category—Multiengine Sea Rating.	FAA-S-ACS-11A, Airline Transport Pilot and Type Rating for Airplane Category Airman Certification Standards, November 2023.
Airline Transport Pilot Certificate; Rotorcraft Category—Helicopter Rating.	FAA-S-8081-20A, Airline Transport Pilot and Aircraft Type Rating Practical Test Standards for Rotorcraft Category Helicopter Rating, November 2023.
Airline Transport Pilot Certificate; Powered-Lift Category	FAA-S-ACS-17, Airline Transport Pilot and Type Rating for Powered-Lift Category Airman Certification Standards, November 2023.
Commercial Pilot Certificate; Airplane Category—Single-Engine Land Rating, Airplane Category—Single-Engine Sea Rating, Airplane Category—Multiengine Land Rating, Airplane Category—Multiengine Sea Rating.	FAA-S-ACS-7B, Commercial Pilot for Airplane Category Airman Certification Standards, November 2023.
Commercial Pilot Certificate; Rotorcraft Category—Helicopter Rating	FAA-S-ACS-16, Commercial Pilot for Rotorcraft Category Helicopter Rating Airman Certification Standards, November 2023.
Commercial Pilot Certificate; Rotorcraft Category—Gyroplane Rating	FAA-S-8081-16C, Commercial Pilot Practical Test Standards for Rotorcraft Category Gyroplane Rating, November 2023.
Commercial Pilot Certificate; Powered-Lift Category	FAA-S-ACS-2, Commercial Pilot for Powered-Lift Category Airman Certification Standards, November 2023.

(continued)

If you are seeking this certificate, rating, and/or privilege...	Then this ACS/PTS (incorporated by reference, see §61.14) is applicable:
Commercial Pilot Certificate; Glider Category	FAA-S-8081-23B, Commercial Pilot Practical Test Standards for Glider Category, November 2023.
Commercial Pilot Certificate; Lighter-Than-Air Category—Airship Rating, Lighter-Than-Air Category—Balloon Rating.	FAA-S-8081-18A, Commercial Pilot Practical Test Standards for Lighter-Than-Air Category, November 2023.
Private Pilot Certificate; Airplane Category—Single-Engine Land Rating, Airplane Category—Single-Engine Sea Rating, Airplane Category—Multiengine Land Rating, Airplane Category—Multiengine Sea Rating.	FAA-S-ACS-6C, Private Pilot for Airplane Category Airman Certification Standards, November 2023.
Private Pilot Certificate; Rotorcraft Category—Helicopter Rating	FAA-S-ACS-15, Private Pilot for Rotorcraft Category Helicopter Rating Airman Certification Standards, November 2023.
Private Pilot Certificate; Rotorcraft Category—Gyroplane Rating	FAA-S-8081-15B, Private Pilot Practical Test Standards for Rotorcraft Category Gyroplane Rating, November 2023.
Private Pilot Certificate; Powered-Lift Category	FAA-S-ACS-13, Private Pilot for Powered-Lift Category Airman Certification Standards, November 2023.
Private Pilot Certificate; Glider Category	FAA-S-8081-22A, Private Pilot Practical Test Standards for Glider Category, November 2023.
Private Pilot Certificate; Lighter-Than-Air Category—Airship Rating, Lighter-Than-Air Category—Balloon Rating.	FAA-S-8081-17A, Private Pilot Practical Test Standards for Lighter-Than-Air Category, November 2023.
Private Pilot Certificate; Powered Parachute Category—Land Rating, Powered Parachute Category—Sea Rating, Weight-Shift-Control Aircraft Category—Land Rating, Weight-Shift-Control Aircraft Category—Sea Rating.	FAA-S-8081-32A, Private Pilot Practical Test Standards for Powered Parachute Category and Weight-Shift-Control Category, November 2023.
Recreational Pilot Certificate; Airplane Category—Single-Engine Land Rating, Airplane Category—Single-Engine Sea Rating, Rotorcraft Category—Helicopter Rating, Rotorcraft Category—Gyroplane Rating.	FAA-S-8081-3B, Recreational Pilot Practical Test Standards for Airplane Category and Rotorcraft Category, November 2023.
Sport Pilot Certificate; Airplane Category—Single-Engine Land Privileges, Airplane Category—Single-Engine Sea Privileges, Rotorcraft Category—Gyroplane Privileges, Glider Category.	FAA-S-8081-29A, Sport Pilot and Sport Pilot Flight Instructor Rating Practical Test Standards for Airplane Category, Rotorcraft Category, and Glider Category, November 2023.
Flight Instructor Certificate with a Sport Pilot Rating; Airplane Category—Single-Engine Privileges, Rotorcraft Category—Gyroplane Privileges, Glider Category.	
Sport Pilot Certificate; Lighter-Than-Air Category—Airship Privileges, Lighter-Than-Air Category—Balloon Privileges.	FAA-S-8081-30A, Sport Pilot and Sport Pilot Flight Instructor Rating Practical Test Standards for Lighter-Than-Air Category, November 2023.
Flight Instructor Certificate with a Sport Pilot Rating; Lighter-Than-Air Category—Airship Privileges, Lighter-Than-Air Category—Balloon Privileges.	
Sport Pilot Certificate; Powered Parachute Category—Land Privileges, Powered Parachute Category—Sea Privileges, Weight-Shift-Control Aircraft Category—Land Privileges, Weight-Shift-Control Aircraft Category—Sea Privileges.	FAA-S-8081-31A, Sport Pilot and Sport Pilot Flight Instructor Rating Practical Test Standards for Powered Parachute Category and Weight-Shift-Control Category, November 2023.
Flight Instructor Certificate with a Sport Pilot Rating; Powered Parachute Category Privileges, Weight-Shift-Control Aircraft Category Privileges.	
Instrument Rating—Airplane Instrument Proficiency Check—Airplane	FAA-S-ACS-8C, Instrument Rating—Airplane Airman Certification Standards, November 2023.
Instrument Rating—Helicopter Instrument Proficiency Check—Helicopter.	FAA-S-ACS-14, Instrument Rating—Helicopter Airman Certification Standards, November 2023.
Instrument Rating—Powered-Lift Instrument Proficiency Check—Powered-Lift.	FAA-S-ACS-3, Instrument Rating—Powered-Lift Airman Certification Standards, November 2023.
Flight Instructor Certificate; Airplane Category—Single Engine Rating Airplane Category—Multiengine Rating.	FAA-S-ACS-25, Flight Instructor for Airplane Category Airman Certification Standards, November 2023.
Flight Instructor Certificate; Rotorcraft Category—Helicopter Rating	FAA-S-ACS-29, Flight Instructor for Rotorcraft Category Helicopter Rating Airman Certification Standards, November 2023.
Flight Instructor Certificate; Rotorcraft Category—Gyroplane Rating	FAA-S-8081-7C, Flight Instructor Practical Test Standards for Rotorcraft Category Gyroplane Rating, November 2023.
Flight Instructor Certificate; Powered-lift Category	FAA-S-ACS-27, Flight Instructor for Powered-Lift Category Airman Certification Standards, November 2023.
Flight Instructor Certificate; Glider Category	FAA-S-8081-8C, Flight Instructor Practical Test Standards for Glider Category, November 2023.
Flight Instructor Certificate; Instrument—Airplane Rating, Instrument—Helicopter Rating.	FAA-S-8081-9E, Flight Instructor Instrument Practical Test Standards for Airplane Rating and Helicopter Rating, November 2023.
Flight Instructor Certificate; Instrument—Powered-Lift Rating	FAA-S-ACS-28, Flight Instructor—Instrument Rating Powered-Lift Airman Certification Standards, November 2023.
Aircraft Type Rating—Airplane	FAA-S-ACS-11A, Airline Transport Pilot and Type Rating for Airplane Category Airman Certification Standards, November 2023.
Aircraft Type Rating—Helicopter	FAA-S-8081-20A, Airline Transport Pilot and Aircraft Type Rating Practical Test Standards for Rotorcraft Category Helicopter Rating, November 2023.
Aircraft Type Rating—Powered-Lift	FAA-S-ACS-17, Airline Transport Pilot and Type Rating for Powered-Lift Category Airman Certification Standards, November 2023.

(continued)

If you are seeking this certificate, rating, and/or privilege...	Then this ACS/PTS (incorporated by reference, see §61.14) is applicable:
Pilot-in-Command Proficiency Check—Airplane	FAA-S-ACS-11A, Airline Transport Pilot and Type Rating for Airplane Category Airman Certification Standards; November 2023
Pilot-in-Command Proficiency Check—Helicopter	FAA-S-8081-20A, Airline Transport Pilot and Aircraft Type Rating Practical Test Standards for Rotorcraft Category Helicopter Rating, November 2023.
Pilot-in-Command Proficiency Check—Powered-Lift	FAA-S-ACS-17, Airline Transport Pilot and Type Rating for Powered-Lift Category Airman Certification Standards, November 2023.

## PART 71

### DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

- **Change Date:** August 25, 2023
- **Effective Date:** September 15, 2023, through September 15, 2024
- **Source:** Amdt. 71–55, 88 FR 58072

§71.1 is revised to read as follows:

#### § 71.1 Applicability.

A listing for Class A, B, C, D, and E airspace areas; air traffic service routes; and reporting points can be found in FAA Order JO 7400.11H, Airspace Designations and Reporting Points, dated August 11, 2023. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. The approval to incorporate by reference FAA Order JO 7400.11H is effective September 15, 2023, through September 15, 2024. During the incorporation by reference period, proposed changes to the listings of Class A, B, C, D, and E airspace areas; air traffic service routes; and reporting points will be published in full text as proposed rule documents in the **Federal Register**, unless there is good cause to forego notice and comment. Amendments to the listings of Class A, B, C, D, and E airspace areas; air traffic service routes; and reporting points will be published in full text as final rules in the **Federal Register**. Periodically, the final rule amendments will be integrated into a revised edition of the Order and submitted to the Director of the Federal Register for approval for incorporation by reference in this section. This incorporation by reference (IBR) material is available for inspection at the Federal Aviation Administration (FAA) and at the National Archives and Records Administration (NARA). Contact the FAA at: Rules and Regulations Group, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591, (202) 267-8783. An electronic version of FAA Order JO 7400.11H is available on the FAA website at [www.faa.gov/air\\_traffic/publications](http://www.faa.gov/air_traffic/publications). Copies of FAA Order JO 7400.11H may be inspected in Docket No. FAA-2023-1785; Amendment No. 71-55, on [www.regulations.gov](http://www.regulations.gov). For information on the availability of this material at NARA, visit [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html) or email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov).

§§71.5; 71.15; 71.31; 71.33(c); 71.41; 71.51; 71.61; 71.71(b), (c), (d), (e), and (f); and 71.901(a) are amended by removing the words “FAA Order 7400.11G” and adding, in their place, the words “FAA Order JO 7400.11H.”

## PART 91

### GENERAL OPERATING AND FLIGHT RULES

- **Change Date:** July 26, 2023
- **Effective Date:** July 26, 2023
- **Source:** Amdt. 91–370, 88 FR 48087

Amend §91.146 by revising paragraphs (b) introductory text and (b)(2), (3), (5), and (7) to read as follows:

#### §91.146 Passenger-carrying flights for the benefit of a charitable, nonprofit, or community event.

\* \* \* \* \*

(b) Passenger-carrying flights in airplanes, powered-lift, or rotorcraft for the benefit of a charitable, nonprofit, or community event identified in paragraph (c) of this section are not subject to the certification requirements of part 119 of this chapter or the drug and alcohol testing requirements in part 120 of this chapter, provided the following conditions are satisfied and the limitations in paragraphs (c) and (d) of this section are not exceeded:

\* \* \* \* \*

(2) The flight is conducted from a public airport that is adequate for the aircraft used, or from another location the FAA approves for the operation;

(3) The aircraft has a maximum of 30 seats, excluding each crewmember seat, and a maximum payload capacity of 7,500 pounds;

\* \* \* \* \*

(5) Each aircraft holds a standard airworthiness certificate, is airworthy, and is operated in compliance with the applicable requirements of subpart E of this part;

\* \* \* \* \*

(7) Reimbursement of the operator of the aircraft is limited to that portion of the passenger payment for the flight that does not exceed the pro rata cost of owning, operating, and maintaining the aircraft for that flight, which may include fuel, oil, airport expenditures, and rental fees;

\* \* \* \* \*

Amend §91.147 by revising paragraph (a) to read as follows:

#### §91.147 Passenger-carrying flights for compensation or hire.

\* \* \* \* \*

(a) For the purposes of this section and for drug and alcohol testing, *Operator* means any person conducting nonstop passenger-carrying flights in an airplane, powered-lift, or rotorcraft for compensation or hire in accordance with §119.1(e)(2), §135.1(a)(5), or §121.1(d) of this chapter that begin and end at the same airport and are conducted within a 25-statute mile radius of that airport.

\* \* \* \* \*

- **Change Date:** October 17, 2023
- **Effective Date:** December 18, 2023
- **Source:** Amdt. 91–371, 88 FR 71476

Amend §91.215 by revising the introductory text of paragraph (b) to read as follows:

**§91.215 ATC transponder and altitude reporting equipment and use.**

\*\*\*\*\*

**(b) All airspace.** Unless otherwise authorized or directed by ATC, and except as provided in paragraph (e)(1) of this section, no person may operate an aircraft in the airspace described in paragraphs (b)(1) through (5) of this section, unless that aircraft is equipped with an operable coded radar beacon transponder having either Mode A 4096 code capability, replying to Mode A interrogations with the code specified by ATC, or a Mode S capability, replying to Mode A interrogations with the code specified by ATC and Mode S interrogations in accordance with the applicable provisions specified in TSO-C112, and that aircraft is equipped with automatic pressure altitude reporting equipment having a Mode C capability that automatically replies to Mode C interrogations by transmitting pressure altitude information in 100-foot increments. The requirements of this paragraph (b) apply to—

\*\*\*\*\*

Amend §91.225 by:

- a. Revising paragraphs (a)(1), (b), and (e) introductory text.
- b. Redesignating paragraphs (h) and (i), as (i) and (h), respectively.
- c. Revising newly redesignated paragraphs (h)(1)(i) and (i).

The revisions read as follows:

**§91.225 Automatic Dependent Surveillance–Broadcast (ADS-B) Out equipment and use.**

**(a) \*\*\***

- (1) Meets the performance requirements in—
- (i) TSO-C166b and Section 2 of RTCA DO-260B (as referenced in TSO-C166b); or
  - (ii) TSO-C166c and Section 2 of RTCA DO-260C as modified by DO-260C—Change 1 (as referenced in TSO-C166c); and

\*\*\*\*\*

**(b)** After January 1, 2020, except as prohibited in paragraph (h) (2) of this section or unless otherwise authorized by ATC, no person may operate an aircraft below 18,000 feet MSL and in airspace described in paragraph (d) of this section unless the aircraft has equipment installed that—

- (1) Meets the performance requirements in—
  - (i) TSO-C166b and Section 2 of RTCA DO-260B (as referenced in TSO-C166b);
  - (ii) TSO-C166c and Section 2 of RTCA DO-260C as modified by DO-260C—Change 1 (as referenced in TSO-C166c);
  - (iii) TSO-C154c and Section 2 of RTCA DO-282B (as referenced in TSO-C154c); or
  - (iv) TSO-C154d and Section 2 of RTCA DO-282C (as referenced in TSO-C154d);
- (2) Meets the requirements of §91.227.

\*\*\*\*\*

**(e)** The requirements of paragraph (b) of this section do not apply to any aircraft that was not originally certificated with an engine-driven electrical system, or that has not subsequently been certified with such a system installed, including balloons and gliders. These aircraft may conduct operations without ADS-B Out in

the airspace specified in paragraph (d)(4) of this section. These aircraft may also conduct operations in the airspace specified in paragraph (d)(2) of this section if those operations are conducted—

\*\*\*\*\*

**(h) \*\*\***

**(1) \*\*\***

(i) That aircraft has equipment installed that meets the performance requirements in TSO-C166b (including Section 2 of RTCA DO-260B, as referenced in TSO-C166b), TSO-C166c (including Section 2 of RTCA DO-260C as modified by DO-260C—Change 1, as referenced in TSO-C166c), TSO-C154c (including Section 2 of RTCA DO-282B, as referenced in TSO-C154c), or TSO-C154d (including Section 2 of RTCA DO-282C, as referenced in TSO-C154d); and

\*\*\*\*\*

(i) The standards required in this section are incorporated by reference with the approval of the Director of the Office of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. This incorporation by reference (IBR) material is available for inspection at the FAA and the National Archives and Records Administration (NARA). Contact the FAA at: Office of Rulemaking (ARM-1), 800 Independence Avenue SW, Washington, DC 20590 (telephone 202-267-9677). For information on the availability of this material at NARA, visit <https://www.archives.gov/federal-register/cfr/ibr-locations.html> or email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov). This material is also available from the following sources in this paragraph (i).

(1) U.S. Department of Transportation, Subsequent Distribution Office, DOT Warehouse M30, Ardmore East Business Center, 3341 Q 75th Avenue, Landover, MD 20785; telephone (301) 322-5377; website: [www.faa.gov/aircraft/air\\_cert/design\\_approvals/tso/](http://www.faa.gov/aircraft/air_cert/design_approvals/tso/) (select the link “Search Technical Standard Orders”).

(i) TSO-C166b, Extended Squitter Automatic Dependent Surveillance–Broadcast (ADS-B) and Traffic Information Service–Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz), December 2, 2009.

(ii) TSO-C166c, Extended Squitter Automatic Dependent Surveillance–Broadcast (ADS-B) and Traffic Information Service–Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz), March 10, 2023.

(iii) TSO-C154c, Universal Access Transceiver (UAT) Automatic Dependent Surveillance–Broadcast (ADS-B) Equipment Operating on the Frequency of 978 MHz, December 2, 2009.

(iv) TSO-C154d, Universal Access Transceiver (UAT) Automatic Dependent Surveillance–Broadcast (ADS-B) Equipment Operating on the Radio Frequency of 978 Megahertz (MHz), March 10, 2023.

(2) RTCA, Inc., 1150 18th St. NW, Suite 910, Washington, DC 20036; telephone (202) 833-9339; website: [www.rtca.org/products](http://www.rtca.org/products).

(i) RTCA DO-260B, Minimum Operational Performance Standards for 1090 MHz Extended Squitter Automatic Dependent Surveillance–Broadcast (ADS-B) and Traffic Information Services–Broadcast (TIS-B), Section 2, Equipment Performance Requirements and Test Procedures, December 2, 2009.

(ii) RTCA DO-260C, Minimum Operational Performance Standards for 1090 MHz Extended Squitter Automatic Dependent Surveillance–Broadcast (ADS-B) and Traffic Information Services–Broadcast (TIS-B), Section 2, Equipment Performance Requirements and Test Procedures, December 17, 2020.

(iii) RTCA DO-260C, Minimum Operational Performance Standards for 1090 MHz Extended Squitter Automatic Dependent Surveillance–Broadcast (ADS-B) and Traffic Information Services–Broadcast (TIS-B), Change 1, January 25, 2022.

(iv) RTCA DO-282B, Minimum Operational Performance Standards for Universal Access Transceiver (UAT) Automatic Dependent Surveillance–Broadcast (ADS-B), Section 2, Equipment Performance Requirements and Test Procedures, December 2, 2009.

(v) RTCA DO-282C, Minimum Operational Performance Standards (MOPS) for Universal Access Transceiver (UAT) Automatic Dependent Surveillance–Broadcast (ADS-B), Section 2, Equipment Performance Requirements and Test Procedures, June 23, 2022.

Amend §91.227 by:

- a. In paragraph (a), revising definitions for “Navigation Accuracy Category for Position (NAC<sub>P</sub>)”, “Navigation Accuracy Category for Velocity (NAC<sub>V</sub>)”, “Navigation Integrity Category (NIC)”, “Source Integrity Level (SIL)”, and “System Design Assurance (SDA)”; and
- b. Revising paragraphs (b)(1), (b)(2)(i) and (ii), (c)(1)(iv) and (v), (d) introductory text, (d)(5) through (8), (11), and (13), and (g).

The revisions read as follows:

**§91.227 Automatic Dependent Surveillance–Broadcast (ADS-B) Out equipment performance requirements.**

(a) \* \* \*

*Navigation Accuracy Category for Position (NAC<sub>P</sub>)* specifies the accuracy of a reported aircraft's position.

*Navigation Accuracy Category for Velocity (NAC<sub>V</sub>)* specifies the accuracy of a reported aircraft's velocity.

*Navigation Integrity Category (NIC)* specifies an integrity containment radius around an aircraft's reported position.

\* \* \* \* \*

*Source Integrity Level (SIL)* indicates the probability of the reported horizontal position exceeding the containment radius defined by the NIC on a per sample or per hour basis.

*System Design Assurance (SDA)* indicates the probability of an aircraft malfunction causing false or misleading information to be transmitted.

\* \* \* \* \*

(b) \* \* \*

(1) Aircraft operating in Class A airspace must have equipment installed that meets the antenna and power output requirements of Class A1S, A1, A2, A3, B1S, or B1 equipment as defined in TSO-C166b and Section 2 of RTCA DO-260B (as referenced in TSO-C166b), or TSO-C166c and Section 2 of RTCA DO-260C as modified by DO-260C—Change 1 (as referenced in TSO-C166c).

(2) \* \* \*

(i) Class A1S, A1, A2, A3, B1S, or B1 as defined in TSO-C166b and Section 2 of RTCA DO-260B (as referenced in TSO-C166b) or TSO-C166c and Section 2 of RTCA DO-260C as modified by DO-260C—Change 1 (as referenced in TSO-C166c); or

(ii) Class A1S, A1H, A2, A3, B1S, or B1 equipment as defined in TSO-C154c and Section 2 of RTCA DO-282B (as referenced in TSO-C154c), or TSO-C154d and Section 2 of RTCA DO-282C (as referenced in TSO-C154d).

(c) \* \* \*

(1) \* \* \*

(iv) The aircraft's SDA must be less than or equal to 10<sup>-5</sup> per flight hour; and

(v) The aircraft's SIL must be less than or equal to 10<sup>-7</sup> per flight hour or per sample.

\* \* \* \* \*

**(d) Minimum Broadcast Message Element Set for ADS-B**

**Out.** Each aircraft must broadcast the following information, as defined in TSO-C166b (including Section 2 of RTCA DO-260B, as referenced in TSO-C166b), TSO-C166c (including Section 2 of RTCA DO-260C as modified by DO-260C—Change 1, as referenced in TSO-C166c), TSO-C154c (including Section 2 of RTCA DO-282B, as referenced in TSO-C154c), or TSO-C154d (including Section 2 of RTCA DO-282C, as referenced in TSO-C154d). The pilot must enter information for message elements listed in paragraphs (d)(7) through (10) of this section during the appropriate phase of flight.

\* \* \* \* \*

(5) An indication if a collision avoidance system is installed and operating in a mode that can generate resolution advisory alerts;

(6) If an operable collision avoidance system is installed, an indication if a resolution advisory is in effect;

(7) An indication of the Mode A transponder code specified by ATC;

(8) An indication of the aircraft identification that is submitted on the flight plan or used for communicating with ATC, except when the pilot has not filed a flight plan, has not requested ATC services, and is using a TSO-C154c or TSO-C154d self-assigned temporary 24-bit address;

\* \* \* \* \*

(11) An indication of the aircraft assigned ICAO 24-bit address, except when the pilot has not filed a flight plan, has not requested ATC services, and is using a TSO-C154c or TSO-C154d self-assigned temporary 24-bit address;

\* \* \* \* \*

(13) An indication of whether an ADS-B In capability is available;

\* \* \* \* \*

**(g) Incorporation by reference.** The standards required in this section are incorporated by reference with the approval of the Director of the Office of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. This incorporation by reference (IBR) material is available for inspection at the FAA and the National Archives and Records Administration (NARA). Contact the FAA at: Office of Rulemaking (ARM-1), 800 Independence Avenue SW, Washington, DC 20590 (telephone 202-267-9677). For information on the availability of this material at NARA, visit [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html) or email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov). This material is also available from the following sources indicated in this paragraph (g).

(1) U.S. Department of Transportation, Subsequent Distribution Office, DOT Warehouse M30, Ardmore East Business Center, 3341 Q 75th Avenue, Landover, MD 20785; telephone (301) 322-5377; website: [www.faa.gov/aircraft/air\\_cert/design\\_approvals/tso/](http://www.faa.gov/aircraft/air_cert/design_approvals/tso/) (select the link “Search Technical Standard Orders”).

(i) TSO-C166b, Extended Squitter Automatic Dependent Surveillance–Broadcast (ADS-B) and Traffic Information Service–Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz), December 2, 2009.

(ii) TSO-C166c, Extended Squitter Automatic Dependent Surveillance–Broadcast (ADS-B) and Traffic Information Service–Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz), March 10, 2023.

(iii) TSO-C154c, Universal Access Transceiver (UAT) Automatic Dependent Surveillance–Broadcast (ADS-B) Equipment Operating on the Frequency of 978 MHz, December 2, 2009.

(iv) TSO-C154d, Universal Access Transceiver (UAT) Automatic Dependent Surveillance–Broadcast (ADS-B) Equipment Operating on the Radio Frequency of 978 Megahertz (MHz), March 10, 2023.



(2) RTCA, Inc., 1150 18th St. NW, Suite 910, Washington, DC 20036; telephone (202) 833-9339; website: [www.rtca.org/products](http://www.rtca.org/products).

(i) RTCA DO-260B, Minimum Operational Performance Standards for 1090 MHz Extended Squitter Automatic Dependent Surveillance–Broadcast (ADS-B) and Traffic Information Services–Broadcast (TIS-B), Section 2, Equipment Performance Requirements and Test Procedures, December 2, 2009.

(ii) RTCA DO-260C, Minimum Operational Performance Standards for 1090 MHz Extended Squitter Automatic Dependent Surveillance–Broadcast (ADS-B) and Traffic Information Services–Broadcast (TIS-B), Section 2, Equipment Performance Requirements and Test Procedures, December 17, 2020.

(iii) RTCA DO-260C, Minimum Operational Performance Standards for 1090 MHz Extended Squitter Automatic Dependent Surveillance–Broadcast (ADS-B) and Traffic Information Services–Broadcast (TIS-B), Change 1, January 25, 2022.

(iv) RTCA DO-282B, Minimum Operational Performance Standards for Universal Access Transceiver (UAT) Automatic Dependent Surveillance–Broadcast (ADS-B), Section 2, Equipment Performance Requirements and Test Procedures, December 2, 2009.

(v) RTCA DO-282C, Minimum Operational Performance Standards (MOPS) for Universal Access Transceiver (UAT) Automatic Dependent Surveillance–Broadcast (ADS-B), Section 2, Equipment Performance Requirements and Test Procedures, June 23, 2022.

► **Change Date:** July 26, 2023  
► **Effective Date:** July 26, 2023  
► **Source:** Amdt. 91–370, 88 FR 48087

Amend §91.1015 by revising paragraph (a)(9) to read as follows:

**§91.1015 Management specifications.**

(a) \* \* \*

(9) Any authorized deviation and exemption that applies to the person conducting operations under this subpart; and  
\* \* \* \* \*

► **Change Date:** October 26, 2023  
► **Effective Date:** October 27, 2023  
► **Source:** Amdt. 91–331H, 88 FR 73532

Remove and reserve §91.1607.

**§91.1607 [Reserved]**

► **Change Date:** December 27, 2023  
► **Effective Date:** December 27, 2023  
► **Source:** Amdt. 91-348D, 88 FR 89300

Amend §91.1609 by revising paragraph (e) to read as follows:

**§91.1609 Special Federal Aviation Regulation No. 114—  
Prohibition Against Certain Flights in the Damascus  
Flight Information Region (FIR) (OSTT).**

\* \* \* \* \*

(e) **Expiration.** This SFAR will remain in effect until December 30, 2028. The FAA may amend, rescind, or extend this SFAR, as necessary.

► **Change Date:** September 22, 2023  
► **Effective Date:** September 22, 2023  
► **Source:** Amdt. 91–340D, 88 FR 65320

Amend §91.1611 by revising paragraphs (b) and (c) to read as follows:

**§91.1611 Special Federal Aviation Regulation No. 115—  
Prohibition Against Certain Flights in Specified Areas of  
the Sanaa Flight Information Region (FIR) (OYSC).**

\* \* \* \* \*

(b) **Flight prohibition.** Except as provided in paragraphs (c) and (d) of this section, no person described in paragraph (a) of this section may conduct flight operations in the portion of the Sanaa Flight Information Region (FIR) (OYSC) that is west of a line drawn direct from KAPET (163322N 0530614E) to NODMA (152603N 0533359E), northwest of a line drawn direct from NODMA to IMPAG (140638N 0503924E) then from IMPAG to TIMAD (115500N 0463500E), north of a line drawn direct from TIMAD to PARIM (123200N 0432720E), and east of a line drawn direct from PARIM to RIBOK (154700N 0415230E). Use of jet route UN303 is not authorized.

(c) **Permitted operations.** This section does not prohibit persons described in paragraph (a) of this section from conducting flight operations in the Sanaa FIR (OYSC) under the following circumstances:

(1) *Permitted operations that do not require an approval or exemption from the FAA.* Flight operations may be conducted in the Sanaa FIR (OYSC) in that airspace east of a line drawn direct from KAPET (163322N 0530614E) to NODMA (152603N 0533359E), southeast of a line drawn direct from NODMA to IMPAG (140638N 0503924E) then from IMPAG to TIMAD (115500N 0463500E), south of a line drawn direct from TIMAD to PARIM (123200N 0432720E), and west of a line drawn direct from PARIM to RIBOK (154700N 0415230E). Use of jet routes UT702 and M999 are authorized. All flight operations conducted under this subparagraph must be conducted subject to the approval of, and in accordance with the conditions established by, the appropriate authorities of Yemen.

(2) *Operations permitted under an approval or exemption issued by the FAA.* Flight operations may be conducted in the Sanaa FIR (OYSC) in that airspace west of a line drawn direct from KAPET (163322N 0530614E) to NODMA (152603N 0533359E), northwest of a line drawn direct from NODMA to IMPAG (140638N 0503924E) then from IMPAG to TIMAD (115500N 0463500E), north of a line drawn direct from TIMAD to PARIM (123200N 0432720E), and east of a line drawn direct from PARIM to RIBOK (154700N 0415230E) if such flight operations are conducted under a contract, grant, or cooperative agreement with a department, agency, or instrumentality of the U.S. Government (or under a subcontract between the prime contractor of the U.S. Government department, agency, or instrumentality and the person subject to paragraph (a)), with the approval of the FAA, or under an exemption issued by the FAA. The FAA will consider requests for approval or exemption in a timely manner, with the order of preference being: First, for those operations in support of U.S. Government-sponsored activities; second, for those operations in support of government-sponsored activities of a foreign country with the support of a U.S. government department, agency, or instrumentality; and third, for all other operations.  
\* \* \* \* \*

Issued in Washington, DC, under the authority of 49 U.S.C. 106(f) and (g), 40101(d)(1), 40105(b)(1)(A), and 44701(a)(5), on September 15, 2023.

- **Change Date:** September 15, 2023
- **Effective Date:** September 15, 2023
- **Source:** Amdt. 91–352B, 88 FR 63525

Amend §91.1615 by revising paragraph (e) to read as follows:

**§91.1615 Special Federal Aviation Regulation No. 79—  
Prohibition Against Certain Flights in the Pyongyang  
Flight Information Region (FIR) (ZKKP).**

\* \* \* \* \*

**(e) Expiration.** This SFAR will remain in effect until September 18, 2028. The FAA may amend, rescind, or extend this SFAR, as necessary.

Issued in Washington, DC, under the authority of 49 U.S.C. 106(f) and (g), 40101(d)(1), 40105(b)(1)(A), and 44701(a)(5).

- **Change Date:** July 25, 2023
- **Effective Date:** July 25, 2023
- **Source:** Amdt. 91-369, 88 FR 47771

Add §91.1619 to read as follows:

**§91.1619 Special Federal Aviation Regulation No. 119—  
Prohibition Against Certain Flights in the Kabul Flight  
Information Region (FIR) (OAKX).**

**(a) Applicability.** This Special Federal Aviation Regulation (SFAR) applies to the following persons:

- (1) All U.S. air carriers and U.S. commercial operators;
- (2) All persons exercising the privileges of an airman certificate issued by the FAA, except when such persons are operating U.S.-registered aircraft for a foreign air carrier; and
- (3) All operators of U.S.-registered civil aircraft, except when the operator of such aircraft is a foreign air carrier.

**(b) Flight prohibition.** Except as provided in paragraphs (c) and (d) of this section, no person described in paragraph (a) of this section may conduct flight operations in the Kabul Flight Information Region (FIR) (OAKX).

**(c) Permitted operations.** This section does not prohibit persons described in paragraph (a) of this section from conducting flight operations in the Kabul Flight Information Region (FIR) (OAKX) under the following circumstances:

(1) Overflights of the Kabul Flight Information Region (FIR) (OAKX) may be conducted at altitudes at and above Flight Level (FL) 320, subject to the approval of, and in accordance with the conditions established by, the appropriate authorities of Afghanistan.

(2) Flight operations may be conducted in the Kabul Flight Information Region (FIR) (OAKX) at altitudes below FL320, provided that such flight operations occur under a contract, grant, or cooperative agreement with a department, agency, or instrumentality of the U.S. Government (or under a subcontract between the prime contractor of the U.S. Government department, agency, or instrumentality and the person described in paragraph (a) of this section) with the approval of the FAA or under an exemption issued by the FAA. The FAA will consider requests for approval or exemption in a timely manner, with the order of preference being: first, for those operations in support of U.S. Government-sponsored activities; second, for those operations in support of government-sponsored activities of a foreign country with the support of a U.S. Government department, agency, or instrumentality; and third, for all other operations.

**(d) Emergency situations.** In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from this section to the extent

required by that emergency. Except for U.S. air carriers and commercial operators that are subject to the requirements of 14 CFR part 119, 121, 125, or 135, each person who deviates from this section must, within 10 days of the deviation, excluding Saturdays, Sundays, and Federal holidays, submit to the responsible Flight Standards Office a complete report of the operations of the aircraft involved in the deviation, including a description of the deviation and the reasons for it.

**(e) Expiration.** This SFAR will remain in effect until July 25, 2025. The FAA may amend, rescind, or extend this SFAR as necessary.

## PART 110 GENERAL REQUIREMENTS

- **Change Date:** July 26, 2023
- **Effective Date:** July 26, 2023
- **Source:** Amdt. 110–3, 88 FR 48087

The authority citation for Part 110 is revised to read as follows:

**Authority:** 49 U.S.C. 106(f), 106(g), 40101, 40102, 40103, 40113, 44105, 44106, 44111, 44701–44717, 44722, 44901, 44903, 44904, 44906, 44912, 44914, 44936, 44938, 46103, 46105.

Amend §110.2 by revising the introductory text of the definition of “Commercial air tour” and by revising the definitions of “Commuter operation”, “Domestic operation”, “Flag operation”, “On-demand operation”, and “Supplemental operation” to read as follows:

**§110.2 Definitions.**

\* \* \* \* \*

**Commercial air tour** means a flight conducted for compensation or hire in an airplane, powered-lift, or rotorcraft where a purpose of the flight is sightseeing. The FAA may consider the following factors in determining whether a flight is a commercial air tour:  
\* \* \* \* \*

**Commuter operation** means any scheduled operation conducted by any person operating one of the following types of aircraft with a frequency of operations of at least five round trips per week on at least one route between two or more points according to the published flight schedules:

- (1) Rotorcraft; or
  - (2) Airplanes or powered-lift that:
    - (i) Are not turbojet-powered;
    - (ii) Have a maximum passenger-seat configuration of 9 seats or less, excluding each crewmember seat; and
    - (iii) Have a maximum payload capacity of 7,500 pounds or less.
- \* \* \* \* \*

**Domestic operation** means any scheduled operation conducted by any person operating any aircraft described in paragraph (1) of this definition at locations described in paragraph (2) of this definition:

- (1) Airplanes or powered-lift that:
  - (i) Are turbojet-powered;
  - (ii) Have a passenger-seat configuration of more than 9 passenger seats, excluding each crewmember seat; or
  - (iii) Have a payload capacity of more than 7,500 pounds.
- (2) Locations:
  - (i) Between any points within the 48 contiguous States of the United States or the District of Columbia; or
  - (ii) Operations solely within the 48 contiguous States of the United States or the District of Columbia; or

(iii) Operations entirely within any State, territory, or possession of the United States; or

(iv) When specifically authorized by the Administrator, operations between any point within the 48 contiguous States of the United States or the District of Columbia and any specifically authorized point located outside the 48 contiguous States of the United States or the District of Columbia.

\* \* \* \* \*

**Flag operation** means any scheduled operation conducted by any person operating any aircraft described in paragraph (1) of this definition at locations described in paragraph (2) of this definition:

(1) Airplanes or powered-lift that:

(i) Are turbojet-powered;

(ii) Have a passenger-seat configuration of more than 9 passenger seats, excluding each crewmember seat; or

(iii) Have a payload capacity of more than 7,500 pounds.

(2) Locations:

(i) Between any point within the State of Alaska or the State of Hawaii or any territory or possession of the United States and any point outside the State of Alaska or the State of Hawaii or any territory or possession of the United States, respectively; or

(ii) Between any point within the 48 contiguous States of the United States or the District of Columbia and any point outside the 48 contiguous States of the United States and the District of Columbia; or

(iii) Between any point outside the U.S. and another point outside the U.S.

\* \* \* \* \*

**On-demand operation** means any operation for compensation or hire that is one of the following:

(1) Passenger-carrying operations conducted as a public charter under part 380 of this chapter or any operations in which the departure time, departure location, and arrival location are specifically negotiated with the customer or the customer's representative that are any of the following types of operations:

(i) Common carriage operations conducted with airplanes or powered-lift, including any that are turbojet-powered, having a passenger-seat configuration of 30 seats or fewer, excluding each crewmember seat, and a payload capacity of 7,500 pounds or less. The operations described in this paragraph do not include operations using a specific airplane or powered-lift that is also used in domestic or flag operations and that is so listed in the operations specifications as required by §119.49(a)(4) of this chapter for those operations are considered supplemental operations;

(ii) Noncommon or private carriage operations conducted with airplanes or powered-lift having a passenger-seat configuration of less than 20 seats, excluding each crewmember seat, and a payload capacity of less than 6,000 pounds; or

(iii) Any rotorcraft operation.

(2) Scheduled passenger-carrying operations conducted with one of the following types of aircraft, other than turbojet-powered aircraft, with a frequency of operations of less than five round trips per week on at least one route between two or more points according to the published flight schedules:

(i) Airplanes or powered-lift having a maximum passenger-seat configuration of 9 seats or less, excluding each crewmember seat, and a maximum payload capacity of 7,500 pounds or less; or

(ii) Rotorcraft.

(3) All-cargo operations conducted with airplanes or powered-lift having a payload capacity of 7,500 pounds or less, or with rotorcraft.

\* \* \* \* \*

**Supplemental operation** means any common carriage operation for compensation or hire conducted with any aircraft described in paragraph (1) of this definition that is a type of operation described in paragraph (2) of this definition:

(1) Airplanes or powered-lift that:

(i) Have a passenger-seat configuration of more than 30 seats, excluding each crewmember seat.

(ii) Have a payload capacity of more than 7,500 pounds.

(iii) Are propeller-powered and:

(A) Have a passenger-seat configuration of more than 9 seats and less than 31 seats, excluding each crewmember seat; and

(B) Are used in domestic or flag operations but are so listed in the operations specifications as required by §119.49(a)(4) of this chapter for such operations.

(iv) Are turbojet-powered and:

(A) Have a passenger seat configuration of 1 or more but less than 31 seats, excluding each crewmember seat; and

(B) Are used in domestic or flag operations and are so listed in the operations specifications as required by §119.49(a)(4) of this chapter for such operations.

(2) Types of operation:

(i) Operations for which the departure time, departure location, and arrival location are specifically negotiated with the customer or the customer's representative.

(ii) All-cargo operations.

(iii) Passenger-carrying public charter operations conducted under part 380 of this chapter.

\* \* \* \* \*

## PART 119

### CERTIFICATION: AIR CARRIERS AND COMMERCIAL OPERATORS

► **Change Date:** July 26, 2023

► **Effective Date:** July 26, 2023

► **Source:** Amdt. 119–20, 88 FR 48088

The authority citation for Part 119 is revised to read as follows:

**Authority:** 49 U.S.C. 106(f), 106(g), 40101, 40102, 40103, 40113, 44105, 44106, 44111, 44701–44717, 44722, 44901, 44903, 44904, 44906, 44912, 44914, 44936, 44938, 46103, 46105; sec. 215, Pub. L. 111–216, 124 Stat. 2348.

Amend §119.1 by:

a. Revising paragraph (a)(2);

b. Adding paragraph (a)(3); and

c. Revising paragraphs (e) introductory text, (e)(2), (e)(4)(v), (e)(5), (e)(7) introductory text, and (e)(7)(i), (iii), and (vii).

The revisions and addition read as follows:

#### §119.1 Applicability.

(a) \* \* \*

(2) When common carriage is not involved, in operations of any U.S.-registered civil airplane or powered-lift with a seat configuration of 20 or more passengers, or a maximum payload capacity of 6,000 pounds or more; or

(3) When noncommon carriage is involved, except as provided in §91.501(b) of this chapter, or in private carriage for compensation or hire, in operations of any U.S.-registered civil airplane or powered-lift with a passenger-seat configuration of less than 20 seats and a payload capacity of less than 6,000 pounds.

\* \* \* \* \*

(e) Except for operations when common carriage is not involved conducted with any airplane or powered-lift having a passenger-seat configuration of 20 seats or more, excluding any required crewmember seat, or a payload capacity of 6,000 pounds or more, this part does not apply to—

\*\*\*\*\*

(2) Nonstop Commercial Air Tours that occur in an airplane, powered-lift, or rotorcraft having a standard airworthiness certificate and passenger-seat configuration of 30 seats or fewer and a maximum payload capacity of 7,500 pounds or less that begin and end at the same airport, and are conducted within a 25-statute mile radius of that airport, in compliance with the Letter of Authorization issued under §91.147 of this chapter. For nonstop Commercial Air Tours conducted in accordance with part 136, subpart B, of this chapter, National Parks Air Tour Management, the requirements of this part apply unless excepted in §136.37(g)(2). For Nonstop Commercial Air Tours conducted in the vicinity of the Grand Canyon National Park, Arizona, the requirements of SFAR 50-2, part 93, subpart U, of the chapter and this part, as applicable, apply.

\*\*\*\*\*

(4) \*\*\*

(v) Powered-lift or rotorcraft operations in construction or repair work (but part 119 of this chapter does apply to transportation to and from the site of operations); and

\*\*\*\*\*

(5) Sightseeing flights conducted in hot air balloons or gliders;

\*\*\*\*\*

(7) Powered-lift or rotorcraft flights conducted within a 25 statute mile radius of the airport of takeoff if—

(i) Not more than two passengers are carried in the aircraft in addition to the required flightcrew;

\*\*\*\*\*

(iii) The aircraft used is certificated in the standard category and complies with the 100-hour inspection requirements of part 91 of this chapter;

\*\*\*\*\*

(vii) Cargo is not carried in or on the aircraft;

\*\*\*\*\*

Amend §119.5 by revising paragraphs (b) and (c) to read as follows:

#### **§119.5 Certifications, authorizations, and prohibitions.**

\*\*\*\*\*

(b) A person not authorized to conduct direct air carrier operations, but authorized by the Administrator to conduct operations as a U.S. commercial operator, will be issued an Operating Certificate.

(c) A person not authorized to conduct direct air carrier operations, but authorized by the Administrator to conduct operations when common carriage is not involved as an operator of any U.S.-registered civil airplane or powered-lift with a seat configuration of 20 or more passengers, or a maximum payload capacity of 6,000 pounds or more, will be issued an Operating Certificate.

\*\*\*\*\*

Amend §119.21 by revising paragraph (a) introductory text to read as follows:

#### **§119.21 Commercial operators engaged in intrastate common carriage and direct air carriers.**

(a) Each person who conducts airplane or powered-lift operations as a commercial operator engaged in intrastate common car-

riage of persons or property for compensation or hire in air commerce, or as a direct air carrier, shall comply with the certification and operations specifications requirements in subpart C of this part, and shall conduct its:

\*\*\*\*\*

Amend §119.23 by revising the section heading, paragraphs (a) introductory text, (a)(2), and (b) introductory text to read as follows:

#### **§119.23 Operators engaged in passenger-carrying operations, cargo operations, or both with airplanes or powered-lift when common carriage is not involved.**

(a) Each person who conducts operations when common carriage is not involved with any airplane or powered-lift having a passenger-seat configuration of 20 seats or more, excluding each crewmember seat, or a payload capacity of 6,000 pounds or more, must, unless deviation authority is issued—

\*\*\*\*\*

(2) Conduct its operations in accordance with the requirements of part 125 of this chapter; and

\*\*\*\*\*

(b) Each person who conducts noncommon carriage (except as provided in §91.501(b) of this chapter) or private carriage operations for compensation or hire with any airplane or powered-lift having a passenger-seat configuration of less than 20 seats, excluding each crewmember seat, and a payload capacity of less than 6,000 pounds, must—

\*\*\*\*\*

Amend §119.49 by revising paragraphs (a)(12), (b)(12), and (c)(11) to read as follows:

#### **§119.49 Contents of operations specifications.**

(a) \*\*\*

(12) Any authorized deviation or exemption from any requirement of this chapter that applies to the certificate holder.

\*\*\*\*\*

(b) \*\*\*

(12) Any authorized deviation or exemption from any requirement of this chapter that applies to the certificate holder.

\*\*\*\*\*

(c) \*\*\*

(11) Any authorized deviation or exemption from any requirement of this chapter that applies to the certificate holder.

\*\*\*\*\*

Amend §119.65 by revising paragraphs (a)(3) and (b)(2) to read as follows:

#### **§119.65 Management personnel required for operations conducted under part 121 of this chapter.**

(a) \*\*\*

(3) Chief Pilot for each category of aircraft the certificate holder uses, as listed in §61.5(b)(1) of this chapter.

\*\*\*\*\*

(b) \*\*\*

(2) The number and type of aircraft used; and

\*\*\*\*\*

Revise §119.67 to read as follows:

**§119.67 Management personnel: Qualifications for operations conducted under part 121 of this chapter.**

**(a) Director of Operations.** To serve as Director of Operations under §119.65(a), a person must hold an airline transport pilot certificate and—

(1) If the certificate holder uses large aircraft, at least 3 years of supervisory or managerial experience within the last 6 years in large aircraft, in a position that exercised operational control over any operations conducted under part 121 or 135 of this chapter.

(2) If the certificate holder uses large aircraft, at least 3 years of experience as pilot in command under part 121 or 135 of this chapter in large aircraft in at least one of the categories of aircraft the certificate holder uses, as listed in §61.5(b)(1) of this chapter. In the case of a person becoming Director of Operations for the first time, he or she must have accumulated this experience as pilot in command within the past 6 years.

(3) If the certificate holder uses only small aircraft in its operations, the experience required in paragraphs (a)(1) and (2) of this section may be obtained in either large or small aircraft.

**(b) Chief Pilot.** To serve as Chief Pilot under §119.65(a), a person must:

(1) Hold an airline transport pilot certificate with appropriate ratings in the category of aircraft that the certificate holder uses in its operations under part 121 of this chapter and over which the Chief Pilot exercises responsibility; and

(2) Have at least 3 years of experience as pilot in command in the same category of aircraft that the certificate holder uses, as listed in §61.5(b) of this chapter. The experience as pilot in command described in this paragraph (b)(2) must:

(i) Have occurred within the past 6 years, in the case of a person becoming a Chief Pilot for the first time.

(ii) Have occurred in large aircraft operated under part 121 or 135 of this chapter. If the certificate holder uses only small aircraft in its operation, this experience may be obtained in either large or small aircraft.

(iii) Be in the same category of aircraft over which the Chief Pilot exercises responsibility.

**(c) Director of Maintenance.** To serve as Director of Maintenance under §119.65(a), a person must:

(1) Hold a mechanic certificate with airframe and powerplant ratings;

(2) Have 1 year of experience in a position responsible for returning aircraft to service;

(3) Have at least 1 year of experience in a supervisory capacity under either paragraph (c)(4)(i) or (ii) of this section maintaining the same category and class of aircraft as the certificate holder uses; and

(4) Have 3 years of experience within the past 6 years in one or a combination of the following—

(i) Maintaining large aircraft with 10 or more passenger seats, including, at the time of appointment as Director of Maintenance, experience in maintaining the same category and class of aircraft as the certificate holder uses; or

(ii) Repairing aircraft in a certificated airframe repair station that is rated to maintain aircraft in the same category and class of aircraft as the certificate holder uses.

**(d) Chief Inspector.** To serve as Chief Inspector under §119.65(a), a person must:

(1) Hold a mechanic certificate with both airframe and powerplant ratings, and have held these ratings for at least 3 years;

(2) Have at least 3 years of maintenance experience on different types of large aircraft with 10 or more passenger seats with an air carrier or certificated repair station, 1 year of which must have been as maintenance inspector; and

(3) Have at least 1 year of experience in a supervisory capacity maintaining the same category and class of aircraft as the certificate holder uses.

**(e) Deviation.** A certificate holder may request a deviation to employ a person who does not meet the appropriate airman experience, managerial experience, or supervisory experience requirements of this section if the Manager of the Air Transportation Division or the Manager of the Aircraft Maintenance Division, as appropriate, finds that the person has comparable experience and can effectively perform the functions associated with the position in accordance with the requirements of this chapter and the procedures outlined in the certificate holder's manual. Deviations under this paragraph (e) may be issued after consideration of the size and scope of the operation and the qualifications of the intended personnel. The Administrator may, at any time, terminate any grant of deviation authority issued under this paragraph (e).

## PART 136

### COMMERCIAL AIR TOURS AND NATIONAL PARKS AIR TOUR MANAGEMENT

► **Change Date:** July 26, 2023

► **Effective Date:** July 26, 2023

► **Source:** Amdt. 136–2, 88 FR 48091

The authority citation for part 136 is revised to read as follows:

**Authority:** 49 U.S.C. 106(f), 106(g), 40113, 40119, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

Amend §136.1:

a. By revising paragraphs (a), (b) introductory text, and (c); and  
b. In paragraph (d):

i. In the definition of “Commercial Air Tour”:

A. By removing “Commercial Air Tour” and adding “Commercial air tour” in its place;

B. By revising the introductory text; and

C. By redesignating paragraphs (1) through (8) as paragraphs (i) through (viii);

ii. By removing the definition of “Suitable landing area for helicopters”; and

iii. By adding a definition for “Suitable landing area for rotorcraft” in alphabetical order.

The revisions and addition read as follows:

#### §136.1 Applicability and definitions.

**(a)** This subpart applies to each person operating or intending to operate a commercial air tour in an airplane, powered-lift, or rotorcraft and, when applicable, to all occupants of those aircraft engaged in a commercial air tour. When any requirement of this subpart is more stringent than any other requirement of this chapter, the person operating the commercial air tour must comply with the requirement in this subpart.

**(b)** This subpart applies to:

\* \* \* \* \*

**(c)** This subpart does not apply to operations conducted in balloons, gliders (powered and un-powered), parachutes (powered and un-powered), gyroplanes, or airships.

(d) \* \* \*

**Commercial air tour** means a flight conducted for compensation or hire in an airplane, powered-lift, or rotorcraft where a purpose of the flight is sightseeing. The FAA may consider the following factors in determining whether a flight is a commercial air tour for purposes of this subpart:

\* \* \* \* \*

**Suitable landing area for rotorcraft** means an area that provides the operator reasonable capability to land in an emergency without causing serious injury to persons. These suitable landing areas must be site specific, designated by the operator, and accepted by the FAA.

\* \* \* \* \*

Revise §136.3 to read as follows:

### §136.3 Letters of Authorization.

Operators subject to this subpart who have Letters of Authorization may use the procedures described in §119.51 of this chapter to amend or have the FAA reconsider those Letters of Authorization.

Revise §136.5 to read as follows:

### §136.5 Additional requirements for Hawaii.

Any operator subject to this subpart who meets the criteria of §136.71 must comply with the additional requirements and restrictions in subpart D of this part.

Amend §136.9 by revising the section heading and paragraphs (b)(1) through (3) to read as follows:

### §136.9 Life preservers for operations over water.

\* \* \* \* \*

(b) \* \* \*

- (1) The aircraft is equipped with floats;
- (2) The airplane is within power-off gliding distance to the shoreline for the duration of the time that the flight is over water; or
- (3) The aircraft is a multiengine that can be operated with the critical engine inoperative at a weight that will allow it to climb, at least 50 feet a minute, at an altitude of 1,000 feet above the surface, as provided in the approved aircraft flight manual for that aircraft.

\* \* \* \* \*

Revise §136.11 to read as follows:

### §136.11 Rotorcraft floats for over water.

(a) A rotorcraft used in commercial air tours over water beyond the shoreline must be equipped with fixed floats or an inflatable flotation system adequate to accomplish a safe emergency ditching, if—

- (1) It is a single-engine rotorcraft; or
- (2) It is a multi-engine rotorcraft that cannot be operated with the critical engine inoperative at a weight that will allow it to climb, at least 50 feet a minute, at an altitude of 1,000 feet above the surface, as provided in the approved aircraft flight manual for that aircraft.

(b) Each rotorcraft that is required to be equipped with an inflatable flotation system under this section must have:

- (1) The activation switch for the flotation system on one of the primary flight controls; and
- (2) The flotation system armed when the rotorcraft is over water beyond the shoreline and is flying at a speed that does not exceed

the maximum speed prescribed in the approved aircraft flight manual for flying with the flotation system armed.

(c) Neither fixed floats nor an inflatable flotation system is required for a rotorcraft under this section when that rotorcraft is:

(1) Over water only during the takeoff or landing portion of the flight; or

(2) Operated within power-off gliding distance to the shoreline for the duration of the flight and each occupant is wearing a life preserver from before takeoff until the aircraft is no longer over water.

Revise §136.13 to read as follows:

### §136.13 Performance plan.

(a) Each operator that uses a rotorcraft must complete a performance plan before each commercial air tour or flight operated under §91.146 or §91.147 of this chapter. The pilot in command must review for accuracy and comply with the performance plan on the day the flight occurs. The performance plan must be based on information in the approved aircraft flight manual for that aircraft taking into consideration the maximum density altitude for which the operation is planned, in order to determine:

(1) Maximum gross weight and center of gravity (CG) limitations for hovering in ground effect;

(2) Maximum gross weight and CG limitations for hovering out of ground effect; and

(3) Maximum combination of weight, altitude, and temperature for which height/velocity information in the approved aircraft flight manual is valid.

(b) Except for the approach to and transition from a hover for the purpose of takeoff and landing, or during takeoff and landing, the pilot in command must make a reasonable plan to operate the rotorcraft outside of the caution/warning/avoid area of the limiting height/velocity diagram.

(c) Except for the approach to and transition from a hover for the purpose of takeoff and landing, during takeoff and landing, or when necessary for safety of flight, the pilot in command must operate the rotorcraft in compliance with the plan described in paragraph (b) of this section.

Remove appendix A to part 136.

## APPENDIX A TO PART 136—[REMOVED]

Add subpart D to part 136 to read as follows:

### Subpart D—Special Operating Rules for Air Tour Operators in the State of Hawaii

Sec.

136.71 Applicability.

136.73 Definitions.

136.75 Equipment and requirements.

### Subpart D—Special Operating Rules for Air Tour Operators in the State of Hawaii

#### §136.71 Applicability.

(a) Except as provided in paragraph (b) of this section, this subpart prescribes operating rules for air tour flights conducted in airplanes, powered-lift, or rotorcraft under visual flight rules in the State of Hawaii pursuant to parts 91, 121, and 135 of this chapter.

(b) This subpart does not apply to:

- (1) Operations conducted under part 121 of this chapter in airplanes with a passenger seating configuration of more than 30 seats or a payload capacity of more than 7,500 pounds.
- (2) Flights conducted in gliders or hot air balloons.

#### §136.73 Definitions.

For the purposes of this subpart:

**Air tour** means any sightseeing flight conducted under visual flight rules in an airplane, powered-lift, or rotorcraft for compensation or hire.

**Air tour operator** means any person who conducts an air tour.

#### §136.75 Equipment and requirements.

(a) **Flotation equipment.** No person may conduct an air tour in Hawaii in a rotorcraft beyond the shore of any island, regardless of whether the rotorcraft is within gliding distance of the shore, unless:

- (1) The rotorcraft is amphibious or is equipped with floats adequate to accomplish a safe emergency ditching and approved flotation gear is easily accessible for each occupant; or
- (2) Each person on board the rotorcraft is wearing approved flotation gear.

(b) **Performance plan.** Each operator must complete a performance plan that meets the requirements of this paragraph (b) before each air tour flight conducted in a rotorcraft.

(1) The performance plan must be based on information from the current approved aircraft flight manual for that aircraft, considering the maximum density altitude for which the operation is planned to determine the following:

- (i) Maximum gross weight and center of gravity (CG) limitations for hovering in ground effect;
- (ii) Maximum gross weight and CG limitations for hovering out of ground effect; and

(iii) Maximum combination of weight, altitude, and temperature for which height-velocity information from the performance data is valid.

(2) The pilot in command (PIC) must comply with the performance plan.

(c) **Operating limitations.** Except for approach to and transition from a hover, and except for the purpose of takeoff and landing, the PIC of a rotorcraft may only operate such aircraft at a combination of height and forward speed (including hover) that would permit a safe landing in event of engine power loss, in accordance with the height-speed envelope for that rotorcraft under current weight and aircraft altitude.

(d) **Minimum flight altitudes.** Except when necessary for takeoff and landing, or operating in compliance with an air traffic control clearance, or as otherwise authorized by the Administrator, no person may conduct an air tour in Hawaii:

- (1) Below an altitude of 1,500 feet above the surface over all areas of the State of Hawaii;
- (2) Closer than 1,500 feet to any person or property; or
- (3) Below any altitude prescribed by Federal statute or regulation.

(e) **Passenger briefing.** Before takeoff, each PIC of an air tour flight of Hawaii with a flight segment beyond the ocean shore of any island shall ensure that each passenger has been briefed on the following, in addition to requirements set forth in §91.107, §121.571, or §135.117 of this chapter:

- (1) Water ditching procedures;
- (2) Use of required flotation equipment; and
- (3) Emergency egress from the aircraft in event of a water landing.

Issued in Washington, DC, under the authority of 49 U.S.C. 106(f) and (g), 40101(d)(1), 40105(b)(1)(A), and 44701(a)(5).

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# Aeronautical Information Manual

## Explanation of Major Changes

Change 1 effective October 5, 2023, and Change 2 effective March 21, 2024 (to Basic Manual effective April 20, 2023).

### 1–1–9. Instrument Landing System (ILS)

This change reflects the FAA Order JO 7110.65 guidance that allows a preceding arrival or departure in or over the ILS critical area when the weather is above 200' ceiling and 2000 RVR. The new guidance warns pilots of signal disturbances that may be encountered in any weather at or above standard CAT I minima.

### 1–1–17. Global Positioning System

This change aligns the AIM with Flight Standards B036 issuance policy that two GPS receivers are considered independent systems for extended overwater operations.

### 1–1–20. Precision Approach Systems Other Than ILS and GPS

#### Appendix 3. Abbreviations/Acronyms

This change will result in the removal of references to SCAT-DGPS from the AIM.

### 2–3–8. Mandatory Instruction Signs

This change addresses a change to the mandatory instruction sign to include the departure runway information in the sign legend. The sign for holding positions protecting both the approach area of a runway end and the departure area for the opposite runway end will now display “DEP” in addition to “APCH” (e.g., 15 APCH–33 DEP). Holding positions signs on taxiways that traverse the approach area but not the departure area (e.g., displaced threshold) will continue to display just the APCH legend. This change does not address changes to the hold line marking or implement conditional holding for protection of approach/departure areas.

### 3–5–2. Military Training Routes

This change adds language to paragraph 3-5-2 that defines what the Department of Defense Flight Information Publications (DoD FLIP) represent and describes instrument/visual routes (IR/VR) that can be found in charts and narratives. It also describes FAA's responsibility for providing information about them on IFR and VFR routes. Additionally, a note was added for users who require copies of the FLIP.

### 3–5–8. Washington DC Special Flight Rules Area (SFRA) Including the Flight Restricted Zone (FRZ)

This change adds a new paragraph 3-5-8, Washington DC Special Flight Rules Area (SFRA) including the Flight Restricted Zone (FRZ), to the AIM to better inform pilots and reduce violations reference the requirements of 14 CFR Part 93.339 and Part 91.161, and 14 CFR 99.7 Special Security Instruction NOTAMs. The current paragraphs 3-5-8 and 3-5-9 are being renumbered 3-5-9 and 3-5-10, respectively.

### 4–1–21. Airport Reservation Operations and Special Traffic Management Programs

Dual-tone multi-frequency (telephone touch-tone signaling) interfaces are no longer available for use to receive an Electronic Special Traffic Management Program or Enhanced Computer Voice

Reservation System reservation. Procedures for coordination processing are updated and some content has been revised for clarification.

### 4–3–20. Standard Taxi Routes

This change adds a paragraph to Chapter 4, Air Traffic Control, Section 3, Airport Operations, of the AIM, to provide guidance to pilots about Standard Taxi Routes (STRs). This new paragraph will support the implementation of a new directive, FAA Order JO 7110.664, Standard Taxi Routes. All subsequent paragraphs will be renumbered.

### 7–1–3. Use of Aviation Products

#### 7–1–4. Graphical Forecasts for Aviation Weather (GFA)

#### 7–1–11. Weather Radar Services

#### 7–1–18. Pilot Weather Reports (PIREPS)

This change updates the references to AC 00-45 to the *Aviation Weather Handbook*, FAA-H-8083-28.

#### 7–1–5. Preflight Briefing

This change updates the subparagraph to use true north rather than magnetic north.

#### 7–3–5. Cold Temperature Airport Procedures

This change adds an additional segment to Figure 7-3-1, Example Cold Temperature Restricted Airport List—Required Segments, along with guidance on how to apply a temperature correction to this segment. The change also rearranges the section for better flow, swapping the positions of updated subparagraphs e and f.

#### 7–6–4. Obstructions to Flight

This change provides pilots guidance on the distinctive hazards when flying near wind turbines and their unique marking and lighting. Additionally, other updates were made to improve the readability of the paragraphs addressing other obstruction types.

#### 9–1–4. General Description of Each Chart Series

As a result of the Chart Supplement Modernization Initiative, the Chart Supplement U.S. descriptions were revised and expanded creating Chart Supplement, Chart Supplement Alaska, and Chart Supplement Pacific. Figure 9-1-14 was repositioned and renumbered to immediately follow subparagraph d2 for better readability.

#### Appendix 4. FAA Form 7233-4—International Flight Plan

This change modifies codes used in field 18 of the ICAO flight plan for indication of ADS-B equipment in compliance with international agreements.

#### Appendix 4. FAA Form 7233-4—International Flight Plan

This change modifies an existing note to identify three Item 18 NAV and PBN codes that require all civil operators to obtain specific operational approval prior to including on their flight plan. Additionally, an identical comment was added to Appendix 2 of the U.S. AIP.



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## Editorial Changes

Editorial changes include updated and corrected references and typos; rewording subparagraph 8-1-2d to eliminate confusion between high altitude of aircraft vs. low cabin altitude pressure; clarifying language in subparagraph 11-2-2c2 to say that UAS that are flown exclusively for recreational purposes must be registered if they weigh more than 0.55 pounds (250 grams); updating the subscription information for this publication; a hyperlink fix and hyperlink update for Helicopter Association International in subparagraph 10-2-1a; updates to the term Chart Supplement and Chart Supplement U.S.; the addition of RX Receive/Receiver and edit of REDL to Runway Edge Light in 5-1-3, Table 5-1-2; a change reconciling the discrepancy between FAA Order JO 7210.3 and

the *Aeronautical Information Manual* by changing the time for requesting Remote Airport Information Service (RAIS) support from 60 days to 30 days; correcting the spelling of “Juliet” to “Juliett” in paragraph 4-1-16; a couple of simple editorial changes in paragraphs 3-2-3 and 5-4-1; correcting non-radar to nonradar in 5-3-2c4; and a simple editorial correcting “four” to “these” in 7-1-10d1(a).

## Entire Publication

Additional editorial/format changes were made where necessary. Revision bars were not used because of the insignificant nature of these changes.

# Aeronautical Information Manual (AIM)

## Subscription Information

This manual is available by its effective date on the FAA's Air Traffic Plans and Publications website at [https://www.faa.gov/air\\_traffic/publications/](https://www.faa.gov/air_traffic/publications/).

This manual is distributed electronically to all who subscribe to receive email notifications through the FAA's website. All organizations are responsible for viewing, downloading, and subscribing to receive email notifications when changes occur to this manual. Subscriptions to air traffic directives can be made through the Air Traffic Plans and Publications website at [https://www.faa.gov/air\\_traffic/publications/](https://www.faa.gov/air_traffic/publications/) or directly via the following link: [https://public.govdelivery.com/accounts/USFAAA/subscriber/new?topic\\_id=USFAAA\\_39](https://public.govdelivery.com/accounts/USFAAA/subscriber/new?topic_id=USFAAA_39).

## Chapter 1

### 1-1-1 General

a. Various types of air navigation aids are in use today, each serving a special purpose. These aids have varied owners and operators, namely: the Federal Aviation Administration (FAA), the military services, private organizations, individual states and foreign governments. The FAA has the statutory authority to establish, operate, maintain air navigation facilities and to prescribe standards for the operation of any of these aids which are used for instrument flight in federally controlled airspace. These aids are tabulated in the Chart Supplement.

\*\*\*\*\*

### 1-1-4 VOR Receiver Check

a. The FAA VOR test facility (VOT) transmits a test signal which provides users a convenient means to determine the operational status and accuracy of a VOR receiver while on the ground where a VOT is located. The airborne use of VOT is permitted; however, its use is strictly limited to those areas/altitudes specifically authorized in the Chart Supplement or appropriate supplement.

\*\*\*\*\*

f. \*\*\*

2. Locations of airborne check points, ground check points and VOTs are published in the Chart Supplement.

\*\*\*\*\*

### 1-1-8 NAVAID Service Volumes

\*\*\*\*\*

d. \*\*\*

TABLE 1-1-2  
NDB SERVICE VOLUMES

Class	Distance (Radius) (NM)
Compass Locator	15
MH	25
H	50*
HH	75

\*Service ranges of individual facilities may be less than 50 nautical miles (NM). Restrictions to service volumes are first published as a Notice to Air Missions and then with the alphabetical listing of the NAVAID in the Chart Supplement.

## 1-1-9 Instrument Landing System (ILS)

\*\*\*\*\*

### k. ILS Course and Glideslope Distortion

1. All pilots should be aware that ILS installations are subject to signal interference by surface vehicles and aircraft (either on the ground or airborne). ILS CRITICAL AREAS are established near each localizer and glide slope antenna. Pilots should be aware of the level of critical area protection they can expect in various weather conditions and understand that signal disturbances may occur as a result of normal airport operations irrespective of the official weather observation.

2. ATC is not always required to issue control instructions to avoid interfering operations within ILS critical areas at controlled airports during the hours the Airport Traffic Control Tower (ATCT) is in operation. ATC responsibilities vary depending on the official weather observation and are described as follows:

(a) **Weather Conditions.** Official weather observation indicates a ceiling of 800 feet or higher and visibility 2 miles or greater, no localizer or glideslope critical area protection is provided by ATC unless specifically requested by the flight crew.

(b) **Weather Conditions.** Official weather observation indicates a ceiling of less than 800 feet or visibility less than 2 miles.

(1) **Holding.** Aircraft holding below 5,000 feet between the outer marker and the airport may cause localizer signal variations for aircraft conducting the ILS approach. Accordingly, such holding will not be authorized by ATC.

(2) **Localizer Critical Area.** When an arriving aircraft is inside the outer marker (OM) or the fix used in lieu of the OM, vehicles and aircraft will not be authorized in or over the precision approach critical area except:

[a] A preceding arriving aircraft on the same or another runway may pass over or through the localizer critical area, and;

[b] A preceding departing aircraft or missed approach on the same or another runway may pass through or over the localizer critical area.

(3) **Glide Slope Critical Area.** ATC will not authorize vehicles or aircraft operations in or over the glideslope critical area when an arriving aircraft is inside the outer marker (OM), or the fix used in lieu of the OM, unless the arriving aircraft has reported the runway in sight and is circling or side-stepping to land on another runway.

(c) **Weather Conditions.** Official weather observation indicates a ceiling less than 200 feet or runway visual range (RVR) less than 2000 feet.

(1) **Localizer Critical Area.** In addition to the critical area protection described in 1-1-9k2(b) above, when an arriving aircraft is inside the middle marker (MM), or in the absence of a MM, 1/2 mile final, ATC will not authorize:

[a] A preceding arriving aircraft on the same or another runway to pass over or through the localizer critical area, or;

[b] A preceding departing aircraft or missed approach on the same or another runway to pass through or over the localizer critical area.

3. In order to ensure that pilot and controller expectations match with respect to critical area protection for a given approach and landing operation, a flight crew should advise the tower any time it intends to conduct any autoland operation or use an SA CAT I, any CAT II, or any CAT III line of minima anytime the official weather observation is at or above a ceiling of 800 feet and 2 miles visibility. If ATC is unable to protect the critical area, they will advise the flight crew.

**Example:** Denver Tower, United 1153, Request Autoland (runway) ATC replies with: United 1153, Denver Tower, Roger, Critical Areas not protected.

4. Pilots are cautioned that even when the critical areas are considered to be protected, unless the official weather observation including controller observations indicates a ceiling less than 200 feet or RVR less than 2000 feet, ATC may still authorize a preceding arriving, departing, or missed approach aircraft to pass through or over the localizer critical area and that this may cause signal disturbances that could result in an undesired aircraft state during the final stages of the approach, landing, and rollout.

5. Pilots are cautioned that vehicular traffic not subject to ATC may cause momentary deviation to ILS course or glide slope signals. Also, critical areas are not protected at uncontrolled airports or at airports with an operating control tower when weather or visibility conditions are above those requiring protective measures. Aircraft conducting coupled or autoland operations should be especially alert in monitoring automatic flight control systems and be prepared to intervene as necessary. (See Figure 1-1-8.)

**Note:** Unless otherwise coordinated through Flight Standards, ILS signals to Category I runways are not flight inspected below the point that is 100 feet less than the decision altitude (DA). Guidance signal anomalies may be encountered below this altitude.

### 1-1-12 NAVAIDs with Voice

a. Voice equipped en route radio navigational aids are under the operational control of either a Flight Service Station (FSS) or an approach control facility. Facilities with two-way voice communication available are indicated in the Chart Supplement and aeronautical charts.

b. Unless otherwise noted on the chart, all radio navigation aids operate continuously except during shutdowns for maintenance. Hours of operation of facilities not operating continuously are annotated on charts and in the Chart Supplement.

### 1-1-17 Global Positioning System (GPS)

\*\*\*\*\*

b. \*\*\*

1. \*\*\*

(c) \*\*\*

(2) Database Currency. Check the currency of the database. Databases must be updated for IFR operations and should be updated for all other operations. However, there is no requirement for databases to be updated for VFR navigation. It is not recommended to use a moving map with an outdated database in and around critical airspace. Pilots using an outdated database should verify waypoints using current aeronautical products; for example, Chart Supplement, Sectional Chart, or En Route Chart.

\*\*\*\*\*

2. \*\*\*

(b) \*\*\*

(5) \*\*\*

[b] Operators must have two independent navigation systems appropriate to the route to be flown or one system that is suitable and a second, independent backup system that allows the operator to proceed safely to a suitable airport, complete an instrument approach; and the aircraft must have sufficient fuel (reference 14 CFR 121.349, 125.203, 129.17, and 135.165). These rules ensure the safety of the operation by preventing a single point of failure.

**Note:** An aircraft approved for multi-sensor navigation and equipped with a single navigation system must maintain an ability to navigate or proceed safely in the event that any one component of the navigation system fails, including the flight management system (FMS). Retaining an FMS-independent VOR capability would satisfy this requirement.

\*\*\*\*\*

[d] Due to low risk of disruption or manipulation of GPS signals beyond 50 NM offshore, FAA differentiates between extended and non-extended over-water operations. To satisfy the requirement for two independent navigation systems:

[1] For all extended over-water operations (defined in 14 CFR Part 1 as greater than 50 NM from the nearest shoreline), operators may consider dual GPS-based systems to meet the “independent” criteria stipulated by regulation, e.g., §121.349, §135.165.

[2] For all “non-extended overwater” operations, if the primary navigation system is GPS-based, the second system must be independent of GPS (for example, VOR or DME/DME/IRU). This allows continued navigation in case of failure of the GPS or WAAS services. Recognizing that GPS interference and test events resulting in the loss of GPS services have become more common, the FAA requires operators conducting IFR operations under 14 CFR 121.349, 125.203, 129.17, and 135.65 to retain a non-GPS navigation capability, for example, either DME/DME, IRU, or VOR for en route and terminal operations and VOR and ILS for final approach. Since this system is to be used as a rever-sionary capability, single equipage is sufficient.

\*\*\*\*\*

### 1-1-20 Precision Approach Systems other than ILS and GLS

\*\*\*\*\*

b. \*\*\*

2. General aviation operators requesting approval for special procedures should contact the local Flight Standards District Office to obtain a letter of authorization. Air carrier operators requesting approval for use of special procedures should contact their Certificate Holding District Office for authorization through their Operations Specification.

**Reference:** AIM, ¶5-4-7j, *Instrument Approach Procedures*.

## Chapter 2

### 2-1-2 Visual Glideslope Indicators

a. \*\*\*

4. The VASI is a system of lights so arranged to provide visual descent guidance information during the approach to a runway. These lights are visible from 3–5 miles during the day and up to 20 miles or more at night. The visual glide path of the VASI provides safe obstruction clearance within plus or minus 10 degrees of the extended runway centerline and to 4 NM from the runway threshold. Descent, using the VASI, should not be initiated until the aircraft is visually aligned with the runway. Lateral course guidance is provided by the runway or runway lights. In certain circumstances, the safe obstruction clearance area may be reduced by narrowing the beam width or shortening the usable distance due to local limitations, or the VASI may be offset from the extended runway centerline. This will be noted in the Chart Supplement and/or applicable Notices to Air Missions (NOTAMs).

\*\*\*\*\*

b. **Precision Approach Path Indicator (PAPI).** The precision approach path indicator (PAPI) uses light units similar to the VASI but are installed in a single row of either two or four light units. These lights are visible from about 5 miles during the day and up to 20 miles at night. The visual glide path of the PAPI typically provides safe obstruction clearance within plus or minus 10 degrees of the extended runway centerline and to 3.4 NM from the runway threshold. Descent, using the PAPI, should not be initiated until the

aircraft is visually aligned with the runway. The row of light units is normally installed on the left side of the runway and the glide path indications are as depicted. Lateral course guidance is provided by the runway or runway lights. In certain circumstances, the safe obstruction clearance area may be reduced by narrowing the beam width or shortening the usable distance due to local limitations, or the PAPI may be offset from the extended runway centerline. This will be noted in the Chart Supplement and/or applicable NOTAMS. (See Figure 2-1-5.)

**2-1-8 Pilot Control of Airport Lighting**

\*\*\*\*\*

d. For all public use airports with FAA standard systems the Chart Supplement contains the types of lighting, runway and the frequency that is used to activate the system. Airports with IAPs include data on the approach chart identifying the light system, the runway on which they are installed, and the frequency that is used to activate the system.

**Note:** Although the CTAF is used to activate the lights at many airports, other frequencies may also be used. The appropriate frequency for activating the lights on the airport is provided in the Chart Supplement and the standard instrument approach procedures publications. It is not identified on the sectional charts.

e. Where the airport is not served by an IAP, it may have either the standard FAA approved control system or an independent type system of different specification installed by the airport sponsor. The Chart Supplement contains descriptions of pilot controlled lighting systems for each airport having other than FAA approved systems, and explains the type lights, method of control, and operating frequency in clear text.

**2-3-5 Holding Position Markings**

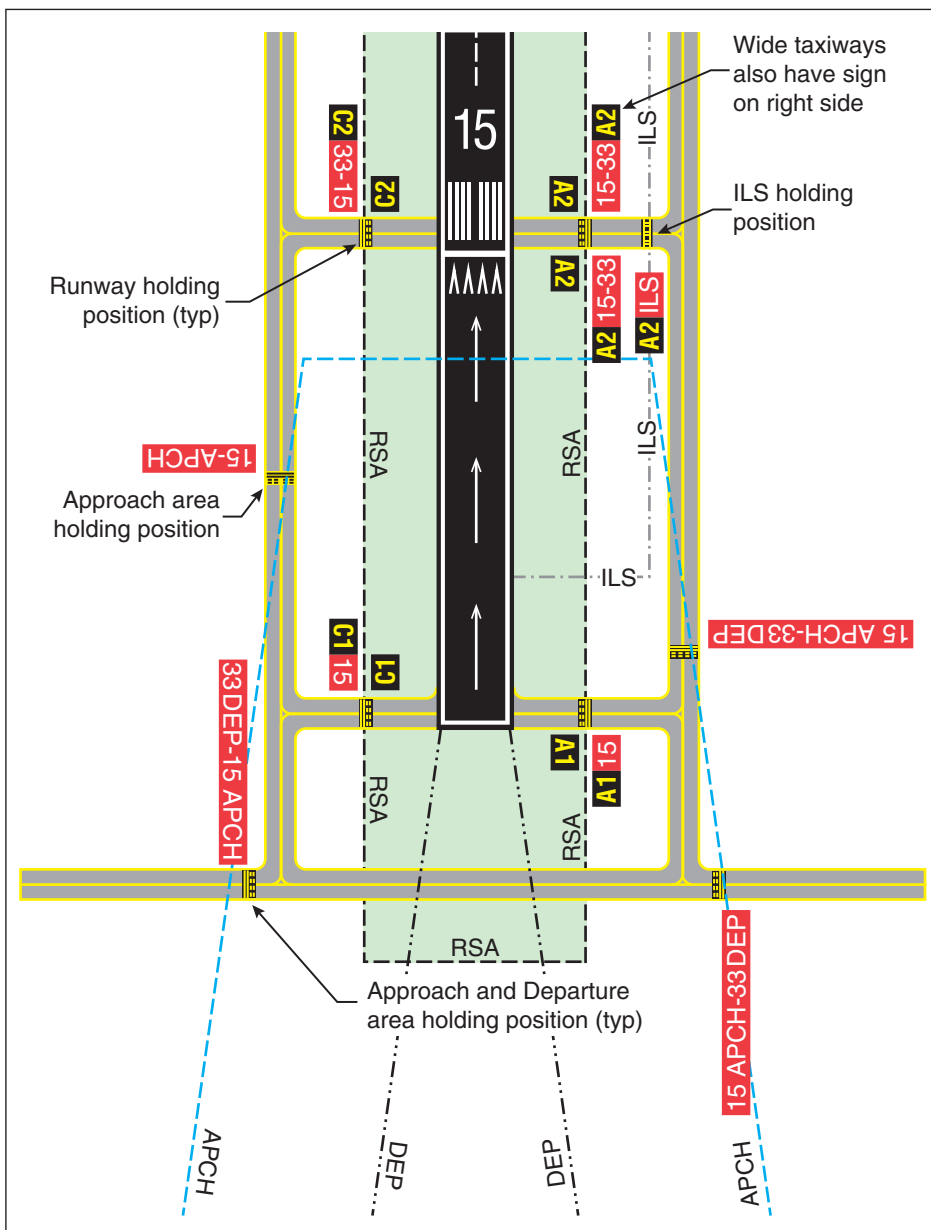
a. \*\*\*

1. \*\*\*

**Reference:** AIM, ¶4-3-21, *Exiting the Runway After Landing.*

\*\*\*\*\*

**FIGURE 2-3-15**  
**Taxiways Located in Runway Approach and Departure Areas**



**Note 1:** Refer to Advisory Circular 150/5300-13 for additional information on obstruction surfaces.

**Note 2:** Because Taxiway C does not enter the departure area of Runway 33, the sign on Taxiway C does not include the “33 DEP” legend.

**Note 3:** The location of a holding position is relative to the point on the aircraft that infringes the surface; for inclining surfaces such as an approach surface, the location of the holdline position may differ from the location of the infringement point.

\*\*\*\*\*

### 2-3-8 Mandatory Instruction Signs

\*\*\*\*\*

b. \*\*\*

**2. Runway Approach Area Holding Position Sign.** At some airports, it is necessary to hold an aircraft on a taxiway located in the approach or departure area for a runway so that the aircraft

does not interfere with operations on that runway. Figure 2-3-15 depicts common situations. A sign with the runway designation(s) and the protected area(s) will be located at applicable holding positions on the taxiway. For locations protecting only the approach area, the holding position on the taxiway includes a sign identifying the approach end runway designation (e.g., 15) followed by a dash (–) and the letters “APCH”. For locations protecting both the approach and departure areas, the holding position on the taxiway includes a sign with the approach end runway designation and letters “APCH” followed by a dash (–), the departure end runway designation and the letters “DEP”. The arrangement of the runway designations and protected areas legend on the sign reflects the orientation of the runway as viewed from the holding position. Holding position markings in accordance with paragraph 2-3-5, Holding Position Markings, are co-located on the taxiway pavement in line with the sign. Examples of these signs are shown in Figure 2-3-27.

**FIGURE 2-3-27**  
Holding Position Sign for Runway Approach and Departure Areas



\*\*\*\*\*

## Chapter 3

### 3-2-5 Class D Airspace

a. \*\*\*

1. Class D surface areas may be designated as full-time (24 hour tower operations) or part-time. Part-time Class D effective times are published in the Chart Supplement.

\*\*\*\*\*

**Note 1.** The airport listing in the Chart Supplement will state the part-time surface area status (for example, “other times CLASS E” or “other times CLASS G”).

\*\*\*\*\*

b. \*\*\*

3. \*\*\*

**Example 2:** “Aircraft calling Manassas tower standby.”

At those airports where the control tower does not operate 24 hours a day, the operating hours of the tower will be listed on the appropriate charts and in the Chart Supplement. During the hours the tower is not in operation, the Class E surface area rules or a combination of Class E rules to 700 feet above ground level and Class G rules to the surface will become applicable. Check the Chart Supplement for specifics.

\*\*\*\*\*

### 3-2-6 Class E Airspace

e. \*\*\*

1. \*\*\*

(c) Pilots should refer to the airport page in the applicable Chart Supplement for surface area status information.

\*\*\*\*\*

**Note:** When a Class C or Class D surface area is not in effect continuously (for example, where a control tower only operates part-time), the surface area airspace will change to either a Class E surface area or Class G airspace. In such cases, the “Airspace” entry for the airport in the Chart Supplement will state “other times Class E” or “other times Class G.” When a part-time surface area changes to Class E airspace, the Class E arrival extensions will remain in effect as Class E airspace. If a part-time Class C, Class D, or Class E surface area becomes Class G airspace, the arrival extensions will change to Class G at the same time.

\*\*\*\*\*

### 3-5-1 Airport Advisory/Information Services

- a. \*\*\*
2. \*\*\*

**Note:** The airport authority and/or manager should request RAIS support on official letterhead directly with the manager of the FSS that will provide the service at least 30 days in advance. Approval authority rests with the FSS manager and is based on workload and resource availability.

\*\*\*\*\*

### 3-5-2 Military Training Routes

\*\*\*\*\*

e. DoD FLIP—Department of Defense Flight Information Publications describe IR/VR routes through charts and narratives, and the FAA provides information regarding these routes to all users via IFR and VFR charts.

**Note:** DoD users that require copies of FLIP should contact:

Defense Logistics Agency for Aviation  
Mapping Customer Operations (DLA AVN/QAM)  
8000 Jefferson Davis Highway  
Richmond, VA 23297-5339  
Toll free phone: 1-800-826-0342  
Commercial: 804-279-6500

\*\*\*\*\*

### 3-5-4 Parachute Jump Aircraft Operations

a. Procedures relating to parachute jump areas are contained in 14 CFR Part 105. Tabulations of parachute jump areas in the U.S. are contained in the Chart Supplement.

\*\*\*\*\*

### 3-5-8 Washington, DC, Special Flight Rules Area (SFRA) including the Flight Restricted Zone (FRZ)

A pilot conducting any type of flight operation in the Washington, DC, SFRA/FRZ must comply with the requirements in:

- a. 14 CFR Section 93.339, Washington, DC, Metropolitan Area Special Flight Rules Area including the FRZ.
- b. 14 CFR Section 91.161, Special Awareness Training for the DC SFRA/FRZ, also located on the FAA website at <https://www.faa.gov>.
- c. Any 14 CFR Section 99.7 special security instructions for the DC SFRA/FRZ published via NOTAM by FAA in the interest of national security.

### 3-5-9 Weather Reconnaissance Area (WRA)

\*\*\*\*\*

### 3-5-10 Other Non-Charted Airspace Areas

\*\*\*\*\*

## Chapter 4

### 4-1-9 Traffic Advisory Practices at Airports Without Operating Control Towers

- a. \*\*\*

3. Many airports are now providing completely automated weather, radio check capability and airport advisory information on an automated UNICOM system. These systems offer a variety of features, typically selectable by microphone clicks, on the UNICOM frequency. Availability of the automated UNICOM will be published in the Chart Supplement and approach charts.

\*\*\*\*\*

### 4-1-13 Automatic Terminal Information Service (ATIS)

a. ATIS is the continuous broadcast of recorded noncontrol information in selected high activity terminal areas. Its purpose is to improve controller effectiveness and to relieve frequency congestion by automating the repetitive transmission of essential but routine information. The information is continuously broadcast over a discrete VHF radio frequency or the voice portion of a local NAVAID. Arrival ATIS transmissions on a discrete VHF radio frequency are engineered according to the individual facility requirements, which would normally be a protected service volume of 20 NM to 60 NM from the ATIS site and a maximum altitude of 25,000 feet AGL. In the case of a departure ATIS, the protected service volume cannot exceed 5 NM and 100 feet AGL. At most locations, ATIS signals may be received on the surface of the airport, but local conditions may limit the maximum ATIS reception distance and/or altitude. Pilots are urged to cooperate in the ATIS program as it relieves frequency congestion on approach control, ground control, and local control frequencies. The Chart Supplement indicates airports for which ATIS is provided.

\*\*\*\*\*

### 4-1-18 Terminal Radar Services for VFR Aircraft

- a. \*\*\*

5. Sequencing for VFR aircraft is available at certain terminal locations (see locations listed in the Chart Supplement). The purpose of the service is to adjust the flow of arriving VFR and IFR aircraft into the traffic pattern in a safe and orderly manner and to provide radar traffic information to departing VFR aircraft. Pilot participation is urged but is not mandatory. Traffic information is provided on a workload permitting basis. Standard radar separation between VFR or between VFR and IFR aircraft is not provided.

\*\*\*\*\*

- b. \*\*\*

1. This service has been implemented at certain terminal locations. The service is advertised in the Chart Supplement. The purpose of this service is to provide separation between all participating VFR aircraft and all IFR aircraft operating within the airspace defined as the Terminal Radar Service Area (TRSA). Pilot participation is urged but is not mandatory.

\*\*\*\*\*

3. TRSAs are depicted on sectional aeronautical charts and listed in the Chart Supplement.

\*\*\*\*\*

### 4-1-21 Airport Reservation Operations and Special Traffic Management Programs

\*\*\*\*\*

- a. Slot Controlled Airports.

1. The FAA may adopt rules to require advance reservations for unscheduled operations at certain airports. In addition to the information in the rules adopted by the FAA, a listing of the airports and relevant information will be maintained on the FAA website [www.fly.faa.gov/ecvrs](http://www.fly.faa.gov/ecvrs).

2. The FAA has established an Airport Reservation Office (ARO) to receive and process reservations for unscheduled flights at the slot controlled airports. The ARO uses the Enhanced Computer Voice Reservation System (e-CVRS) to allocate reservations. Reservations will be available beginning 72 hours in advance of the operation at the slot controlled airport. Standby lists are not maintained. Flights with declared emergencies do not require reservations. Refer to the website for the current listing of slot controlled airports, limitations, and reservation procedures.

3. For more detailed information on operations and reservation procedures at a Slot Controlled Airport, please see 14 CFR Part 93, Subpart K—High Density Traffic Airports.

**b. Special Traffic Management Programs (STMP).**

1. Special programs may be established when a location requires special traffic handling to accommodate above normal traffic demand (for example, EAA AirVenture Oshkosh, SUN 'n FUN Aerospace Expo) or reduced airport capacity (for example, airport runway/taxiway closures for airport construction). The special programs may remain in effect until the problem has been resolved or until local traffic management procedures can handle the volume and a need for special handling no longer exists.

2. If an STMP is used to accommodate a special event, a domestic notice will be issued relaying the website address: [www.fly.faa.gov/estmp](http://www.fly.faa.gov/estmp). Domestic notice information includes: what airports are included in the STMP, the dates and times reservations are required, the time limits for reservation requests, the point of contact for reservations, and any other instructions.

**c. Making Reservations.** Detailed information and User Instruction Guides for using the Web reservation systems are available on the websites for the slot controlled airports (e-CVRS), [www.fly.faa.gov/ecvrs](http://www.fly.faa.gov/ecvrs); and STMPs (e-STMP), [www.fly.faa.gov/estmp](http://www.fly.faa.gov/estmp).

**Note:** Users may contact the ARO at (540) 422-4246 if they have a problem with their reservation.

**4-2-14 Communications for VFR Flights**

**a. FSSs and Supplemental Weather Service Locations (SWSL)** are allocated frequencies for different functions; for example, in Alaska, certain FSSs provide Local Airport Advisory on 123.6 MHz or other frequencies which can be found in the Chart Supplement. If you are in doubt as to what frequency to use, 122.2 MHz is assigned to the majority of FSSs as a common en route simplex frequency.

**b. Certain VOR voice channels** are being utilized for recorded broadcasts; for example, ATIS. These services and appropriate frequencies are listed in the Chart Supplement. On VFR flights, pilots are urged to monitor these frequencies. When in contact with a control facility, notify the controller if you plan to leave the frequency to monitor these broadcasts.

**4-3-3 Traffic Patterns**

**a.** It is recommended that aircraft enter the airport traffic pattern at one of the following altitudes listed below. These altitudes should be maintained unless another traffic pattern altitude is published in the Chart Supplement or unless otherwise required by the applicable distance from cloud criteria (14 CFR Section 91.155). (See Figure 4-3-2 and Figure 4-3-3):

**d. \*\*\***

**Note 2:** \*RP indicates special conditions exist and refers pilots to the Chart Supplement.

**4-3-6 Use of Runways/Declared Distances**

**d. \*\*\***

2. All 14 CFR Part 139 airports report declared distances for each runway. Other airports may also report declared distances for a runway if necessary to meet runway design standards or to indicate the presence of a clearway or stopway. Where reported,

declared distances for each runway end are published in the Chart Supplement. For runways without published declared distances, the declared distances may be assumed to be equal to the physical length of the runway unless there is a displaced landing threshold, in which case the Landing Distance Available (LDA) is shortened by the amount of the threshold displacement.

**Note:** A symbol **D** is shown on U.S. Government charts to indicate that runway declared distance information is available (See appropriate Chart Supplement, Chart Supplement Alaska or Pacific).

**(a) \*\*\***  
**(2) \*\*\***

**Note:** The length of any available clearway will be included in the TODA published in the entry for that runway end within the Chart Supplement.

**(3) \*\*\***

**Note:** The length of any available stopway will be included in the ASDA published in the entry for that runway end within the Chart Supplement.

**4-3-7 Low Level Wind Shear/Microburst Detection Systems**

**e.** An airport equipped with the LLWAS, ITWS, or WSP is so indicated in the Chart Supplement under Weather Data Sources for that particular airport.

**4-3-11 Pilot Responsibilities When Conducting Land and Hold Short Operations (LAHSO)**

**b. \*\*\***

2. At controlled airports, air traffic may clear a pilot to land and hold short. Pilots may accept such a clearance provided that the pilot-in-command determines that the aircraft can safely land and stop within the Available Landing Distance (ALD). ALD data are published in the Chart Supplement and in the U.S. Terminal Procedures Publications. Controllers will also provide ALD data upon request. Student pilots or pilots not familiar with LAHSO should not participate in the program.

**4-3-17 VFR Helicopter Operations at Controlled Airports**

**b. \*\*\***

3. *Air taxi* is the preferred method for helicopter ground movements on airports provided ground operations and conditions permit. Unless otherwise requested or instructed, pilots are expected to remain below 100 feet AGL. However, if a higher than normal airspeed or altitude is desired, the request should be made prior to lift-off. The pilot is solely responsible for selecting a safe airspeed for the altitude/operation being conducted. Use of *air taxi* enables the pilot to proceed at an optimum airspeed/altitude, minimize downwash effect, conserve fuel, and expedite movement from one point to another. Helicopters should avoid overflight of other aircraft, vehicles, and personnel during air-taxi operations. Caution must be exercised concerning active runways and pilots must be certain that air taxi instructions are understood. Special precautions may be necessary at unfamiliar airports or airports with multiple/intersecting active runways. The taxi procedures given in paragraph 4-3-18, Taxiing, paragraph 4-3-19, Taxi Dur-

ing Low Visibility, and paragraph 4-3-21, Exiting the Runway After Landing, also apply.

\*\*\*\*\*

#### **4-3-20 Standard Taxi Routes**

a. Standard Taxi Routes (STRs) provide a standard, predictable taxi route from an origination point to a termination point on the airport movement area. The use of STRs helps reduce frequency congestion and streamline taxi procedures. STRs may be available at certain airports. Absent an STR Letter of Agreement (LOA), issuance of an STR will be at the request of the pilot and discretion of ATC. STRs used under an LOA are issued by ATC and are not required to be requested by the pilot.

b. STRs are available via two methods, (LOA) or publicly-available via the Domestic Notices website: [https://www.faa.gov/air\\_traffic/publications/domesticnotices/](https://www.faa.gov/air_traffic/publications/domesticnotices/).

c. An LOA for STRs will be revised for updates and changes, including cancellation on an as-needed basis with the operator. It is the responsibility of the operator to distribute changes to their flight crews.

d. An STR may be requested by a pilot or assigned at the discretion of ATC to the pilot of an operator with an LOA STR. It is the responsibility of the pilot to request a full taxi clearance if not fully familiar with the STR.

e. A Letter to Airmen (LTA) will be issued by airport traffic control towers to announce availability, updates, cancellation, or changes of publicly-available STRs with appropriate updates to the Domestic Notices website. An LTA may include an airport diagram. The airport diagram will be labeled “not for navigation” and is not an acceptable substitute for the most up-to-date airport diagrams. LTAs are available via the FAA NOTAM Search website: <https://notams.aim.faa.gov/notamSearch/>.

f. Pilots request publicly-available STRs by stating the desired STR name (e.g., ATC facility, flight or aircraft identification, location, request STR name). By requesting an STR, a pilot acknowledges full familiarity with the STR. The issuance of a pilot-requested STR is at the discretion of ATC.

g. STRs contain the same characteristics and responsibilities:

1. Pilots should not request, and ATC may not issue STR instructions during low visibility Surface Movement Guidance and Control System (SMGCS) operations.

2. It is the pilot’s responsibility to maintain familiarity and awareness of the most current versions of STRs, as well as airport diagrams and charts prior to accepting an STR assignment.

3. If a pilot is unsure about the assigned STR procedure, the pilot is encouraged to either seek clarification from ATC or decline the STR assignment.

4. Pilots who become disoriented during taxi should advise ATC immediately and request detailed taxi instructions or other assistance.

5. An STR instruction does not constitute nor imply a clearance to cross a runway.

6. Unless otherwise stated by ATC, the issuance of an STR does not give an aircraft the right of way over another taxiing aircraft.

7. Unless otherwise instructed by ATC, originating from, and terminating to a non-movement area as part of an STR is at the discretion of the pilot in coordination with ramp control, if required.

8. If ATC instructs the pilot to deviate from an STR, ATC must issue detailed taxi instructions for the remainder of the taxi.

9. Pilots are urged to exercise caution when accepting STR assignments, especially when STRs are used or available at more than one airport in the same terminal area.

h. ATC may cancel, amend, or revise an STR as necessary. Any updates to publicly-available STRs will be communicated via LTA with appropriate updates to the Domestic Notices website.

#### **4-3-21 Exiting the Runway After Landing**

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#### **4-3-22 Practice Instrument Approaches**

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#### **4-3-23 Option Approach**

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#### **4-3-24 Use of Aircraft Lights**

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#### **4-3-25 Flight Inspection/“Flight Check” Aircraft in Terminal Areas**

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#### **4-3-26 Hand Signals**

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#### **4-3-27 Operations at Uncontrolled Airports With Automated Surface Observing System (ASOS)/ Automated Weather Observing System (AWOS)**

\*\*\*\*\*

b. At uncontrolled airports that are equipped with ASOS/AWOS with ground-to-air broadcast capability, the one-minute updated airport weather should be available to you within approximately 25 NM of the airport below 10,000 feet. The frequency for the weather broadcast will be published on sectional charts and in the Chart Supplement. Some part-time towered airports may also broadcast the automated weather on their ATIS frequency during the hours that the tower is closed.

\*\*\*\*\*

#### **4-5-1 Radar**

\*\*\*\*\*

c. FAA radar units operate continuously at the locations shown in the Chart Supplement, and their services are available to all pilots, both civil and military. Contact the associated FAA control tower or ARTCC on any frequency guarded for initial instructions, or in an emergency, any FAA facility for information on the nearest radar service.

## **Chapter 5**

### **5-1-1 Preflight Preparation**

g. \*\*\*

**Reference:** Chart Supplement, Special Notices Section; AIM, ¶4-1-21, Airport Reservation Operations and Special Traffic Management Programs.

\*\*\*\*\*

i. \*\*\*

**Reference:** AIM, ¶4-2-4, Aircraft Call Signs; FAA Order JO 7110.65, ¶2-3-5, Aircraft Identity, Subpara a; FAA Order JO 7110.10, Appendix B, FAA Form 7233-1, Flight Plan.



### 5-1-3 Notice to Air Missions (NOTAM) System

\*\*\*\*\*

#### g. \*\*\*

1. **NOTAM (D)** information is disseminated for all navigational facilities that are part of the National Airspace System (NAS), all public use aerodromes, seaplane bases, and heliports listed in the Chart Supplement. NOTAM (D) information includes taxiway closures, personnel and equipment near or crossing runways, and airport lighting aids that do not affect instrument approach criteria (i.e., VGSI). All NOTAM Ds must have one of the keywords listed in Table 5-1-1, as the first part of the text after the location identifier. These keywords categorize NOTAM Ds by subject, for example, APRON (ramp), RWY (runway), SVC (Services), etc. There are several types of NOTAM Ds:

\*\*\*\*\*

#### h. \*\*\*

#### 2. \*\*\*

TABLE 5-1-2

#### CONTRACTIONS COMMONLY FOUND IN NOTAMS

\*\*\*\*\*

REDL	Runway Edge Light
------	-------------------

\*\*\*\*\*

RX	Receive/Receiver
----	------------------

\*\*\*\*\*

### 5-1-6 Flight Plan—IFR Flights

\*\*\*\*\*

#### b. \*\*\*

#### 5. \*\*\*

**Reference:** Preferred IFR Routes are described and tabulated in the Chart Supplement.

Additionally available at U.S. [http://www.fly.faa.gov/Products/Coded\\_Departure\\_Routes/NFDC\\_Prefered\\_Routes\\_Database/nfdc\\_preferred\\_routes\\_database.html](http://www.fly.faa.gov/Products/Coded_Departure_Routes/NFDC_Prefered_Routes_Database/nfdc_preferred_routes_database.html).

\*\*\*\*\*

### 5-2-1 Pre-Taxi Clearance Procedures

\*\*\*\*\*

b. Locations where these procedures are in effect are indicated in the Chart Supplement.

### 5-2-3 IFR Clearances Off Uncontrolled Airports

a. Pilots departing on an IFR flight plan should consult the Chart Supplement to determine the frequency or telephone number to use to contact clearance delivery. On initial contact, pilots should advise that the flight is IFR and state the departure and destination airports.

b. Air traffic facilities providing clearance delivery services via telephone will have their telephone number published in the Chart Supplement of that airport's entry. This same section may also contain a telephone number to use for cancellation of an IFR flight plan after landing.

\*\*\*\*\*

### 5-3-2 Position Reporting

\*\*\*\*\*

#### c. \*\*\*

4. **Flights in an Oceanic (Nonradar) Environment.** Pilots must report over each point used in the flight plan to define the route of flight, even if the point is depicted on aeronautical charts as an "on request" (non-compulsory) reporting point. For aircraft

providing automatic position reporting via an Automatic Dependent Surveillance-Contract (ADS-C) logon, pilots should discontinue voice position reports.

\*\*\*\*\*

### 5-4-5 Instrument Approach Procedure (IAP) Charts

a. 14 CFR Section 91.175(a), Instrument approaches to civil airports, requires the use of SIAPs prescribed for the airport in 14 CFR Part 97 unless otherwise authorized by the Administrator (including ATC). If there are military procedures published at a civil airport, aircraft operating under 14 CFR Part 91 must use the civil procedure(s). Civil procedures are defined with "FAA" in parenthesis; e.g., (FAA), at the top, center of the procedure chart. DOD procedures are defined using the abbreviation of the applicable military service in parenthesis; e.g., (USAF), (USN), (USA). 14 CFR Section 91.175(g), Military airports, requires civil pilots flying into or out of military airports to comply with the IAPs and takeoff and landing minimums prescribed by the authority having jurisdiction at those airports. Unless an emergency exists, civil aircraft operating at military airports normally require advance authorization, commonly referred to as "Prior Permission Required" or "PPR." Information on obtaining a PPR for a particular military airport can be found in the Chart Supplement.

\*\*\*\*\*

## Chapter 7

### 7-1-3 Use of Aviation Weather Products

\*\*\*\*\*

h. With increased access to weather products via the public Internet, the aviation community has access to an overwhelming amount of weather information and data that support self-briefing. The *Aviation Weather Handbook*, FAA-H-8083-28 (current edition), describes the weather products distributed by the NWS. Pilots and operators using the public Internet to access weather from a third party vendor should request and/or review an appropriate description of services and provider disclosure. This should include, but is not limited to, the type of weather product (for example, current weather or forecast weather), the currency of the product (i.e., product issue and valid times), and the relevance of the product. Pilots and operators should be cautious when using unfamiliar weather products and when in doubt, consult with a Flight Service Specialist.

\*\*\*\*\*

### 7-1-4 Graphical Forecasts for Aviation (GFA)

\*\*\*\*\*

#### b. \*\*\*

3. The GFA will be continuously updated and available online at <http://aviationweather.gov/gfa>. Upon clicking the link above, select INFO on the top right corner of the map display. The next screen presents the option of selecting Overview, Products, and Tutorial. Simply select the tab of interest to explore the enhanced digital and graphical weather products designed to replace the legacy FA. Users should also refer to the *Aviation Weather Handbook*, FAA-H-8083-28, Graphical Forecasts for Aviation (GFA) Tool, for more detailed information on the GFA.

\*\*\*\*\*

## 7-1-5 Preflight Briefing

\*\*\*\*\*

### b. \*\*\*

**7. Winds Aloft.** Forecast winds aloft will be provided in knots and degrees, referenced to true north. The briefer will interpolate wind directions and speeds between levels and stations as necessary to provide expected conditions at planned altitudes. (Heights are MSL.) Temperature information will be provided on request.

### 8. \*\*\*

#### (c) \*\*\*

**Note 2:** *Airway NOTAMs, procedural NOTAMs, and NOTAMs that are general in nature and not tied to a specific airport/facility (for example, flight advisories and restrictions, open duration special security instructions, and special flight rules areas) are briefed solely by pilot request. For complete flight information, pilots are urged to review the Domestic Notices and International Notices found in the External Links section of the Federal NOTAM System (FNS) NOTAM Search System and the Chart Supplement in addition to obtaining a briefing.*

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## 7-1-10 Weather Observing Programs

\*\*\*\*\*

### b. \*\*\*

**2.** The AWOS observations will include the prefix “AUTO” to indicate that the data are derived from an automated system. Some AWOS locations will be augmented by certified observers who will provide weather and obstruction to vision information in the remarks of the report when the reported visibility is less than 7 miles. These sites, along with the hours of augmentation, are to be published in the Chart Supplement. Augmentation is identified in the observation as “OBSERVER WEATHER.” The AWOS wind speed, direction and gusts, temperature, dew point, and altimeter setting are exactly the same as for manual observations. The AWOS will also report density altitude when it exceeds the field elevation by more than 1,000 feet. The reported visibility is derived from a sensor near the touchdown of the primary instrument runway. The visibility sensor output is converted to a visibility value using a 10-minute harmonic average. The reported sky condition/ceiling is derived from the ceilometer located next to the visibility sensor. The AWOS algorithm integrates the last 30 minutes of ceilometer data to derive cloud layers and heights. This output may also differ from the observer sky condition in that the AWOS is totally dependent upon the cloud advection over the sensor site.

\*\*\*\*\*

**5.** AWOS information (system level, frequency, phone number, etc.) concerning specific locations is published, as the systems become operational, in the Chart Supplement, and where applicable, on published Instrument Approach Procedures. Selected individual systems may be incorporated into nationwide data collection and dissemination networks in the future.

\*\*\*\*\*

### d. \*\*\*

#### 1. \*\*\*

**(a)** The ASOS/AWOS at each airport location consists of these main components:

\*\*\*\*\*

## 7-1-11 Weather Radar Services

\*\*\*\*\*

**e.** For more detailed information on PIREPS, users can refer to the current version of the *Aviation Weather Handbook*, FAA-H-8083-28.

**Reference:** *Pilot/Controller Glossary Term—Precipitation Radar Weather Descriptions; AIM, ¶7-1-26, Thunderstorms; Chart Supplement, Charts, NWS Upper Air Observing Stations and Weather Network for the location of specific radar sites.*

## 7-1-18 Pilot Weather Reports (PIREPs)

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**f.** For more detailed information on PIREPs, users can refer to the current version of the *Aviation Weather Handbook*, FAA-H-8083-28.

## 7-3-5 Cold Temperature Airport Procedures

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**e.** Acceptable use of the table for manual CTA altitude correction (see Table 7-3-1): Pilots may calculate a correction with a visual interpolation of the chart when using reported temperature and height above airport. This calculated altitude correction may then be rounded to the nearest whole hundred or rounded up. For example, a correction of 130 ft from the chart may be rounded to 100 ft or 200 ft. A correction of 280 ft will be rounded up to 300 ft. This rounded correction will be added to the appropriate altitudes for the “Individual” or “All” segment method. The correction calculated from the table for the MDA or DA may be used as is or rounded up, but never rounded down. This number will be added to the MDA, DA, and all step-down fix altitudes inside of the FAF/PFAF.

**1.** No extrapolation above the 5000 ft column is required. Pilots may use the 5000 ft “height above airport in feet” column for calculating corrections when the calculated altitude is greater than 5000 ft above reporting station elevation. Pilots must add the correction(s) from the table to the affected segment altitude(s) and fly at the new corrected altitude. Do not round down when using the 5000 ft column for calculated height above airport values greater than 5000 ft. Pilots may extrapolate above the 5000 ft column to apply a correction if desired.

**2.** These techniques have been adopted to minimize pilot distraction by limiting the number of entries into the table when making corrections. Although not all altitudes on the approach will be corrected back to standard day values, a safe distance above the terrain/obstacle will be maintained on the corrected approach segment(s). Pilots may calculate a correction for each fix based on the fix altitude if desired.

**Note:** *Pilots may use Real Time Mesoscale Analysis (RTMA): Alternate Report of Surface Temperature, for computing altitude corrections, when airport temperatures are not available via normal reporting.*

**f.** How to apply Cold Temperature Altitude Corrections on an Approach.

**1.** All Segments Method: Pilots may correct all segment altitudes from the IAF altitude to the MA final holding altitude. Pilots familiar with the information in this section and the procedures for accomplishing the all segments method, only need to use the published “snowflake” icon, ❄️/CTA temperature limit on the approach chart for making corrections. Pilots are not required to reference the CTA list. The altitude correction is calculated as follows:

(a) Manual correction: Pilots will make a manual correction when the aircraft is not equipped with a temperature compensating system or when a compensating system is not used to make the correction. Use Table 7-3-1, ICAO Cold Temperature Error Table, to calculate the correction needed for the approach segment(s).

(1) Correct all altitudes from the FAF/PFAF up to and including the IAF altitude: Calculate the correction by taking the FAF/PFAF altitude and subtracting the airport elevation. Use this number to enter the height above airport column in Table 7-3-1 until reaching the reported temperature from the “Reported Temperature” row. Round this number as applicable and then add to all altitudes from the FAF altitude through the IAF altitude.

(2) Correct all altitudes in the final segment: Calculate the correction by taking the MDA or DA for the approach being flown and subtract the airport elevation. Use this number to enter the height above airport column in Table 7-3-1 until reaching the reported temperature from the “Reported Temperature” row. Use this number or round up to next nearest 100 ft. Add this number to MDA or DA, and any step-down fix altitudes in the final segment.

(3) Correct final holding altitude in the MA Segment: Calculate the correction by taking the MA holding altitude and subtract the airport elevation. Use this number to enter the height above airport column in Table 7-3-1 until reaching the reported temperature from the “Reported Temperature” row. Round this number as applicable and then add to the final MA altitude only.

(b) Aircraft with temperature compensating systems: If flying an aircraft equipped with a system capable of temperature compensation, follow the instructions for applying temperature

compensation provided in the airplane flight manual (AFM), AFM supplement, or system operating manual. Ensure that temperature compensation system is on and active prior to the IAF and remains active throughout the entire approach and missed approach.

(1) Pilots that have a system that is able to calculate a temperature-corrected DA or MDA may use the system for this purpose.

(2) Pilots that have a system unable to calculate a temperature corrected DA or MDA will manually calculate an altitude correction for the MDA or DA.

**Note:** Some systems apply temperature compensation only to those altitudes associated with an instrument approach procedure loaded into the active flight plan, while other systems apply temperature compensation to all procedure altitudes or user entered altitudes in the active flight plan, including altitudes associated with a Standard Terminal Arrival (STAR). For those systems that apply temperature compensation to all altitudes in the active flight plan, delay activating temperature compensation until the aircraft has passed the last altitude constraint associated with the active STAR.

2. Individual Segment(s) Method: Pilots are allowed to correct only the marked segment(s) indicated in the CTA list ([https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/digital\\_products/dtpp/search/](https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dtpp/search/)). Pilots using the Individual Segment(s) Method will reference the CTA list to determine which segment(s) need a correction. (See Figure 7-3-1.)

**FIGURE 7-3-1**  
**EXAMPLE COLD TEMPERATURE RESTRICTED AIRPORT LIST – REQUIRED SEGMENTS**

Identifier	Airport Name	Temperature	Initial	Intermediate	Final	Missed
<b>Montana</b>						
KBTM	Bert Mooney	-25C	X	X	X	
KBZN	Bozeman Yellowstone Intl	-31C		X		
KEKS	Ennis Big Sky	-25C			X	
KGPI	Glacier Park Intl	-15C		X		
KHLN	Helena Rgnl	-17C	X	X	X	

(a) Manual Correction: Pilots will make a manual correction when the aircraft is not equipped with a temperature compensating system or when a compensating system is not used to make the correction. Use Table 7-3-1, ICAO Cold Temperature Error Table, to calculate the correction needed for the approach segment(s).

(1) Initial Segment: All altitudes from the intermediate fix (IF) altitude up to and including the IAF altitude. The correction may be accomplished by using the IF altitude or by using the All Segments Method (a) Manual correction (1). To correct the initial segment by using the IF altitude, subtract the airport elevation from the IF altitude. Use this number to enter the height above airport column in Table 7-3-1 until reaching the reported temperature from the “Reported Temperature” row. Round this number as applicable and then add to the IF, IAF, and any step-down fix altitudes.

(2) Intermediate Segment: All altitudes from the FAF/PFAF up to but not including the IF altitude. Calculate the correction by taking FAF/PFAF altitude and subtracting the airport elevation. Use this number to enter the height above airport column in Table 7-3-1 until reaching the reported temperature from the “Reported Temperature” row. Round this number as applicable and then add to FAF altitude and all step-down fix altitudes within the intermediate segment (inside of the waypoint labeled “IF”).

(3) Final segment: Calculate the correction by taking the MDA or DA for the approach flown and subtract the airport elevation. Use this number to enter the height above airport column in Table 7-3-1 until reaching the reported temperature from the “Reported Temperature” row. Use this number or round up to next nearest 100 ft. Add this number to MDA or DA and any applicable step-down fix altitudes in the final segment.

(4) Missed Approach Segment: Calculate the correction by taking the final MA holding altitude and subtract the airport elevation. Use this number to enter the height above airport column in Table 7-3-1 until reaching the reported temperature from the “Reported Temperature” row. Round this number as applicable and then add to the final MA altitude only.

(b) Aircraft with temperature compensating system: If flying an aircraft equipped with a system capable of temperature compensation, follow the instructions for applying temperature compensation provided in the AFM, AFM supplement, or system operating manual. Ensure the temperature compensation system is on and active prior to the segment(s) being corrected. Manually calculate an altimetry correction for the MDA or DA. Determine an altimetry correction from the ICAO table based on the reported airport temperature and the height difference between the MDA or

DA, as applicable, and the airport elevation, or use the compensating system to calculate a temperature corrected altitude for the published MDA or DA if able.

g. \* \* \*

### **7-5-5 Pilot Advisories on Bird and Other Wildlife Hazards**

Many airports advise pilots of other wildlife hazards caused by large animals on the runway through the Chart Supplement and the NOTAM system. Collisions of landing and departing aircraft and animals on the runway are increasing and are not limited to rural airports. These accidents have also occurred at several major airports. Pilots should exercise extreme caution when warned of the presence of wildlife on and in the vicinity of airports. If you observe deer or other large animals in close proximity to movement areas, advise the FSS, tower, or airport management.

### **7-6-4 Obstructions To Flight**

**a. General.** Many structures exist that could significantly affect the safety of your flight when operating below 500 feet above ground level (AGL), and particularly below 200 feet AGL. While 14 CFR Part 91.119 allows flight below 500 feet AGL when over sparsely populated areas or open water, such operations involve increased safety risks. At and below 200 feet AGL there are numerous power lines, antenna towers, etc., that are not marked and lighted and/or charted as obstructions and, therefore, may not be seen in time to avoid a collision. Notices to Air Missions NOTAM are issued on those lighted structures experiencing temporary light outages. However, some time may pass before the FAA is notified of these outages, and the NOTAM issued, thus pilot vigilance is imperative. Additionally, new obstructions may not be on current charts because the information was not received prior to the FAA publishing the chart.

**b. Antenna Towers.** Extreme caution should be exercised when flying less than 2,000 feet AGL because of numerous skeletal structures, such as radio and television antenna towers, that exceed 1,000 feet AGL with some extending higher than 2,000 feet AGL. Most skeletal structures are supported by guy wires which are very difficult to see in good weather and can be invisible at dusk or during periods of reduced visibility. These wires can extend about 1,500 feet horizontally from a structure; therefore, all skeletal structures should be avoided horizontally by at least 2,000 feet.

**c. Overhead Wires.** Overhead transmission and utility lines often span approaches to runways, natural flyways such as lakes, rivers, gorges, and canyons, and cross other landmarks pilots frequently follow such as highways, railroad tracks, etc. As with antenna towers, these power transmission and/or utility lines and the supporting structures of these lines may not always be readily visible. The wires may be virtually impossible to see under certain conditions. Spherical markers may be used to identify overhead wires and catenary transmission lines and may be lighted. In some locations, the supporting structures of overhead transmission lines are equipped with unique sequence flashing white strobe light systems to indicate that there are wires between the structures. The flash sequence for the wire support structures will be middle, top, and bottom with all lights on the same level flashing simultaneously. However, not all power transmission and/or utility lines require notice to the FAA as they do not exceed 200 feet AGL or meet the obstruction standard of 14 CFR Part 77 and, therefore, are not marked and/or lighted. All pilots are cautioned to remain extremely vigilant for power transmission and/or utility lines and their supporting structures when following natural flyways or dur-

ing the approach and landing phase. This is particularly important for seaplane and/or float equipped aircraft when landing on, or departing from, unfamiliar lakes or rivers.

**d. Wind Turbines.** The number, size, and height of individual wind turbines and wind turbine farms have increased over time. The locations of wind turbine farms have also expanded to areas more commonly flown by VFR pilots and to all regions of the United States. VFR pilots should be aware that many wind turbines are exceeding 499 feet AGL in height, which may affect minimum safe VFR altitudes in uncontrolled airspace. In addition, many wind turbines are encroaching on the 700 foot AGL floor of controlled airspace (Class E). Pilots are cautioned to maintain appropriate safe distance (laterally, vertically, or both). Wind turbines are typically charted on Visual Flight Rules (VFR) Sectional Charts and/or Terminal Area Charts. For a description of how wind turbines and wind turbine farms are charted, refer to the FAA Aeronautical Chart User's Guide. Wind turbines are normally painted white or light gray to improve daytime conspicuity. They are typically lit with medium-intensity, flashing red lights, placed as high as possible on the turbine nacelle (not the blade tips), that should be synchronized to flash together; however, not all wind turbine units within a farm need to be lighted, depending on their location and height. Sometimes, only the perimeter of the wind turbine farm and an arrangement of interior wind turbines are lit. Some wind turbine farms use Aircraft Detection Lighting Systems (ADLS), which are proximity sensor-based systems designed to detect aircraft as they approach the obstruction. This system automatically activates the appropriate obstruction lights until they are no longer needed based on the position of the transiting aircraft. This technology reduces the impact of nighttime lighting on nearby communities and migratory birds and extends the life expectancy of the obstruction lights. For more information on how obstructions such as wind turbines are marked and lighted, refer to Advisory Circular 70/7460-1, Obstruction Marking and Lighting. Pilots should be aware that wind turbines in motion could result in limitations of air traffic services in the vicinity of the wind turbine farms.

**Reference:** AIM, ¶4-5-1, Radar.

**e. Meteorological (MET) Evaluation Towers.** MET towers are used by wind energy companies to determine feasible sites for wind turbines. Some of these towers are less than 200 feet AGL. These structures are portable, erected in a matter of hours, installed with guyed wires, and constructed from a galvanized material often making them difficult to see in certain atmospheric conditions. Markings for these towers include alternating bands of aviation orange and white paint, and high-visibility sleeves installed on the outer guy wires. However, not all MET towers follow these guidelines, and pilots should be vigilant when flying at low altitude in remote or rural areas.

**f. Other Objects/Structures.** There are other objects or structures that could adversely affect your flight such as temporary construction cranes near an airport, newly constructed buildings, new towers, etc. Many of these structures do not meet charting requirements or may not yet be charted because of the charting cycle. Some structures do not require obstruction marking and/or lighting, and some may not be marked and lighted even though the FAA recommended it. VFR pilots should carefully review NOTAMs for temporary or permanent obstructions along the planned route of flight during their preflight preparations. Particular emphasis should be given to obstructions in the vicinity of the approach and departure ends of the runway complex or any other areas where flight below 500 feet AGL is planned or likely to occur.

### 7-6-13 Light Amplification by Stimulated Emission of Radiation (Laser) Operations and Reporting Illumination of Aircraft

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h. When these activities become known to the FAA, Notices to Air Missions (NOTAMs) are issued to inform the aviation community of the events. Pilots should consult NOTAMs or the Chart Supplement for information regarding these activities.

### 7-6-16 Avoid Flight in the Vicinity of Exhaust Plumes (Smoke Stacks and Cooling Towers)

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b. \*\*\*

Pilots are encouraged to exercise caution when flying in the vicinity of exhaust plumes. Pilots are also encouraged to reference the Chart Supplement where amplifying notes may caution pilots and identify the location of structure(s) emitting exhaust plumes.

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## Chapter 8

### 8-1-2 Effects of Altitude

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d. \*\*\*

1. A pilot or passenger who intends to fly after scuba diving should allow the body sufficient time to rid itself of excess nitrogen absorbed during diving. If not, altitude decompression sickness due to evolved nitrogen gas can occur during exposure to reduced barometric pressure (i.e., low cabin pressure) associated with increased altitude and may lead to a serious inflight emergency.

2. The recommended wait time before going to flight altitudes up to 8,000 feet is at least 12 hours after diving that did not require a controlled ascent (i.e., non-decompression stop diving), and at least 24 hours after diving that required a controlled ascent (i.e., decompression stop diving). The recommended wait time before going to flight altitudes above 8,000 feet is at least 24 hours after any SCUBA dive. These recommended altitudes are actual flight altitudes above mean sea level (AMSL) and not pressurized cabin altitudes. This takes into consideration the risk of aircraft decompression during flight.

## Chapter 9

### 9-1-4 General Description of Each Chart Series

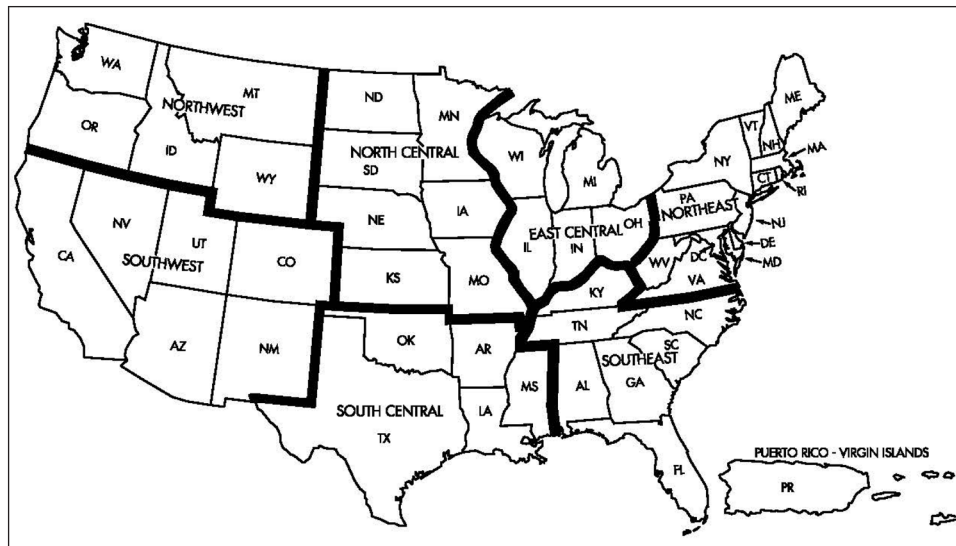
\*\*\*\*\*

#### d. Supplementary Charts and Publications.

1. Chart Supplement refers to a series of civil/military flight information publications issued by FAA every 56 days consisting of the Chart Supplement U.S., Chart Supplement Alaska, and Chart Supplement Pacific.

2. **Chart Supplement U.S.** This is a civil/military flight information publication. This 7-volume book series is designed for use with appropriate IFR or VFR charts and contains data including, but not limited to, airports, NAVAIDs, communications data, weather data sources, special notices, non-regulatory operational procedures, and airport diagrams. Coverage includes the conterminous U.S., Puerto Rico, and the Virgin Islands. The Chart Supplement U.S. shows data that cannot be readily depicted in graphic form; for example, airport hours of operations, types of fuel available, run widths, and lighting codes. (See Figure 9-1-12.)

FIGURE 9-1-12  
Chart Supplement U.S. Geographic Areas



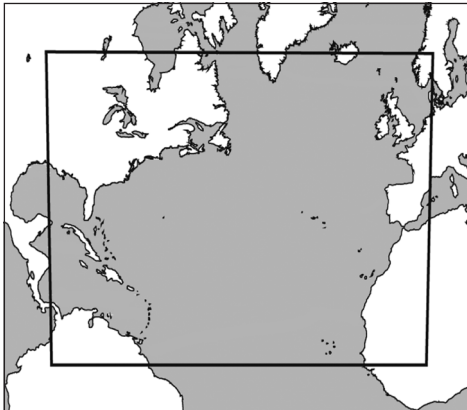
3. **Chart Supplement Alaska.** This is a civil/military flight information publication. This single-volume book is designed for use with appropriate IFR or VFR charts. The Chart Supplement Alaska contains data including, but not limited to, airports, NAVAIDs, communications data, weather data sources, special notices, non-regulatory operational procedures, and airport diagrams. The publication also includes uniquely geographical operational requirements as area notices and emergency procedures.

4. **Chart Supplement Pacific.** This is a civil/military flight information publication. This single volume book is designed for use with appropriate IFR or VFR charts. The Chart Supplement Pacific contains data including, but not limited to, airports, NAVAIDs, communications data, weather data sources, special notices, non-regulatory operational procedures, and airport diagrams. The publication also includes airspace, navigational facilities, non-regulatory Pacific area procedures, Instrument Approach Procedures (IAP),

Departure Procedures (DP), Standard Terminal Arrival (STAR) charts, radar minimums, supporting data for the Hawaiian and Pacific Islands, and uniquely geographical operational requirements as area notices and emergency procedures.

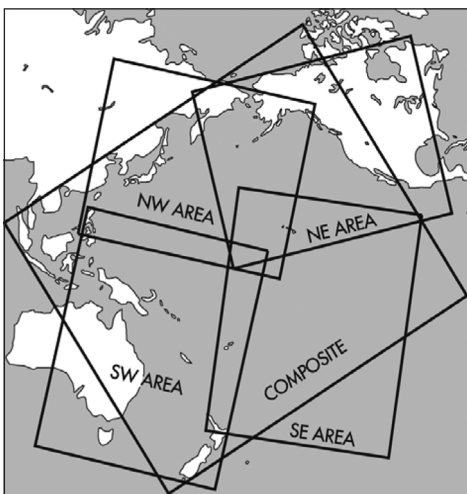
**5. North Atlantic Route Chart.** Designed for FAA controllers to monitor transatlantic flights, this 5-color chart shows oceanic control areas, coastal navigation aids, oceanic reporting points, and NAVAID geographic coordinates. Full Size Chart: Scale 1 inch = 113.1 NM/1:8,250,000. Chart is shipped flat only. Half Size Chart: Scale 1 inch = 150.8 NM/1:11,000,000. Chart is 29-3/4 x 20-1/2 inches, shipped folded to 5 x 10 inches only. Chart revised every 56 days. (See Figure 9-1-13.)

**FIGURE 9-1-13**  
**North Atlantic Route Charts**



**6. North Pacific Route Charts.** These charts are designed for FAA controllers to monitor transoceanic flights. They show established intercontinental air routes, including reporting points with geographic positions. Composite Chart: Scale 1 inch = 164 NM/1:12,000,000. 48 x 41-1/2 inches. Area Charts: Scale 1 inch = 95.9 NM/1:7,000,000. 52 x 40-1/2 inches. All charts shipped unfolded. Charts revised every 56 days. (See Figure 9-1-14.)

**FIGURE 9-1-14**  
**North Pacific Oceanic Route Charts**



**7. Airport Obstruction Charts (OC).** The OC is a 1:12,000 scale graphic depicting 14 CFR Part 77, Objects Affecting Navigable Airspace, surfaces, a representation of objects that penetrate these surfaces, aircraft movement and apron areas, navigational aids, prominent airport buildings, and a selection of roads and other planimetric detail in the airport vicinity. Also included are tabulations of runway and other operational data.

**8. FAA Aeronautical Chart User's Guide.** A booklet designed to be used as a teaching aid and reference document. It describes the substantial amount of information provided on FAA's aeronautical charts and publications. It includes explanations and illustrations of chart terms and symbols organized by chart type. The users guide is available for free download at the AIS website. \* \* \* \* \*

## Chapter 10

### 10-2-1 Offshore Helicopter Operations

#### a. Introduction

The offshore environment offers unique applications and challenges for helicopter pilots. The mission demands, the nature of oil and gas exploration and production facilities, and the flight environment (weather, terrain, obstacles, traffic), demand special practices, techniques and procedures not found in other flight operations. Several industry organizations have risen to the task of reducing risks in offshore operations, including the Helicopter Safety Advisory Conference (HSAC) (<http://www.hsac.org>), and the Offshore Committee of the Helicopter Association International (HAI) (<https://www.rotor.org>). The following recommended practices for offshore helicopter operations are based on guidance developed by HSAC for use in the Gulf of Mexico, and provided here with their permission. While not regulatory, these recommended practices provide aviation and oil and gas industry operators with useful information in developing procedures to avoid certain hazards of offshore helicopter operations. \* \* \* \* \*

## Chapter 11

### 11-2-2 Registration Requirements

\* \* \* \* \*

#### c. \* \* \*

**2. Recreational Flyers.** UAS that are flown exclusively for recreational purposes must be registered if they weigh more than 0.55 pounds (250 grams). \* \* \* \* \*

### 11-5-1 UAS Pilot Certification and Requirements for Part 107 and Recreational Flyers

\* \* \* \* \*

#### i. Night Operations and Operations over People:

\* \* \* \* \*

### 11-8-6 Environmental Best Practices

\* \* \* \* \*

#### a. \* \* \*

#### 2. \* \* \*

**(b)** As described in FAA Order 1050.1, Environmental Impact: Policies and Procedures, an area is "noise sensitive" if noise interferes with any normal activities associated with the area's use.

**Reference:** FAA Order 1050.1, *Environmental Impact: Policies and Procedures*.

\* \* \* \* \*

### Appendix 3. Abbreviations/Acronyms

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SBAS	Satellite-Based Augmentation System
SDF	Simplified Directional Facility

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### Appendix 4: FAA Form 7233-4— International Flight Plan

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b. \*\*\*

4. Any flight requesting services that require filing of capabilities only supported in the international flight plan format.

c. Flight Plan Contents

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d. \*\*\*

4. \*\*\*

(b) \*\*\*

**TABLE 4-4**  
**ITEM 18 NAV/, COM/, DAT/, AND SUR/ CAPABILITIES USED BY FAA**

Item	Purpose	Entry	Explanation
NAV/ entries used by FAA	Radius to Fix (RF) capability	Z1	RNP-capable flight is authorized for Radius to Fix operations.
	Fixed Radius Transitions (FRT)	Z2	RNP-capable flight is authorized for Fixed Radius Transitions.
	Time of Arrival Control (TOAC)	Z5	RNP-capable flight is authorized for Time of Arrival Control.
	Advanced RNP (A-RNP)	P1	Flight is authorized for A-RNP operations.
	Helicopter RNP 0.3	R1	Flight is authorized for RNP 0.3 operations (pertains to helicopters only).
	RNP 2 Continental	M1	Flight is authorized for RNP 2 continental operations.
	RNP 2 Oceanic/ Remote	M2	Flight is authorized for RNP 2 oceanic/remote operations.
COM/ entries used by FAA	N/A	N/A	The FAA currently does not use any entries in COM/.
DAT/ entries used by FAA	Capability and preference for delivery of pre-departure clearance	Priority number followed by: • FANS • FANSP • PDC • VOICE	Entries are combined with a priority number, for example; 1FANS2PDC means a preference for departure clearance delivered via FANS 1/A; with capability to also receive the clearance via ACARS PDC. FANS = FANS 1/A DCL FANSP = FANS 1/A+ DCL PDC = ACARS PDC VOICE = PDC via voice (no automated delivery)
SUR/ entries used by FAA	Req. Surveillance Performance	RSP180	Aircraft is authorized for Required Surveillance Performance RSP180
		RSP400	Aircraft is authorized for Required Surveillance Performance RSP400
	ADS-B	A2	Aircraft has 1090 MHz Extended Squitter ADS-B compliant with RTCA DO-260B (complies with FAA requirements)
		A2	Aircraft has 978 MHz UAT ADS-B compliant with RTCA DO-282B (complies with FAA requirements)

\*\*\*\*\*

(f) \*\*\*

**Note:** Do not include a capability solely based on the installed equipment if an operational approval is required. For example, all U.S. civil operators require either Operations Specification, Management Specification, or Letter of Authorization B036, as applicable, in order to include NAV/M2 (RNP 2 (oceanic/remote)), PBN/A1 (RNAV 10 (RNP 10)), or PBN/L1 (RNP 4) in Item 18.

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5. \*\*\*

(d) \*\*\*

**TABLE 4-10**  
**ADS-B CAPABILITIES**

Capability	Item 10b	Item 18 SUR/
1090 ES Out Capability	B1	A2
1090 ES Out and In Capability	B2	A2
UAT Out Capability	U1	A2
UAT Out and In Capability	U2	A2

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f. \*\*\*

5. \*\*\*

(c) \*\*\*

**Example:** DCT APN J177 LEXOR/N0467F380 J177 TAM/  
N0464F390 J177

**6. Delay En Route (Item 15, Item 18 DLE/)**

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