**U.S. DEPARTMENT OF TRANSPORTATION**
FEDERAL AVIATION ADMINISTRATION

# ORDER JO 7210.3FF

Air Traffic Organization Policy

Effective Date:
December 24, 2026

**SUBJ:** Facility Operation and Administration

This order provides instructions, standards, and guidance for operating and managing air traffic facilities.

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# Explanation of Changes
# Basic

**Direct questions through appropriate facility/service center office staff to the office of primary responsibility (OPR)**

**a. 1–2–4. ABBREVIATIONS**

**2–1–4. REFERENCE FILES**

**2–2–4. DUTY FAMILIARIZATION AND THE TRANSFER OF POSITION RESPONSIBILITY**

**3–1–1. BASIC EQUIPMENT**

**6–3–1. HANDLING OF SIGMETS, CWAS, AND PIREPs**

**6–3–2. RECEIPT OF NOTAM DATA**

**6–3–4. FLIGHT DATA UNIT**

This change adds Enterprise Information Display System (E-IDS) to abbreviations. E-IDS language was added to paragraphs 6–3–1, 6–3–2, and 6–3–4. Paragraph 2–1–4 Note was deleted and the content added into the paragraph. Information Display System (IDS) language was added to paragraph 2–2–4. Paragraph 4–7–12, subparagraph a, Note 1, which is being removed, was added to paragraph 2–2–4, subparagraph c2(b)(1–3), with a revision in subparagraph c2(b), where the term "en route" was removed from the original sentence. A reference was added below subparagraph c2(b)(3). Paragraph 2–2–4, subparagraph c2 was updated to encourage the use of Status Information Areas (SIAs) and IDS for airport conditions. Subparagraph c2(a) was added to give direction on prioritization. Additional editorial changes were made in paragraph 2–2–4 for SIA consistency. Paragraph 3–1–1, subparagraph b4, last sentence was deleted for clarity.

**b. 2–1–27. COMBINE/RECOMBINE AN ATCT/TRACON**

This change updates the paragraph language to show the current organizational structure.

**c. 2–2–4. DUTY FAMILIARIZATION AND THE TRANSFER OF POSITION RESPONSIBILITY**

This change specifies that David J. Hurley Air Traffic Control System Command Center operational personnel are not required to review and listen to the recorded Center Weather Service Unit briefing prior to working an operational position. This change cancels and incorporates Notice JO 7210.974, Center Weather Service Unit Pre-Duty Weather Briefing Applicability, effective June 19, 2026.

**d. 2–5–4. RELIEF PERIODS**

**2–6–6. RELIEF PERIODS**

This change updates the language in subparagraphs 2–5–4d and 2–6–6c to prohibit sleep within operational areas, which would allow employees to nap during their recuperative break. This proposal incorporates and cancels Notice JO 7210.975, Relief Periods, effective August 6, 2026.

**e. 2–6–1. WATCH SUPERVISION**
**2–10–7. HIGH BAROMETRIC PRESSURE**

This change adds a new paragraph 2–10–7 to provide specific guidance for issuing a Notice to Airmen (NOTAM) when barometric pressure exceeds 31.00 inches of mercury. The content was

relocated from paragraph 2–6–1, which is being revised to remove this guidance. The relocation improves procedural clarity and aligns the requirement with altimeter-related responsibilities.

**f. 2–6–3. OPERATIONS SUPERVISOR FATIGUE AND COVERAGE REQUIREMENTS**

This change incorporates Operations Supervisor fatigue mitigation and coverage expectations into FAA policy. The change provides guidance intended to reduce extended periods of continuous operational duty, improve opportunities for rest and recovery, and promote supervisory presence during periods of operational demand. Additionally, the change encourages facilities to evaluate staffing and scheduling practices to provide supervisory coverage throughout the majority of operational hours and reduce instances where a single Operations Supervisor is required to work alone for extended periods. These provisions are intended to support safe and effective operational oversight while providing flexibility to implement coverage based on local staffing and traffic requirements. The change does not affect air traffic control procedures, separation standards, controller responsibilities, or pilot-facing operations. Rather, it establishes supervisory staffing and fatigue mitigation expectations designed to support the continued safe and efficient operation of the National Airspace System.

**g. 4–3–4. REVIEW BY SERVICE AREA OFFICE**

**4–3–8. HELICOPTER/POWERED-LIFT LOAs**

**10–1–4. SECTIONAL AERONAUTICAL, TERMINAL AREA, AND OTHER CHARTS**

**12–4–1. POLICY**

**12–4–2. CRITERIA**

**12–4–3. RESPONSIBILITIES**

**12–4–4. HELICOPTER/POWERED-LIFT CHART PUBLICITY AND FEEDBACK**

This change adds powered-lift aircraft to published helicopter chart products and procedures. Air traffic facilities may create routes specifically for use by powered-lift aircraft or allow existing helicopter routes to be used. Additional changes include the renaming of the task force to a development team, along with revised responsibilities. A new paragraph in Chapter 4, Section 3, for developing Letters of Agreement with helicopter/powered-lift operators has been added.

**h. 8–2–1. THREE MILE OPERATIONS**

This change integrates and aligns the provisions of FAA Order JO 7110.124 as a new Micro-EARTS specific subparagraph of 5–5–4, Minima. Requirements for Micro-EARTS facilities to utilize 3 NM separation operations at and below FL 230 while operating in fused display mode will now be available. It also deletes a superfluous note that is not necessary or pertinent for air traffic personnel. This change incorporates and cancels N JO 7210.977, Micro-EARTS 3 Mile Operations, effective September 14, 2026.

**i. 10–1–11. MOBILE CONTROL TOWERS**

The paragraph title and content are revised to provide easily identifiable information to users with updated references to applicable Service Center procedures and FAA Orders covering implementation and responsibilities for FAA mobile/temporary airport traffic control towers.

**j. 10–1–12. PARTICIPATION IN LOCAL AIRPORT DEICING PLANS (LADP)**

This change makes several editorial updates and converts a NOTE to a new subparagraph.

**k. 10–4–10. SIMULTANEOUS INDEPENDENT APPROACHES**

**10–4–11. GLIDESLOPE OUTAGE CONTINGENCY PLANS AND AUTHORIZATION**

This change relocates simultaneous independent approach glideslope outage procedures in paragraph 10-4-10, Simultaneous Independent Approaches, to a new paragraph 10-4-11, Glideslope Outage Contingency Plans and Authorization, with greater detail for routing and approval.

**l. 10–6–2. OPERATION OF LIGHTS WHEN TOWER IS CLOSED**

**10–6–5. VISUAL APPROACH SLOPE INDICATOR (VASI) SYSTEMS**

**10–6–6. PRECISION APPROACH PATH INDICATOR (PAPI) SYSTEMS**

This change replaces the outdated reference from "Terminal Operations Service Area Office" to "Service Area Director of Air Traffic Operations." The revision aligns FAA Order JO 7210.3 with the current ATO organizational structure and clarifies the proper approving authority at the service area level. Additionally, this change removes the requirement that air traffic facilities be responsible for issuing NOTAMs when the tower is closed. Procedures for part-time or conditional VASI and PAPI operations must be contained in an LOA.

**m. 11–1–2. FAA HEADQUARTERS**

**11–2–2. FAA STAFFING FOR SPECIAL EVENTS**

**11–3–1. TESTING AND CERTIFICATION**

**11–4–2. PROVISION OF INFORMATION AND DATA**

This change reflects updated organizational names and functional responsibilities under the 2025 Air Traffic Services (AJT) reorganization. Federal Contract Tower program responsibilities are revised with the correct offices, and a previous line-authority stipulation for FAA and FCT personnel at special events is made a subparagraph in place of a note.

**n. 11–2–6. FAA CONTRACT TOWER (FCT) AIR TRAFFIC CONTROLLER ELIGIBILITY**

This change revises air traffic controller eligibility for hire into an FAA Contract Tower. It affords the contract vendor a larger pool from which to attract and hire candidates. This change cancels and incorporates Notice JO 7210.976, FAA Contract Tower (FCT) Air Traffic Controller Eligibility, effective September 2, 2026.

**o. 18–10–3. BACKGROUND**

**18–10–5. VARIABLES IN GDPS**

**18–10–6. ATCSCC PROCEDURES**

**18–10–10. CANCELLATION PROCEDURES**

This change removes Diversion Recovery from Variables in GDPs, adds Program Rates (PR) to the list of items used to determine GDPs, and updates language to correspond with current technology and FSM data fields.

**p. 20–7–3. DEGREE OF RESTRICTIONS**

This change removes the language contained in paragraph 20–7–3, which is more permissive than the regulation.

**q. 21–4–8. UAS SGI ADDENDUM REQUEST PROCESS AND COORDINATION**

**21–5–4. UAS SGI ADDENDUM REQUEST PROCESS AND COORDINATION**

This change deletes paragraph 21–5–4, UAS SGI Addendum Request Process and Coordination, and relocates it to a new paragraph 21–4–8 with same title and updated information.

**r. Editorial Changes**

Editorial changes include removing the annotation "Terminal" from the title of Chapter 12, Section 1 (the word terminal is removed from subparagraph a, subparagraph b, and the reference to FAA Order JO 7110.65, Chapter 7, Section 6); updating any reference akin to the old terminology "NOTAM system," "Federal NOTAM System (FNS)," and "United States NOTAM System (USNS)" within this order to either "NOTAM Service" or "NOTAM Management Service (NMS)"; revising paragraph 20–1–8 by replacing the legacy term "ATO Service Area Director" with "appropriate ATO Service Center" to reflect the current ATO organizational structure, updating the point-of-contact language for Temporary Flight Restrictions (TFR) questions and concerns without changing existing responsibilities, procedures, or operational requirements, and improving organizational accuracy and ensuring terminology used throughout the order remains consistent with current FAA structure and nomenclature; and correcting the usage of the terms go around/go-around and read back/readback.

**s. Entire Publication**

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

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# Part 1. BASIC

# Chapter 1. General

## Section 1. Introduction

### 1−1−1. PURPOSE OF THIS ORDER

This order provides instructions, standards, and guidance for operating and managing air traffic facilities.

### 1−1−2. AUDIENCE

This order applies to all ATO personnel and anyone using ATO directives.

### 1−1−3. WHERE TO FIND THIS ORDER

This order is available on the FAA's Air Traffic Plans and Publications website at https://faa.gov/air_traffic/publications and Orders & Notices website at https://www.faa.gov/regulations_policies/orders_notices/.

### 1−1−4. WHAT THIS ORDER CANCELS

FAA Order JO 7210.3EE, Facility Operation and Administration, dated February 20, 2025, and all changes to it are canceled.

### 1−1−5. EXPLANATION OF CHANGES

The significant changes to this order are identified in the Explanation of Changes page(s). It is advisable to retain the page(s) throughout the duration of the basic order.

### 1−1−6. EFFECTIVE DATES AND SUBMISSIONS FOR CHANGES

**a.** This order and its changes are scheduled to be published to coincide with AIRAC dates.

**b.** The “Cutoff Date for Completion" in the table below refers to the deadline for a proposed change to be fully coordinated and signed. Change initiators must submit their proposed changes well in advance of this cutoff date to meet the publication effective date. The process to review and coordinate changes often takes several months after the change is initially submitted.

*TBL 1−1−1*

**Publication Schedule**

| Basic or Change | Cutoff Datefor Completion | Effective Date of Publication |
|---|---|---|
| JO 7210.3FF | 7/9/26 | 12/24/26 |
| Change 1 | 12/24/26 | 6/10/27 |
| Change 2 | 6/10/27 | 11/25/27 |
| Change 3 | 11/25/27 | 5/11/28 |
| JO 7210.3GG | 5/11/28 | 10/26/28 |
| Change 1 | 10/26/28 | 4/12/29 |
| Change 2 | 4/12/29 | 9/27/29 |
| Change 3 | 9/27/29 | 3/14/30 |

## 1−1−7. DELIVERY DATES

This order will be available on the FAA's website 30 days prior to its effective date.

## 1−1−8. RECOMMENDATIONS FOR PROCEDURAL CHANGES

The responsibility associated with processing and coordinating revisions to this order is delegated to the Director, Operational Policy, AJV-P.

**a.** Personnel should submit recommended changes in procedures to facility management.

**b.** Recommendations from other sources should be submitted through appropriate FAA, military, or industry/user channels.

**c.** Proposed changes must be submitted electronically to 9-AJV-P-HQ-Correspondence@faa.gov. The submission should include a description of the recommended change, and the proposed language to be used in the order.

***NOTE-***
*For details on the submission process as well as additional AJV-P processing responsibilities, please see FAA Order JO 7000.5, Procedures for Submitting Changes to Air Traffic Control Publications.*

**d.** Procedural changes will not be made to this order until the operational system software has been adapted to accomplish the revised procedures.

## 1−1−9. REQUESTS FOR INTERPRETATIONS OR CLARIFICATIONS TO THIS ORDER

**a.** Requests from Air Traffic Services (AJT) field personnel must be submitted to the applicable Service Area Director of Air Traffic Operations, as follows:

1. The request must be submitted in writing by an Air Traffic Manager to the District General Manager, who will forward the request in writing to the Service Area Director of Air Traffic Operations through the Operations Support Group (OSG).
2. The Service Area Director of Air Traffic Operations must review the submission to determine if an interpretation or a clarification is required.
   **(a)** If more than one interpretation of the language can be inferred, the request for interpretation must be submitted in writing to the Director, Operational Policy (AJV-P).
   **(b)** If it is determined a clarification of the language is required, the request is returned to the OSG. The OSG must provide a written clarification response to the requestor and forward a copy of the response to the Service Area Director of Air Traffic Operations and AJV-P.

**b.** Requests from System Operations Services (AJR) personnel must be submitted in writing through appropriate channels to the applicable Systems Operations Services Director. The receiving Systems Operations Services Director will review and, if deemed valid, submit the request to AJV-P for response.

**c.** Requests from all other FAA ATO service units, Lines of Business, or Staff Offices must be submitted in writing through appropriate leadership channels to AJV-P.

**d.** Requests from DoD personnel must be submitted in writing to the respective Military Service Headquarters, via the appropriate chain of command. The Military Service Headquarters will review and, if deemed valid, submit the request to AJV-P.

**e.** All external (non-FAA) requests may be submitted directly to AJV-P.

**f.** All requests directed to AJV-P in accordance with subparagraphs a through e above must be sent to the AJV-P Correspondence Mailbox at: 9-AJV-P-HQ-Correspondence@faa.gov.

**g.** Published interpretations for this order may be accessed through the MyFAA employee website via: https://my.faa.gov/org/linebusiness/ato/missionsupport/air-traffic-control-interpretations.

## 1−1−10. PROCEDURAL LETTERS OF AGREEMENT (LOAS)

Procedures/minima that are applied jointly or otherwise require the cooperation or concurrence of more than one facility/organization must be documented in a letter of agreement (LOA).

## 1−1−11. WAIVERS TO THIS ORDER

**a.** Exceptional or unusual requirements may dictate procedural deviations or supplementary procedures to this order.

**b.** The approval or denial of a certificate of authorization or waiver from Title 14, Code of Federal Regulations (14 CFR), is covered in Part 6, Chapter 19, of this order.

**c.** The approval of waivers to air traffic procedures is covered in Part 6, Chapter 19, Section 7, of this order.

**d.** Prior approval by the appropriate military headquarters is required for subsequent interface with the FAA if military operations or facilities are involved. (See TBL 1−1−2.)

*TBL 1−1−2*

**Military Operations Interface Offices**

| Department | Address |
|---|---|
| Department of the Navy | Department of the Navy<br>Chief of Naval Operations<br>N980A, NAATSEA<br>2000 Navy Pentagon (5D453)<br>Washington, D.C. 20350-2000 |
| Department of the Air Force | HQ AFFSA<br>5316 S. Douglas Blvd<br>Bldg 8400, Room 232<br>Oklahoma City, OK 73150 |
| Department of the Army | Director<br>USAASA (MOAS-AS)<br>9325 Gunston Road, Suite N-314<br>Ft. Belvoir, VA 22060-5582 |

## 1−1−12. SAFETY MANAGEMENT SYSTEM (SMS)

Safety is fundamental to the provision of air traffic management and communication, navigation, and surveillance services. The ATO develops, implements, and maintains processes, tools, and guiding principles within the framework of a Safety Management System (SMS) to ensure that performance-based NAS safety goals are achieved. The ATO SMS gives the responsibility for owning and executing the SMS to all employees at all levels of the ATO. All ATO employees must strive not only to maintain safety in the NAS for those services they provide but also to continuously improve the ATO SMS. Direction regarding the ATO SMS and its application is found in FAA Order JO 1000.37, Air Traffic Organization Safety Management System. Additional information pertaining to ATO SMS requirements and processes can be obtained by visiting the SMS Toolbox, emailing Operational System Intelligence (AJS) at 9-AJI-SMS@faa.gov, or contacting the service center Quality Control Group. SMS training is available for all employees via eLMS. Additional courses along with Technical Training for SMS Practitioners and SMS Facilitators are available from AJS.

***REFERENCE−***
*ATO SMS Toolbox - https://my.faa.gov/org/linebusiness/ato/safety/sms.*

## 1−1−13. REFERENCES TO FAA NON-AIR TRAFFIC ORGANIZATION

When references are made to regional office organizations that are not part of the ATO (Communications Center, Flight Standards, Airport offices, etc.), the facility should contact the FAA region where the facility is physically located—not the region where the facility's Service Area office is located.

## 1−1−14. DISTRIBUTION

This order 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 order. Subscriptions to air traffic directives can be made through the Air Traffic Plans and Publications website at https://www.faa.gov/air_traffic/publications/ or directly via the following link: https://public.govdelivery.com/accounts/USAFAA/subscriber/new?topic_id=USAFAA_39.

# Section 2. Order Use

## 1−2−1. POLICY

This order prescribes information necessary to effectively operate and administer air traffic service facilities. When a conflict arises between this order's provisions and those in other agency issuances, management must request clarification from higher authority and/or assistance from the Operations Support Group (OSG), Service Area Director of Air Traffic Operations, or the Flight Services Safety and Operations Group. Procedures for requesting interpretation or clarification to this order are contained in paragraph 1−1−9. In the event a conflict arises between instructions in this order and the terms of a Collective Bargaining Agreement (CBA), management must abide by the CBA.

## 1−2−2. ANNOTATIONS

Revised, new, or reprinted pages will be marked as follows:

**a.** The change number and the effective date are printed on each revised or additional page.

**b.** A reprinted page not requiring a change is reprinted in its original form.

**c.** Bold vertical lines in the margin of the text mark the location of substantive procedural, operational, or policy changes; e.g., when material affecting the performance of duty is added, revised, or deleted.

**d.** Statements of fact of a prefatory or explanatory nature relating to directive material are set forth as notes.

**e.** If a facility has not received the order/changes at least 30 days before the above effective dates, the facility must notify its service area office distribution officer.

## 1−2−3. WORD MEANINGS

As used in this order:

**a.** “Must” means a procedure is mandatory.

**b.** “Should” means a procedure is recommended.

**c.** “May” and “need not” mean a procedure is optional.

**d.** “Will” indicates futurity, not a requirement for application of a procedure.

**e.** “Must not” means a procedure is prohibited.

**f.** Singular words include the plural, and plural words include the singular.

## 1−2−4. ABBREVIATIONS

As used in this order, the following abbreviations have the meanings indicated: (See TBL 1-2-1.)

***TBL 1−2−1***

**Abbreviations**

| Abbreviation | Meaning |
|---|---|
| AAO | Adverse assumption obstacle |
| AAR | Adapted arrival route |

| Abbreviation | Meaning |
|---|---|
| AAR | Airport arrival rate |
| ACDO | Air Carrier District Office |
| ACE-IDS | ASOS Controller Equipment-Information Display System |
| ACID | Aircraft identification |
| ADAR | Adapted departure arrival route |
| ADC | Aerospace Defense Command |
| ADIZ | Air defense identification zone |
| ADL | Aggregate demand list |
| ADR | Adapted departure route |
| ADR | Airport departure rate |
| ADS-A | Automatic Dependent Surveillance-Addressable |
| ADS-B | Automatic Dependent Surveillance-Broadcast |
| AFP | Airspace Flow Program |
| AFRES | Air Force reserve |
| AFTN | Aeronautical fixed telecommunications network |
| AIDC | ATS Interfacility Data Communications |
| AIM | Aeronautical Information Manual |
| AIRAC | Aeronautical Information Regulation and Control |
| AIS | Aeronautical Information Services |
| AISR | Aeronautical Information System Replacement |
| AIT | Automated information transfer |
| ALD | Available landing distance |
| ALS | Approach light system |
| ALTRV | Altitude reservation |
| AMASS | Airport Movement Area Safety System |

| Abbreviation | Meaning |
|---|---|
| APREQ | Approval request |
| ARAC | Army Radar Approach Control facility (US Army) |
| ARFF | Airport rescue and fire fighting |
| ARINC | Aeronautical Radio, Inc. |
| ARO | Airport Reservations Office |
| ARP | Airport reference point |
| ARSR | Air route surveillance radar |
| ART | ATO Resource Tool |
| ARTCC | Air route traffic control center |
| ARV | Approach Runway Verification |
| ASDE | Airport surface detection equipment |
| ASDE-X | Airport Surface Detection Equipment System - Model X |
| ASF | Airport stream filters |
| ASI | Altimeter setting indicator |
| ASOS | Automated Surface Observing System |
| ASP | Arrival sequencing program |
| ASPM | Aviation System Performance Metrics |
| ASR | Airport surveillance radar |
| ASSC | Airport Surface Surveillance Capability |
| AT | Air Traffic |
| ATA | Air traffic assistant |
| ATC | Air traffic control |
| ATCAA | Air traffic control assigned airspace |
| ATCRBS | Air traffic control radar beacon system |
| ATCS | Air traffic control specialist |

| Abbreviation | Meaning |
|---|---|
| ATCSCC | David J. Hurley Air Traffic Control System Command Center |
| ATCT | Airport traffic control tower |
| ATIS | Automatic terminal information service |
| ATM | Air Traffic Manager |
| ATO | Air Traffic Organization |
| ATOP | Advanced Technologies and Oceanic Procedures |
| ATPB | Air Traffic Procedures Bulletin |
| ATREP | Air Traffic representative |
| AWC | Aviation Weather Center |
| AWIS | Automated weather information service |
| AWOS | Automated Weather Observing System |
| CA | Conflict alert |
| CAP | Civil Air Patrol |
| CARF | Central Altitude Reservation Function |
| CAS | Civil Aviation Security |
| CCF | Combined Control Facility |
| CCFP | Collaborative Convective Forecast Product |
| CCSD | Collaborative Constraint Situation Display |
| CD | Clearance delivery |
| CDM | Collaborative decision making |
| CDR | Coded Departure Route(s) |
| CDR | Continuous Data Recording |
| CFR | Code of Federal Regulations |
| CIC | Controller-in-charge |
| CIRNOT | Circuit Notice |

| Abbreviation | Meaning |
|---|---|
| COB | Close of business |
| CONUS | Continental/Contiguous/Conterminous United States |
| COO | Chief Operating Officer |
| COTC | Computer operator terminal console |
| CPDLC | Controller Pilot Data Link Communications |
| CTRD | Certified Tower Radar Display |
| CTA | Controlled times of arrival |
| CWA | Center weather advisory |
| CWSU | Center Weather Service Unit |
| DAS | Delay assignment |
| DASI | Digital altimeter setting indicator |
| DCCWU | ATCSCC Weather Unit |
| DCL | Departure Clearance |
| DDSO | Deputy Director of System Operations |
| DEDS | Data entry display system |
| DEN | Domestic Events Network |
| DLS | Designated Lead Specialist |
| DME | Distance measuring equipment |
| DoD | Department of Defense |
| DOE | Department of Energy |
| DOT | Department of Transportation |
| DP | Instrument Departure Procedure |
| DRT | Diversion Recovery Tool |
| DSP | Departure sequencing program |
| DTM | Digital terrain maps |

| Abbreviation | Meaning |
|---|---|
| DVA | Diverse vector area |
| DVRSN | Diversion |
| E-IDS | Enterprise Information Display System |
| E-MSAW | En Route Minimum Safe Altitude Warning |
| EAM | Emergency altitude map |
| EASL | Existing automation service level |
| EDCT | Expect departure clearance time |
| EDST | En Route Decision Support Tool |
| EI | Early Intent |
| ELT | Emergency locator transmitter |
| EOVM | Emergency obstruction video map |
| EOSH | Environmental and Occupational Safety and Health |
| EPIC | El Paso Intelligence Center |
| ERAM | En Route Automation Modernization |
| ERIDS | En Route Information Display System |
| ERT | Embedded route text |
| ESL | Emergency service level |
| ESP | En Route sequencing program |
| FAA | Federal Aviation Administration |
| FCA | Flow Constrained Area |
| FCFSS | Federal Contract Flight Service Station |
| FDEP | Flight data entry and printout |
| FDIO | Flight data input/output |
| FEA | Flow Evaluation Area |
| FICO | Flight Inspection Central Operations |

| Abbreviation | Meaning |
|---|---|
| FOIA | Freedom of Information Act |
| FOUO | For Official Use Only |
| FP | Flight plan |
| FPL | Full performance level |
| FRD | Fixed Radial Distance |
| FSA | Flight schedule analyzer |
| FSDO | Flight Standards district office |
| FSL | Full service level |
| FSM | Flight Schedule Monitor |
| FSS | Flight service station |
| GA | General aviation |
| GC | Ground control |
| GDP | Ground delay program(s) |
| GENOT | General notice |
| GI | General information message |
| GS | Ground stop(s) |
| HIRL | High intensity runway lights |
| HRPM | Human Resource Policy Manual |
| IAFDOF | Inappropriate Altitude for Direction of Flight |
| IC | Initial contact |
| ICAO | International Civil Aviation Organization |
| ICR | Integrated Collaborative Rerouting |
| ICSS | Integrated communication center |
| IDS | Information Display System |
| IFR | Instrument flight rules |

| Abbreviation | Meaning |
|---|---|
| ILS | Instrument landing system |
| INS | Immigration and Naturalization Service |
| IR | IFR MTR |
| ITWS | Integrated Terminal Weather System |
| LAA | Local airport advisory |
| LAANC | Low Altitude Authorization Notification Capability |
| LAAS | Low altitude alert system |
| LADP | Local Airport Deicing Plan |
| LAHSO | Land and hold short operations |
| LAWRS | Limited aviation weather reporting station |
| LC | Local control |
| LLWAS | Low level wind shear alert system |
| LLWAS NE | Low Level Wind Shear Alert System Network Expansion |
| LLWAS-RS | Low Level Wind Shear Alert System Relocation/Sustainment |
| LLWS | Low Level Wind Shear |
| LOA | Letter of agreement |
| LOGT | Log/tally print time |
| LTA | Letter to Airmen |
| MA | Monitor alert |
| MALS/RAIL | Medium approach light system and runway alignment indicator lights |
| MAPPS | Management Association for Private Photogrammetric Surveyors |
| MCI | Mode C intruder |
| MDM | Main display monitor |
| MEA | Minimum en route IFR altitude |
| MEARTS | Micro En Route Automated Radar Tracking System |

| Abbreviation | Meaning |
|---|---|
| METAR | Aviation Routine Weather Report |
| MIA | Minimum IFR altitude |
| MIAWS | Medium Intensity Airport Weather System |
| MIT | Miles-in-trail |
| MOA | Military operations area |
| MOCA | Minimum obstruction clearance altitude |
| MOR | Mandatory Occurrence Report |
| MOU | Memorandum of understanding |
| MSL | Mean sea level |
| MTI | Moving target indicator |
| MTM | Maintenance TDLS Menu |
| MTR | Military training route |
| MVA | Minimum vectoring altitude |
| NAA | National aeronautical association |
| NADIN | National airspace data interchange network |
| NAR | National Automation Request |
| NAR | North American Routes |
| NAS | National Airspace System |
| NASA | National Aeronautics and Space Administration |
| NASE | National Airway Systems Engineering |
| NAVAID | Navigational aid |
| NCIC | National crime information center |
| NFDD | National Flight Data Digest |
| NHOP | National hurricane operations plan |
| NM | Nautical mile |

| Abbreviation | Meaning |
|---|---|
| NNCC | National Network Control Center |
| NOAA | National Oceanic and Atmospheric Administration |
| NOM | National Operations Manager |
| NORAD | North American Aerospace Defense Command |
| NOS | National Ocean Service |
| NOTAM | Notice to Airmen |
| NRP | North American Route Program |
| NTML | National Traffic Management Log |
| NTMO | National Traffic Management Officer |
| NTSB | National Transportation Safety Board |
| NWS | National Weather Service |
| NWSOP | National winter season operations plan |
| OASIS | Operational and Supportability Implementation System |
| OM | Operations Manager |
| OMIC | Operations Manager-in-Charge |
| OPR | Office of primary responsibility |
| OS | Operations Supervisor |
| OSIC | Operations Supervisor-in-Charge |
| P-ACP | Prearranged coordination procedures |
| PAR | Precision approach radar |
| PB | Pilot briefing |
| PCS | Power Conditioning System |
| PDC | Pre-Departure Clearance |
| PIC | Pilot-in-command |
| PIREPs | Pilot weather reports |

| Abbreviation | Meaning |
|---|---|
| POC | Point of Contact |
| PVD | Planned view display |
| RA | Radar Associate |
| RAA | Remote Airport Advisory |
| RADLO | Regional air defense liaison officer |
| RAIL | Runway alignment indicator lights |
| RAIS | Remote Airport Information Service |
| RAPCON | Radar Approach Control facility (USAF, USN and USMC) |
| RATCF | Radar Air Traffic Control Facility (USN and USMC) |
| RCAG | Remote center air/ground facility |
| RCC | Rescue coordination center |
| RMT | Route Management Tool |
| ROC | Regional operations center |
| ROG | Route Options Generation |
| ROT | Runway occupancy time |
| RSU | Runway supervisory unit |
| RVR | Runway visual range |
| SAA | Special activity airspace |
| SAMS | Special Use Airspace Management System |
| SATCOM | Satellite Communication(s) |
| SAWS | Stand Alone Weather System |
| SDP | Surveillance Data Processing |
| SE | Systems engineer |
| SECM | Safety and Environmental Compliance Manager |
| SGI | Special Government Interest |

| Abbreviation | Meaning |
|---|---|
| SIA | Status information area |
| SID | Standard Instrument Departure |
| SIGMET | Significant meteorological information |
| SMGCS | Surface movement guidance and control system |
| SMIS | Safety Management Information System |
| SMO | System Management Office |
| SMR | Surface Movement Radar |
| SOP | Standard operating procedure |
| SP | Support Specialist(s) |
| SPECI | Nonroutine (Special) Aviation Weather Report |
| STARS | Standard terminal automation replacement system |
| STMC | Supervisor Traffic Management Coordinator |
| STMCIC | Supervisory Traffic Management Coordinator-in-Charge |
| STMP | Special traffic management program |
| SUA | Special use airspace |
| sUAS | Small Unmanned Aircraft System(s) |
| SVFR | Special visual flight rules |
| SWAP | Severe weather avoidance plan |
| SWS | Surface Weather System |
| T&A | Time and attendance |
| TAC | Terminal area chart |
| TACAN | Tactical air navigation aid |
| TAS | TDLS Application Specialist |
| TCA | Tactical Customer Advocate |
| TCAS | Traffic alert collision and avoidance system |

| Abbreviation | Meaning |
|---|---|
| TCDD | Tower cab digital display |
| TCF | Traffic Flow Management Convective Forecast Produce |
| TCW | Terminal Controller Workstation |
| TDLS | Terminal Data Link System |
| TDW | Tower Display Workstation |
| TDWR | Terminal Doppler weather radar |
| TEC | Tower en route control |
| TELCON | Telephone Conference |
| TERPS | Terminal instrument procedures |
| TFMS | Traffic Flow Management System |
| TFR | Temporary flight restriction |
| TM | Traffic management |
| TMC | Traffic management coordinator |
| TMI | Traffic management initiatives |
| TMO | Traffic Management Officer |
| TMU | Traffic management unit |
| TO | Technical Operations |
| TOC | Transfer of communication |
| TRACAB | Terminal radar approach control in tower cab |
| TRACON | Terminal radar approach control |
| TRSA | Terminal Radar Service Area |
| TSD | Traffic situation display |
| UA | routine PIREPs |
| UAS | Unmanned Aircraft System(s) |
| UASFM | Unmanned Aircraft System(s) Facility Map |

| Abbreviation | Meaning |
|---|---|
| UAP | Unidentified anomalous phenomena |
| UHF | Ultrahigh frequency |
| UPT | User Preferred Trajectory |
| USAF | United States Air Force |
| USN | United States Navy |
| USS | Unmanned Aircraft System(s) Service Supplier |
| UTC | Coordinated universal time |
| UUA | urgent PIREPs |
| VAR | Volcanic activity report |
| VASI | Visual approach slope indicator |
| VCE | VSCS/Console Equipment |
| VEARS | VSCS Emergency Access Radio System |
| VFR | Visual flight rules |
| VHF | Very high frequency |
| VMC | Visual meteorological conditions |
| VOR | Omnidirectional VHF navigational aid |
| VORTAC | Collocated VOR and TACAN navigational aid |
| VR | VFR MTR |
| VSCS | Voice Switching and Control System |
| VTABS | Voice switching and control system training and backup system |
| WC | Weather coordinator |
| WFO | Weather Forecast Office |
| WINGS | Weather Information and Navigational Graphics System |
| WMSCR | Weather Message Switching Center Replacement |
| WRA | Weather Reconnaissance Area |

| Abbreviation | Meaning |
|---|---|
| WSD | Web Situation Display |
| WSO | Weather Service Office |
| WSP | Weather System Processor |

# Chapter 2. Administration of Facilities

## Section 1. General

### 2−1−1. FACILITY REQUIREMENTS

Facilities must coordinate with various lines of business (LOB), staff offices, and ATO Service Units directly on mutual procedural or operational requirements. When the resolution of procedural or operational problems is not possible, or when a directive is incompatible with another directive or agreement, the facility must notify its higher authority management structure for resolution assistance.

**a.** Air Route Traffic Control Centers (ARTCCs) and terminal air traffic facilities are responsible to the respective Air Traffic Service Area office.

**b.** Flight Service Stations (FSS) are responsible to the Flight Service Safety and Operations Group.

**c.** The Air Traffic Control System Command Center (ATCSCC) is responsible to the Director of NAS Operations.

### 2−1−2. FACILITY STANDARD OPERATING PROCEDURES (SOP)

The ATM must issue an SOP specifying, at a minimum, required procedures for maintaining a safe and efficient operation and the jurisdictional boundaries for each operational position/sector.

***NOTE-***
*Although FAA Order JO 1320.62, Air Traffic Organization Directives Management, states that an SOP is not an authorized way to issue policy and thus should not be identified as a directive, ATMs have historically issued SOPs as such and may continue to do so.*

**a.** Review SOPs at least annually and update as necessary.

**b.** Review and, if necessary, update SOPs when new or revised instrument flight procedures are published or pertinent national procedures are implemented or changed.

***NOTE-***
*Information related to subscribing for alerts regarding upcoming changes to instrument flight procedures is available at the Instrument Flight Procedures Information Gateway: https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/.*

***REFERENCE-***
*FAA Order JO 7210.3, Para 2-1-6, Checking Accuracy of Published Data.*
*FAA Order JO 7210.3, Para 4-1-1, Correspondence Standards.*
*FAA Order JO 7210.3, Para 4-3-3, Developing LOA.*
*FAA Order JO 7210.3, Para 4-3-9, Annual Review/Revisions.*

**c.** Ensure noise abatement procedure commitments are included in the SOP or facility directives and identified as such.

***NOTE-***
*Noise abatement procedure commitments are the result of the NEPA process or other formal/informal agreements.*

**d.** Where emergency airport information is available via ERAM or STARS, include in the SOP a description of the functionality, to include any local adaptations or uses. Where no such automated functionality is available, the ATM must ensure the SOP addresses emergency airport information and where it must be made available in the operation.

## 2−1−3. POSITION/SECTOR BINDERS

Air traffic managers must develop and maintain binders for each position/sector within the facility. In addition to the above, this must include a supervisor position binder. The supervisor position binder should address procedures that will enhance controller performance in areas such as scanning, coordination, use of proper phraseology, and proficiency/remedial training. The binders must contain as a minimum, but not be limited to, the information listed in the En Route, Terminal, Flight Service Option Specific Guidelines. The binder must contain information that is necessary for the safe and efficient operation of each position/sector, including examples and formats where appropriate. A copy of each binder must be in a location easily accessible by each position/sector. Data may be stored and displayed via electronic means, e.g., on Information Display Systems (IDS), where available. Air traffic managers in terminal facilities may determine the need for individual binders for associated/coordinator positions.

## 2−1−4. REFERENCE FILES

Air traffic managers must maintain current sets of orders, facility directives, Letters of Agreement (LOA), aeronautical charts, pertinent International Civil Aviation Organization (ICAO) documents and related publications so that they may be readily available for operational use and study by facility personnel. Also, the air traffic manager must maintain reference materials at appropriate work areas. These materials must consist of pertinent directives, agreements, emergency and overdue aircraft procedures, and a location listing of airports within the area of responsibility including runway alignment, lighting, surface, and length as a minimum. The air traffic manager will ensure that the telephone numbers of user companies/organizations, which have the capability to contact no radio (NORDO) aircraft are kept current. Air traffic managers must determine the applicability of other materials to be included.

## 2−1−5. RELEASE OF INFORMATION

**a.** It is FAA policy to make factual information available to persons, properly and directly concerned, except information held confidential for good cause.

**b.** Flight Track Data is defined in this order as all flight data related to one or more individual flights, inclusive of plot, track, altitude, heading, positional, and identification data (e.g., call sign, aircraft registration number, aircraft type, beacon code, origination, route of flight, and destination). Flight Track Data is contained in any NAS or ATO information system, automation platform, and/or database that contains data on individual flights. Flight Track Data can be contained and provided in digital, written, graphic, or oral form.

**c.** Flight Track Data on sensitive U.S. Government flights conducted for the purposes of national defense, homeland security, intelligence, and law enforcement is considered Sensitive Flight Data (SFD). SFD contains multiple types of Sensitive Unclassified Information (SUI), which must be protected from unauthorized disclosure as required by Federal law, government-wide regulation, and agency policy. SFD is not marked or identified as SFD or SUI at the facility level, which means that agency personnel have no authoritative method to differentiate between Flight Track Data that is nonsensitive and Flight Track Data that is SFD. Therefore, in instances where agency personnel are unable to validate that certain Flight Track Data is nonsensitive (i.e., not inclusive of SFD), they must protect that Flight Track Data as SUI.

**d.** Except as provided in this and other FAA orders, or when specifically authorized to do so by the Secretary of Transportation or the Administrator, agency personnel must notrelease Flight Track Data to an individual or entity outside of the FAA in response to any request.

**1.** Agency personnel must not release Flight Track Data to an entity outside the FAA unless it is first determined that the request is being made for an official purpose and/or an ongoing investigation by a U.S. Government agency or law enforcement organization personnel.

**2.** Agency personnel must not release Flight Track Data considered SFD on U.S. Government aircraft conducting military, homeland security, intelligence, law enforcement, presidential, or other sensitive flights to an entity outside the FAA except as operationally required to assist such flights. In the event that the employee is not able to determine if the Flight Track Data being requested is SFD, the employee must not release the data in question except as operationally required to assist that flight.

**3.** Each request must be handled in the following manner:

**(a)** Positively identify the requestor by name, organization or affiliation, and point of contact information (including a telephone call-back number and, if possible, email address).

**(b)** Inquire about the purpose of the request to determine whether the request is being made for an official purpose and by a duly authorized representative of a U.S. Government agency or law enforcement organization in support of an ongoing investigation.

**(c)** For requests received from any U.S. Government agency or law enforcement organization, the only information entered into the facility Daily Record of Facility Operation, FAA Form 7230-4, must be that called for by subparagraph d3(a) above, with a brief notation as to whether the request was granted or not.

**(d)** Notify facility management of all incoming requests.

**4.** If the request is from an individual not associated with any U.S. Government agency or law enforcement organization, agency personnel must deny the request and may inform the requester that information may be sought under the Freedom of Information Act (FOIA). A FOIA request should be filed in writing with the FOIA Officer, AFN-400, 800 Independence Avenue SW, Washington, DC 20591, or make an electronic request at https://www.faa.gov/foia/email_foia.

**5.** If it cannot be ascertained whether the purpose of the request from a U.S. Government agency or law enforcement organization is for an official purpose regarding a time-sensitive issue, agency personnel must contact facility management for guidance. If local management is unable to determine whether or not a request should be granted, the official may contact the National Tactical Security Operations (NTSO) Air Traffic Security Coordinator (ATSC) at (540) 422-4423/24/25.

**e.** FAA Contract Flight Service Stations (FCFSSs) must handle the release of information in accordance with contract requirements.

**f.** Any requests made by entities external to the FAA seeking connectivity to FAA systems for access to NAS data or NAS automation system data must first be directed to HQ FAA System Operations Security, Operations Security Plans and Procedures NAS Data Release Board (NDRB) Secretariat via email at 9-AJR-NDRB-Executive-Secretariat@faa.gov.

## 2−1−6. CHECKING ACCURACY OF PUBLISHED DATA

Air traffic managers and air traffic representatives (ATREPs) must ensure, upon receipt of official publications, that a review of data pertaining to their facilities and areas of concern is accomplished to ensure accuracy and completeness. When pertinent national procedures, aeronautical data (to include weather reporting locations), or flight procedures are created or changed, review facility standard operating procedures (SOPs) directives, position/sector binders, reference files, and/or letters of agreement (LOAs) and initiate corrections and briefings as required.

***NOTE-***

1. *Information related to subscribing for alerts regarding upcoming changes to instrument flight procedures is available at the Instrument Flight Procedures Information Gateway: https://www.faa.gov/air_traffic/flight_info/aeronav/procedures.*
2. *Additional digital aeronautical products and services are available via the following websites:*
   ***a.****https://www.faa.gov/air_traffic/flight_info/aeronav/procedures*
   ***b.****http://aerochart.faa.gov*

**1.** *Information on aeronautical data changes, including weather reporting locations, is available for free at the Aeronautical Information Services (AJV-A), Aeronautical Data web portal. Check 28-Day Subscription and Transmittal Letters at https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/.*

**4.***Notice to Airmen information may be viewed on the Aeronautical Information System Replacement (AISR) or at https://notams.aim.faa.gov/notamSearch.*

***REFERENCE-***

*FAA Order JO 7210.3, Para 2-1-2, Facility Standard Operating Procedures (SOP).*
*FAA Order JO 7210.3, Para 2-1-3, Position/Sector Binders.*
*FAA Order JO 7210.3, Para 2-2-11, Personnel Briefings Regarding Orders, Published Aeronautical Data and Flight Procedures.*
*FAA Order JO 7210.3, Para 4-3-3, Developing LOA.*
*FAA Order JO 7210.3, Para 4-3-9, Annual Review/Revisions.*
*FAA Order 7930.2, Notice to Airmen (NOTAM).*
*FAA Order JO 8260.19, Flight Procedures and Airspace.*
*FAA Order JO 8260.3, United States Standard for Terminal Instrument Procedures (TERPS).*
*FAA Order JO 8260.43, Flight Procedures Management Program.*

## 2−1−7. AIR TRAFFIC SERVICE DURING PLANNED AND UNPLANNED OUTAGES

The air traffic manager (ATM) must develop and maintain guidelines to provide continuity of required services during planned and, to the degree possible, during unplanned outages.

**a.** The ATM must collaborate with Technical Operations (Tech Ops) during any projected planned maintenance tasks that may impact air traffic control (ATC). The ATM must ensure affected

air traffic stakeholders or appropriate subject matter experts (SMEs) are notified of planning meetings.

**b.** The ATM must review all project risk plans (PRP) received from Tech Ops. A PRP is a living document that promotes coordination and communication and reduces the risk to the National Airspace System (NAS) associated with project implementation. After review, the ATM must forward concur or non-concur via the notification email or directly through the corporate work plan portal link provided in the email. The ATM may forward questions or comments regarding the PRP directly through the notification email or by contacting the point of contact identified in the notification email.

**c.** Facility Standard Operating Procedures (SOP) must include the use of the Operational Risk Management Plan (ORMP), which is the formal document for review and approval that includes the plan for ATC to protect continuity of service.

> ***NOTE−***
> *Operational Risk Management (ORM) training is available via eLMS.*

**1.** The ORMP must be used in conjunction with local procedures to support the completion of formal ORM maintenance activities and projects.

**2.** Certain maintenance tasks that do not meet the criteria identified in subparagraph c1 may still have the potential for operational consequences locally. Air Traffic and Technical Operations should jointly identify these additional maintenance activities that will require an ORMP.

**d.** The ATM must develop an ORM section in the facility SOP. The facility SOP must identify persons or positions authorized to review and/or approve ORMPs for the facility. Additionally, the SOP must identify communication procedures to ensure team members are notified in a timely manner of their team participation responsibilities.

**e.** All air traffic personnel identified in an ORMP are team members. Additional team members may be added for informational and increased situational awareness purposes and should address any concerns through the point of contact (POC)/reviewer or approver. The required air traffic team members consist of POC/reviewer and approver. Air traffic team members must:

**1.** Add additional team members as necessary.

**2.** Participate in ORMP meetings.

**3.** Review and comment on the ORMP.

**4.** Assess operational risks, identify any conflicting activities, and propose mitigations.

**5.** Maintain situational awareness until completion of the activity.

**6.** Contact the air traffic POC if the situation changes or the ORMP requires reassessment.

**f.** The air traffic POC/reviewer is responsible for coordination of the ORMP meeting with all affected air traffic stakeholders. The air traffic POC/reviewer:

**1.** Reviews the composition of the ORMP team and ensures the appropriate air traffic team members and/or air traffic approver have been assigned. When more than one facility is affected, ORMPs may require multiple reviewers or approvers.

**2.** Adds team members as appropriate.

**3.** Participates in ORMP meetings.

**4.** Ensures the completeness and feasibility of executing the ORMP, (shares responsibility with the air traffic approver).

**5.** Identifies any conflicting activities.

**6.** When the ORMP has been submitted for Air Traffic review, completes the air traffic mitigation plan element and submits the ORMP for approval. The System Support Center (SSC) manager will submit the plan to the Air Traffic and Tech Ops approvers.

**7.** Ensures the affected air traffic personnel are briefed and prepared to implement mitigations prior to commencing work.

**g.** The Air Traffic and Tech Ops approvers are responsible for the final review of the ORMP. Plans approved by Air Traffic and Tech Ops approvers are forwarded to Tech Ops personnel to perform the agreed-upon work. If a plan is not approved, the approver will select the Take 5 button in the ORMP tool and will notify the SSC manager or the initiator of their concern. The approvers:

**1.** Ensure the completeness and feasibility of executing the ORMP (shared responsibility with the air traffic POC/reviewer).

**2.** Approve the ORMP or select the Take 5 button with comments for additional consideration or follow-up.

**3.** Change role assignments or team members as necessary.

**4.** Identify any conflicting activities.

**5.** Ensure the High Visibility Event flag is set when it meets the appropriate definition outlined below.

***NOTE–***
*High Visibility Events are those that require upper management awareness because of their potentially significant impact on the NAS. These are events that if the worst-case scenario occurs, even with mitigations in place, could cause a hazardous situation in the NAS, change Operational Contingency Level (OCL), create a significant increase in workload for ATC, or cause aircraft to be held or diverted, especially at High Impact facilities.*

**h.** The majority of interactions with Tech Ops will not involve a PRP or an ORMP. Therefore, the facility must develop and incorporate procedures into the facility SOP for the coordination of maintenance activities which may affect the ability of the facility to provide air traffic services. These procedures must be consistent with the Principles of ORM outlined below and take into consideration the facility's unique operational circumstances. Air traffic personnel will use these procedures when coordinating and executing planned outages and maintenance tasks with Tech Ops.

**i.** Principles of ORM.

**1.** Situational Awareness. Understand the current state and dynamics of the operation and remain vigilant for future changes and developments. Considerations include:

**(a)** Peak and off-peak traffic periods.

**(b)** Weather conditions.

**(c)** Known concurrent activities that could impact, or be impacted by this activity. Example: VIP movement, airshows, other outages, etc.

**(d)** Additional outages in your facility or adjacent facility.

**(e)** Current staffing/operational oversight.

**(f)** Other communication/surveillance equipment available as an alternate means of providing air traffic services.

**2.** Plan Actions. The method and resources needed to accomplish the activity. Considerations include:

**(a)** Review break rotations/staffing plan to ensure positions are staffed accordingly.

**(b)** Review applicable (e.g., FAA Order JO 1900.47) Air Traffic Control Operational Contingency Plans.

**(c)** Brief affected staff prior to outages of the credible risks and potential impacts including worst-case scenarios and alternate procedures.

**(d)** Identify the Tech Ops POC if immediate contact is needed.

**(e)** Test back-up equipment before releasing the primary equipment to be worked on (where applicable).

**3.** Identify operational consequences. Identify the NAS systems and air traffic stakeholders that will, or could potentially be affected during the execution of the plan. Considerations include:

**(a)** Credible risks and potential impacts including worst-case scenarios that could affect air traffic's ability to provide service.

**(b)** Affected facilities, sectors/areas, positions, or other stakeholders participating in, or potentially impacted by the activity.

**(c)** Adverse effects to ATC personnel safety.

**4.** Communicate. An ongoing exchange of information between Technical Operations and air traffic personnel is essential for the review of the potential operational consequences and development of mitigation strategies. The information must be received, understood, and, in some cases, approved. Considerations include:

**(a)** Identified credible risks and potential impacts including worst-case scenarios.

**(b)** Mitigation Strategies.

**(1)** Include using the back-up equipment/systems, alternate channels, etc.

**(2)** Confirm proper operation of support equipment, standby equipment and/or backup systems prior to conducting the scheduled activity.

**(3)** Confirm Technical Operations and Air Traffic are prepared to implement their mitigation strategies.

**(c)** Notify Tech Ops immediately of any circumstances that may affect the procedure/task, e.g., change in operational hours, unusual circumstances, or operational configurations.

**(d)** "Take-5," if needed (to gain more information or reassess approval).

**(e)** Discuss and/or document effectiveness of plan for future reference or training.

**5.** Coordinate. Considerations include:

**(a)** Coordinating the activity with the appropriate adjacent facilities.

**(b)** Additional coordination and notification requirements should there be a change to planned activity.

**(c)** Notify Regional Operations Center (ROC), Domestic Events Network (DEN), or facility management (when applicable).

**(d)** Verify the equipment status and configuration upon completion of the activity.

**(e)** Ensuring that Out for Maintenance (OFM) and Return to Service (RTS) are recorded on FAA Form 7230-4, Daily Record of Facility Operation.

**j.** For unplanned outages, air traffic managers must develop and maintain operational plans that provide continuity of services to the extent dictated by the outage. The plans must be in accordance with FAA Order JO 1900.47.

**k.** For unplanned outages of airport traffic control towers, air traffic managers, in coordination with the local airport operator, must ensure operational plans for the temporary use of Common Traffic Advisory Frequency (CTAF) do not exceed 48 hours, unless an extension is approved by the Service Area Director of Operations because of unforeseen extenuating circumstances.

***REFERENCE−***

*FAA Order JO 1900.47, Air Traffic Control Operational Contingency Plans.*

*14 CFR 91.129, Operations in Class D Airspace.*

## 2−1−8. OPERATIONS DURING A STAFFING CONSTRAINT

The following steps must be followed when traffic management initiatives (TMI), ATC-0, or any reduction in ATC services are being considered due to staffing constraints:

**a.** The Air Traffic Manager (ATM) or designee must contact the General Manager (GM) or Assistant General Manager (AGM) or designee and provide the factors of the staffing shortage, expected duration, facility mitigations implemented, and any other related information. If the situation can be mitigated by other means and no TMIs, ATC-0 declaration, or reduction in services is required, the GM or AGM or designee will determine if a Staffing Trigger report should be initiated and coordinated with the Director of Operations (DO), Deputy Director of Operations (DDO), or designee.

**b.** If it is determined that TMIs are required, ATC-0 is unavoidable, or a reduction in services is required, then the GM, AGM, or designee must notify the DO, DDO, or designee for their concurrence. The GM or AGM or designee must obtain DO, DDO, or designee approval before submitting a Staffing Trigger report to the National Operations Manager (NOM) and Joint Air Traffic Operations Command (JATOC).

***NOTE−***

1. *Situations involving a minor disruption of air traffic services or a short duration ATC-0 situation that does not have an impact on the NAS should be reported to the DO, DDO, or designee. The DO, DDO, or designee will determine if a Staffing Trigger report is to be submitted to the NOM. (e.g., a facility is opening a few minutes late without flight delays, airborne holding, or flight diversions.)*
2. *The Staffing Trigger report is a collection of key data elements related to a staffing constraint that is captured and available for the JATOC and NOM for upward distribution.*

***REFERENCE−***

*FAA Order JO 7110.65, Para 11−1−2, Duties and Responsibilities.*

*FAA Order JO 7210.3, Chapter 18, Section 7, Traffic Management Initiatives.*

## 2−1−9. HANDLING BOMB THREAT INCIDENTS

Air Traffic facilities must establish procedures to carry out their functions in accordance with FAA Order 1600.69, FAA Facility Security Management Program. The following provisions must be incorporated into facility plans:

**a.** All air traffic facilities must notify the National Tactical Security Operations (NTSO) Air Traffic Security Coordinator (ATSC) team through the Domestic Events Network (DEN), the respective regional operations center, and other appropriate Service Area office element when a bomb threat occurs.

**b.** All personnel in the facility will be advised when a bomb threat has been received and of pertinent information regarding the bomb threat.

**c.** The decision to evacuate a facility will be made by the air traffic manager or his/her designee.

**d.** If the decision is made to evacuate and air safety is not a factor, immediately release nonessential personnel, instruct aircraft to contact the appropriate facility designated in the facility contingency plan, advise adjacent facilities as appropriate (ARTCCs should advise the ATCSCC of pending evacuation), broadcast that the facility is being evacuated, and evacuate the building.

**e.** If the decision is made to evacuate and air safety is a factor, immediately release nonessential personnel, resolve traffic conflicts (aircraft on radar vectors should be cleared to resume normal navigation), instruct aircraft to contact the appropriate facility designated in the facility contingency plan, advise adjacent facilities (ARTCCs should advise the ATCSCC), broadcast that the facility is being evacuated, and evacuate the building as rapidly as personnel can be released. The appropriate actions should be accomplished quickly to minimize personnel exposure. Further, the air traffic manager or his/her designee will determine which personnel will remain on duty until the traffic situation is resolved. Personnel designated to perform this function normally will be selected from the supervisory ranks or persons volunteering temporary services. To be effective this action should be planned in advance. There are various ways in which this can be accomplished. One simple method is that at the beginning of each watch, supervisors will plan their watch coverage should the need to evacuate arise.

**f.** The evacuation plans will also include recall procedures.

**g.** Consideration should be given to establishing an alternate site to provide limited flight service or airport air traffic and approach control services.

***NOTE−***
*Processes for the establishment of alternate sites and divestiture of airspace/responsibilities are outlined in FAA Order JO 1900.47 and facility Operational Contingency Plans (OCPs).*

**h.** During bomb threat situations, facility air traffic managers or their designees should exercise discretion regarding admittance of visitors to their facilities.

**i.** Facilities will take action to increase the security whenever such action is feasible. Measures to protect administrative and operational areas and equipment rooms should be taken. FAA Order 1600.69, FAA Facility Security Management Program, provides additional guidance for the protection of agency facilities, installations, equipment, etc. Examples are:

1. Increase security forces and measures.
2. Ensure that facilities are kept tidy so that out-of-place articles can be easily detected. This concept should be emphasized to all personnel including contractors and their employees.

3. Room or area monitors can be assigned to "look over" the area at frequent intervals for suspicious objects. In this regard, air traffic personnel assigned temporary administrative duties would be given building warden responsibilities.

***REFERENCE−***
*FAA Order JO 7210.3, Para 2−8−2, Medical Clearance Requirements.*

4. Outside areas should be kept as neat as possible. Landscaping should, if possible, be done in a manner that will not enhance clandestine activities.

**j.** Although it is envisioned that the foregoing will be accomplished within existing resources, planning (including budgeting) should be initiated to establish a secure environment.

**k.** Release information on bomb threat incidents in accordance with the procedures established in current directives. Where no applicable procedures have been established, all information must be treated as "For Official Use Only."

## 2−1−10. HANDLING MANPADS INCIDENTS

**a.** Air traffic managers must coordinate with federal, local, and other law enforcement agencies, as needed, to develop notification and contingency plans during a threat or attack from Man-Portable Air Defense Systems (MANPADS).

**b.** Air traffic managers must establish procedures to ensure the dissemination of MANPADS alert level 2 (credible threat)/alert level 3 (reported attack) and post-event activity via ATIS and/or controller-to-pilot transmissions. These reports must continue until notified otherwise by the Domestic Events Network (DEN) Air Traffic Security Coordinator (ATSC).

***REFERENCE−***
*FAA Order JO 7110.65, Para 2−9−3, Content.*
*FAA Order JO 7110.65, Para 10−2−13, MANPADS Alert.*
*FAA Order JO 7610.4, Para 3−1−3, Responsibilities.*

**c.** Air traffic managers must ensure the Operations Manager/OS/controller-in-charge (CIC) notifies the DEN ATSC of any MANPADS threat or attack as soon as possible. In the event of an observed or reported MANPADS launch, the initial report to the DEN ATSC must include the following information:

1. Call sign (if known);
2. Type aircraft (if known);
3. Coordinated Universal time;
4. Position/location of event;
5. Altitude (if known); and
6. Any other pertinent information (e.g., contrail sighting, additional pilot or ATC observation reports, law enforcement contact, etc.).

## 2−1−11. AIRPORT EMERGENCY PLANS

**a.** Operational instructions covering airport emergency service at airports served by an ATCT and/or FSS must be issued by the air traffic manager (the ATCT manager at airports with both facilities) in the form of a LOA. Procedures and/or LOAs for alerting airport emergency

equipment at other public-use airports served by the ATCT and/or FSS must also be developed, if deemed appropriate.

***NOTE–***
*Facility managers or their designee should meet with Airport Rescue and Fire Fighting (ARFF) personnel on an annual basis to review the local airport emergency service LOA and the effectiveness of local procedures.*

***REFERENCE–***
*FAA Advisory Circular AC 150/5210-7, Aircraft Rescue and Fire Fighting Communications.*

**b.** Responsibility for the prompt dispatch of equipment upon alert notice by the FAA ATCT or the FSSs is the joint responsibility of the airport management and the emergency equipment operator. The amount of equipment and number of personnel responding to the emergency will be determined by the equipment operator and should be kept to the minimum required. After receiving the alert and the route to be taken, the personnel operating the equipment are responsible for handling the emergency.

**c.** Procedures for alerting airport emergency equipment, including additional equipment which may be located off the airport, must consist only of:

**1.** Stating the nature and the location of the emergency by means of a signalling system; e.g., a siren and/or telephone. When required, the tower must indicate the route to be taken by the emergency equipment. FSSs must not specify such routes.

**2.** Specifying, when required, the category of alert applicable to the emergency.

**3.** Initiating the alert when, in the opinion of any of the following, a potential or actual emergency exists:

**(a)** The FAA specialists on duty.

**(b)** The pilot of the aircraft concerned.

**(c)** The operator of the aircraft or his/her representative.

**(d)** A representative of the airport management.

**d. Alert Phases:** Operations personnel may categorize local alerts if the category or phase designations have been coordinated locally and agreed to. It may be desirable for emergency equipment to be alerted on a standby or ready basis by use of a two-phase or three-phase alert system, but keep these actions as inconspicuous as possible without impairing efficiency. A three-phase alert may be set up as follows:

**1. Alert I:** Indicating an aircraft approaching the airport is in minor difficulty; e.g., feathered propeller, oil leak, etc. The emergency equipment and crews would standby at the equipment house for further instructions.

**2. Alert II:** Indicating an aircraft approaching the airport is in major difficulty; e.g., engine on fire, faulty landing gear, no hydraulic pressure, etc. This could mean emergency equipment would proceed to a predetermined location (end of runway, etc.) to await development of the potential emergency.

**3. Alert III:** Indicating an aircraft involved in an accident on or near the airport and emergency equipment should proceed immediately to the scene.

**e.** After alerting the emergency equipment, notify only the local aircraft operator or his/her representative and the airport management.

***NOTE−***
*Airport management is responsible for notifying other agencies or personnel.*

***REFERENCE−***
*Advisory Circular AC 150/5210-7, Aircraft Rescue and Fire Fighting Communications.*

## 2−1−12. EXPLOSIVES DETECTION K-9 TEAMS

At many of our major airports a program has been established by the FAA and the Law Enforcement Assistance Administration to make available an explosives detection K-9 team. ATC facilities must take the following actions should they receive an aircraft request for the location of the nearest explosives detection K-9 team:

**a.** The facility will relay the pilot's request to the FAA Washington Operations Center, AEO-100, telephone: commercial (202) 267-3333; ETN 521-0111; or DSN 851-3750 providing the aircraft's identification and position.

**b.** AEO-100 will provide the facility with the nearest location. The facility will have AEO-100 standby while the information is relayed to the pilot.

**c.** After it has been determined that the aircraft wishes to divert to the airport location provided, the air traffic facility will ascertain estimated arrival time and advise AEO-100. AEO-100 will then notify the appropriate airport authority at the diversion airport. In the event the K-9 team is not available at this airport, AEO-100 will relay this information to the air traffic facility providing them with the secondary location. ATC will then relay this to the pilot concerned for appropriate action.

## 2−1−13. INTERSECTION TAKEOFFS

Air traffic managers at ATCTs and at FSS facilities that provide LAA will prepare an airport diagram showing intersection takeoff information as follows:

**a.** Indicate the actual remaining runway length from each intersection; round all actual measurements “down” to the nearest 50 feet. Obtain measurements from an authentic source and record them on the diagram.

***NOTE−***
*Some airports publish “declared distances” for a particular runway. These are published in the Chart Supplement or the Aeronautical Information Publication (AIP), and there is no requirement that facility personnel be made aware of them. These distances are a means of satisfying airport design criteria and are intended to be used by pilots and/or operators for preflight performance planning only. There are no special markings, signage, or lighting associated with declared distances, and they do not limit the actual runway available for use by an aircraft. Therefore, they cannot be used for any air traffic control purpose. If pilots inquire about the existence of declared distances, refer them to the Chart Supplement or the AIP.*

**b.** If the airport authority requests that certain intersection takeoffs be denied, so indicate on the diagram.

***EXAMPLE–***
*/NO TKOFF/*

**c.** Indicate any access points to a runway from which an intersection takeoff may be made.

## 2–1–14. AIRCRAFT IDENTIFICATION PROBLEMS

FAA CONTRACT TOWERS NOT APPLICABLE

To reduce any potential misunderstandings of aircraft identifications caused by duplicate, phonetically similar-sounding, or hard to distinguish registration numbers or call signs operating in the same area, facility managers must ensure that those occurrences are processed using the Similar Sounding Call Sign Submission Tool. Where possible, facility managers must ensure computers in operating quarters are provided with a bookmarked hyperlink to https://ksn2.faa.gov/ATO/AJT-BURST-Team-Tools/SSCS/SitePages/Home.aspx. Where no internet-connected computers are accessible in operations areas, specify procedures in a facility directive for forwarding pertinent information to personnel that can make the entry into the tool as soon as practical. Ensure that the following additional actions are taken.

**a.** Scheduled air carrier aircraft: When two or more air carriers with duplicate flight numbers or phonetically similar-sounding call signs operate within 30 minutes of each other at the same airport or within the same sector and cause an identification problem on a recurring basis, request that the flight identification numbers be changed by:

***NOTE–***
*Recurrent situations would be aircraft proceeding primarily the same direction through the same sectors three or more times a week, at least two weeks out of four consecutive weeks.*

1. For carriers listed at the following web address, http://tfms.faa.gov/fly/airlinephones/airlinephones.html, contact the appropriate airline office.
2. For carriers not listed on the website, contact the operator or the chief pilot of the carrier concerned. Changes to the list can be provided to the ATCSCC Facility Automation Office via the Traffic Management Officer (TMO) or the Deputy Director of System Operations (DDSO).

**b.** *Military aircraft*: Contact base operations of the departure airport and request that action be taken to have the flight identifications changed when duplicate, phonetically similar, or hard to distinguish call signs are causing a flight identification problem. If additional assistance is required, immediately advise the military representative assigned to the Service Area office.

**c.** Civil aircraft other than air carrier: Advise Mission Readiness Services, Aeronautical Information Services, at Callsigns@faa.gov when two or more designated call signs are found to be phonetically similar or difficult to pronounce and are causing a flight identification problem.

**d.** The designated facility officer must maintain a record of actions taken using the Similar Sounding Call Sign Documentation Tool accessed via https://ksn2.faa.gov/ATO/AJT-BURST-Team-Tools/SSCS/SitePages/Home.aspx.

## 2−1−15. APPROACH CONTROL AIRSPACE

With the advancement of technologies, the air traffic services provided by en route facilities and terminal facilities are becoming more integrated. Terminal airspace should be adjusted to match the services provided. Although en route services are an ARTCC function, terminal facilities may be expected to provide some en route service. There are some areas in which an ARTCC may not have adequate radar coverage or resources, and in these areas it may be necessary to expand the terminal airspace to provide service. Conversely, at locations with nonradar approach control facilities, en route facilities may have radar coverage, and better service would be provided if some approach control airspace is recalled to the ARTCC. At certain locations, the en route facility may be able to absorb all the airspace of a nonradar approach control. Prior to implementing airspace changes, en route and terminal facility managers must work together to ensure the delegated approach control airspace best meets the needs of the airspace area.

## 2−1−16. AUTHORIZATION FOR SEPARATION SERVICES BY TOWERS

**a.** Nonapproach control towers, not equipped with a tower radar display, may be authorized to provide appropriate separation between consecutive departures based upon time or diverging courses, and between arrivals and departures, provided:

**1.** A LOA exists with the IFR facility having control jurisdiction which authorizes the separation responsibilities and prescribes the procedures to be used;

**2.** The agreement has been approved by the Service Area Director of Air Traffic Operations; and

**3.** There is no delegation of airspace to the tower.

**b.** Towers equipped with certified tower radar displays (CTRD) may be authorized to provide separation services in accordance with paragraph 10−5−3, Functional Use of Certified Tower Radar Displays.

**c.** An authorization for towers to provide separation services other than those prescribed in subparagraphs a and b must be supported by a staff study prepared by the authorizing facility that addresses at least:

**1.** The proposed procedures.

**2.** Operational benefits.

**3.** Operational impact.

**4.** Why the IFR facility is unable to provide an equal or superior level of service without the delegation of airspace for separation responsibility.

**5.** Improved services to users.

**6.** Additional radar training.

**7.** The measures taken to ensure that the local controller's ability to satisfy the FAA's air traffic responsibilities regarding aircraft operating on the runways or within the surface area is not impaired.

**8.** On-site spares, maintenance support/restoration requirements.

**9.** Savings and/or additional costs.

**10.** The number of additional people required.

**d.** The staff study must, following OSG review and concurrence by the District General Manager, be forwarded to the Service Area Director of Air Traffic Operations for approval.

## 2−1−17. BIRD HAZARDS

The air traffic manager of the ATCT must establish procedures to:

**a.** Ensure that any reported bird strikes or trend toward an increase in bird activity on or around the airport served by the ATCT are reported to airport management.

**b.** Ensure that coordination will be accomplished with airport management for the possible issuance of NOTAMs when flocks of birds roost on the runways.

> ***NOTE−***
> *It is the responsibility of airport management to issue any such NOTAMs.*

**c.** Participate in local bird hazard programs when established by airport management.

## 2−1−18. PROHIBITED/RESTRICTED AREAS AND STATIONARY ALTRVS

FAA Order JO 7110.65, Air Traffic Control, prescribes separation requirements from special use, ATC-assigned airspace, and stationary ALTRVs. The intent in prescribing this separation requirement is to establish separation minima between nonparticipating aircraft and certain aircraft operations inside that airspace. Some prohibited/restricted areas and stationary ALTRVs are established for security reasons or to contain hazardous activities, and do not require a boundary separation minima. These areas may be exempted from vertical and lateral separation minima when identified by facility management. In making a determination to exempt specific areas, air traffic facility managers must be guided by the following:

**a.** Determine the exact nature of prohibited/ restricted area and stationary ALTRV utilization through direct liaison with the using agency.

**b.** Coordinate with the Service Center during the analysis of area utilization.

**c.** The following types of activity are examples of restricted area utilization which may not require application of boundary separation minima:

**1.** Explosives detonation.

**2.** Ground firing of various types.

**3.** VFR aircraft operations associated with the above but only in a safety, observer, or command and control capacity.

**4.** VFR aircraft, not directly engaging in activity for which the airspace is activated, that have been authorized by the using agency.

**d.** If area utilization varies between aircraft operations and other types of activity as described above, do not exempt the area from separation requirements unless a significant operational advantage can be obtained.

**e.** Restricted airspace with the same number but different letter suffixes are considered to be separate restricted areas. However, treat these types as one restricted area for the purpose of identifying areas for exemption from separation requirements in order to simplify application of separation minima unless a significant operational advantage can be obtained.

## 2−1−19. SPECIAL ACTIVITY AIRSPACE (SAA) SCHEDULING, COORDINATION, AND DISSEMINATION

Air Traffic Managers (ATMs) must develop procedures for SAA information and integrate them into facility Standard Operating Procedures (SOPs) and Letters of Agreement (LOAs). The following processing actions must be included in SOPs and LOAs.

**a.** SAA Scheduling/Airspace Request Processing.

**1.** Receive and process requests for SAA (e.g., times and altitudes).

**2.** Check the Special Use Airspace Management System (SAMS) or other information sources to obtain SAA schedules/changes.

**3.** SAA schedule verification/approval and conflict resolution.

**b.** SAA Implementation Coordination Process and impacted organizations.

**1.** Department of Defense (DoD) facilities.

**2.** FAA ATC facilities.

**3.** Air Traffic Control System Command Center (ATCSCC) Central Altitude Reservation Function (CARF).

**4.** Others (e.g., Department of Energy [DOE], National Aeronautics and Space Administration [NASA], and other civilian entities).

**c.** Activation/Deactivation/Change Dissemination Procedures.

**1.** Enter SAA information in FAA systems.

**2.** Methods for distributing SAA information to external ATC facilities (e.g., GI message).

**3.** Methods of intra-facility dissemination of SAA information.

**4.** Publishing to Notices to Airmen (NOTAMs), if applicable.

## 2−1−20. SPECIAL AIR TRAFFIC RULES (SATR) AND SPECIAL FLIGHT RULES AREA (SFRA)

The Code of Federal Regulations prescribes special air traffic rules for aircraft operating within the boundaries of certain designated airspace. These areas are listed in 14 CFR part 93 and can be found throughout the NAS. Procedures, nature of operations, configuration, size, and density of traffic vary among the identified areas.

**a.** Special Flight Rules Areas are areas of airspace wherein the flight of aircraft is subject to special air traffic rules set forth in 14 CFR part 93, unless otherwise authorized by air traffic control. Not all areas listed in 14 CFR part 93 are Special Flight Rules Areas, but special air traffic rules apply to all areas designated as SFRA.

***REFERENCE−***
*14 CFR Part 93, Special Air Traffic Rules.*
*P/CG Term - Special Air Traffic Rules (SATR).*
*P/CG Term - Special Flight Rules Area (SFRA).*

**b.** Each person operating an aircraft to, from, or within airspace designated as a SATR area or SFRA must adhere to the special air traffic rules set forth in 14 CFR part 93, as applicable, unless otherwise authorized or required by ATC.

## 2−1−21. ATC SECURITY SERVICES FOR THE WASHINGTON, DC, SPECIAL FLIGHT RULES AREA (DC SFRA)

ATC security services are designed to support the national security mission of the FAA and other agencies. A designated security services position has area responsibility for the purpose of security service. Such positions do not have airspace jurisdiction and are not ATC operational positions for

purposes beyond the scope of this section, for example, transfer of control, communications, point-out, etc.

**a.** The OS/CIC must report all instances of loss of radio communication, intermittent transponder or transponder/Mode C failure, the inability to security track aircraft, and other unusual IFR/VFR flight information to the Domestic Events Network (DEN) through the appropriate lines of communication. Some examples are, but are not limited to; suspicious activities, deviation from assigned course/altitude, or other equipment malfunction that may cause an aircraft to operate in an unexpected manner. Relay all known information regarding the aircraft.

**b.** ATC Security Services Position: ATC Security Services Position is responsible for providing ATC security services as defined. This position does not provide air traffic control IFR separation or VFR flight following services, but is responsible for providing security services in an area comprising airspace assigned to one or more ATC operating sectors and as such, normal airspace jurisdictional constraints do not apply.

**c.** Facility manager must:

**1.** Designate in a facility directive which existing position(s) and frequencies will be utilized to provide Security Services when required and the transition procedures from the ATC operational status to the Security Services Position.

**2.** Ensure that contingency plan parent and support procedures are updated regarding operational capability level (OCL) changes that affect Special Security Areas.

***NOTE−***
*The requirement to establish an ATC Security Services Position in addition to ATC operating position does not by itself constitute a need for additional staffing nor is its purposes intended to justify or deny facility staffing needs.*

**d.** When the Security Services position and the ATC Operating position are both staffed, detailed position responsibilities must be defined in the facility directive.

***NOTE−***
*Airspace sectorization and the workload associated with the normal use of that airspace may degrade the ability of an ATC operation position to provide security services. When this occurs, pilots must be held outside of the security services area in accordance with FAA Order JO 7110.65, paragraph 9−2−1, Aircraft Carrying Dangerous Materials, subparagaph b2.*

**1.** When an ATC Security Services Position is not separately staffed, the appropriate ATC operating position responsible for that airspace will assume the security service responsibilities.

**2.** Requests for ATC services to VFR aircraft operating within the designated area to enter positive controlled airspace must be issued by the appropriate radar position in accordance with FAA Order JO 7110.65, Air Traffic Control, and other applicable directives.

**e.** Adjacent Airport Operations.

**1.** Aircraft that will enter the designated airspace after departing controlled airports within or adjacent to security areas must be provided security services by the appropriate ATC facility having jurisdiction over the affected airspace. Procedures for handling this situation must be covered in a Letter of Agreement (LOA) or facility directive as appropriate.

**2.** Aircraft departing uncontrolled airports within security areas must be handled using procedures contained in a NOTAM or rule designating the area where ATC security services are required.

## 2−1−22. AIRPORT TRAFFIC PATTERNS

**a.** The Service Area Directors of Air Traffic Operations are the focal point to review traffic patterns. Traffic patterns at airports without an operating control tower should be established in accordance with Advisory Circular, AC 90-66, Non-Towered Airport Flight Operations.

**b.** FAA Order JO 7400.2, Procedures for Handling Airspace Matters, will be the source for handling technical matters pertaining to the establishment or the revision of traffic patterns.

## 2−1−23. OBSTACLE IDENTIFICATION SURFACES, OBSTACLE FREE ZONES, RUNWAY SAFETY AREAS, APPROACH/ DEPARTURE HOLD AREAS, AND CLEARWAYS

**a.** Facility air traffic managers must monitor planned airport construction projects, work with the regional airports office and the airport manager in determining the need to modify any taxi routes normally used, and request notification from the airport manager when adequate signage and marking are completed on the new/different taxi routes, while ensuring that local procedures provide protected airspace from adjacent, nonintersecting runways and taxiways where simultaneous use could create hazards for arriving and departing aircraft. These procedures must be reviewed whenever new runways or taxiways are programmed or whenever new/different aircraft are scheduled to provide service to the airport.

**b.** Ensure that aircraft on the ground do not penetrate marked Obstacle Identification Surfaces, Obstacle Free Zones, Runway Safety Areas, Approach/Departure Hold Areas, Clearways, or other airspace designed to provide protection for departures and arrivals.

**c.** At locations where potential for conflict exists, take action to rectify the situation by developing proposed solutions and establishing local procedures to define conditions when the Approach/ Departure Hold Areas and other surfaces must be protected. These procedures must be included in a facility directive and the signage at the intended hold position must be consistent with the phraseology identified in FAA Order JO 7110.65, paragraph 3−7−2, Taxi and Ground Movement Operations.

**d.** ATMs must consult with the airport authority, Flight Standards, Airports, and the Regional Runway Safety Program Manager (RSPM) when developing proposed solutions and establishing local procedures. The RSPM will assist the ATM, as needed, in initiating contact with Flight Standards and Airports.

***REFERENCE−***
*P/CG Term – Approach/Departure Hold.*

## 2−1−24. FACILITY IDENTIFICATION

**a.** TERMINAL/EN ROUTE: Requests for permanent changes or waivers to facility identification require that the ATM document the benefit to the Agency and the customer. The ATM must submit the request through the District General Manager to the Service Area Director of Air Traffic Operations. The Service Area Director of Air Traffic Operations has approval

authority. Large, combined, or consolidated facilities may be authorized multiple identification nomenclature at the discretion of the Service Area Director of Air Traffic Operations.

***REFERENCE−***
*FAA Order JO 7110.65, Para 2−4−19, Facility Identification.*

**b.** FSS: Requests for permanent changes or waivers to facility identification require that the ATM document the benefit to the Agency and the customer. The Flight Service Safety and Operations Group must review the request and forward its recommendation to the Director of Flight Service. The Director of Flight Service has approval authority.

***REFERENCE−***
*FAA Order JO 7110.10, Para 2−5−2, Facility Identification.*

**c.** If a facility identification change is approved, the ATM must ensure all applicable facility directives, LOAs, and aeronautical publications reflect the new identification. A Letter to Airmen must be published notifying users of the change.

## 2−1−25. DISPOSITION OF OBSOLETE CHARTS

**a.** Obsolete charts may only be disposed of by destroying, including recycling, or by giving to flight schools and other training institutions where the charts are to be used only for training in the classroom. Under no circumstances should obsolete charts be given to pilots or the general public, regardless if they are marked obsolete or not.

**b.** There are hundreds of changes that appear on each new edition of a chart. When pilots are given obsolete charts they are not aware of critical changes that have occurred. Further, the use of such a chart could result in a Code of Federal Regulations (CFR) violation or an accident which would have serious legal implications for the agency.

## 2−1−26. OUTDOOR LASER DEMONSTRATIONS

FAA Order JO 7400.2, Procedures for Handling Airspace Matters, Chapter 29, Outdoor Laser Operations, contains procedures for processing outdoor laser demonstration requests.

## 2−1−27. COMBINE/RECOMBINE AN ATCT/TRACON

Combining an ATCT/TRACON requires a staff study from the facility explaining the benefit to the agency and the customer. The staff study must be routed through the General Manager, Service Area Director of Air Traffic Operations, and Director of Strategic Operations to the ATO Chief Operating Officer for approval.

## 2−1−28. SUBMISSION OF AIR TRAFFIC CONTROL ASSIGNED AIRSPACE (ATCAA) DATA

Air Traffic Service Area offices submit data on all ATCAAs used on a continuing/constant basis, and any subsequent changes to the ATCAA database to System Operations Airspace and Aeronautical Information Management for the purpose of updating the Special Use Airspace Management System (SAMS) and Aeronautical Information System. Include the following as applicable:

**a.** Transmittal memorandum containing a brief overview of the ATCAA, and/or changes to, FAA headquarters, and System Operations Airspace and Aeronautical Information Services.

Summarize the ATCAAs or any amendments made to ATCAAs including additional changes, etc.

**b.** A separate attachment that contains a description of the area to include latitude/longitude points, boundaries, altitudes, times, controlling agency, using agency, and any other relative information.

***NOTE−***
*If only part of the description of an existing area is being amended, the attachment should show just the changed information rather than the full legal description.*

**c.** A sectional aeronautical chart depicting the final boundaries of the proposed area, including any subdivisions.

**d.** Any other information that should be considered by FAA headquarters.

***NOTE−***
*ATCAA descriptive data will normally be submitted 9 weeks prior to the requested/required airspace effective date.*

## 2−1−29. SUBMISSION OF SUA AND PAJA FREQUENCY INFORMATION

The Aeronautical Information Services maintain a national database of Special Use Airspace (SUA) and Parachute Jump Area (PAJA) controlling sector contact information. The database is used to publish frequencies for pilots to obtain status information for SUAs and PAJAs. Facility managers should ensure that the following information is forwarded to Aeronautical Information Services:

**a.** Contact frequencies for existing SUAs and PAJAs within your area of jurisdiction.

**b.** Any changes to contact frequencies for existing SUAs and PAJAs within your area of jurisdiction.

**c.** Contact frequencies for any new SUAs or PAJAs within your area of jurisdiction.

## 2−1−30. REPORTING UNAUTHORIZED LASER ILLUMINATION OF AIRCRAFT

Consistent with the provisions of Air Traffic Service, Duty and Operational Priorities; all Air Traffic Control facilities, FAA Contract Towers**,** and Flight Service Stations must report unauthorized laser illumination incidents as follows:

**a.** Contact local law enforcement or the Federal Bureau of Investigation (FBI) as soon as possible providing location, description, and other pertinent information regarding the incident;

**b.** Report the incident to the Domestic Events Network (DEN) Air Traffic Security Coordinator (ATSC);

**c.** Record the incident via the Comprehensive Electronic Data Analysis and Reporting (CEDAR) program or, if CEDAR is not available, via the appropriate means, in accordance with FAA Order JO 7210.632, Air Traffic Organization Occurrence Reporting;

**d.** Provide the following information when reporting the incident via the DEN and CEDAR:

**1.** UTC date and time of event.

**2.** Call Sign, or aircraft registration number.

**3.** Type of aircraft.

**4.** Nearest major city.

5. Altitude.
6. Location of event (e.g., latitude/longitude and/or Fixed Radial Distance (FRD)).
7. Brief description of the event.
8. Any other pertinent information.
9. Law enforcement contact information.

***NOTE–***
*Facilities without direct access to the DEN should forward the information through the Washington Operations Center Complex (WOCC) to the DEN.*

***REFERENCE–***
*FAA Order JO 7110.65, Para 2−9−3, Content.*
*FAA Order JO 7110.65, Para 10−2−14, Unauthorized Laser Illumination of Aircraft.*

## 2−1−31. REPORTING SUSPICIOUS AIRCRAFT/PILOT ACTIVITIES

**a.** Facility air traffic managers must ensure that the operations manager, operations supervisor, or controller-in-charge promptly reports any suspicious aircraft/pilot activities to the National Tactical Security Operations (NTSO) Air Traffic Security Coordinator (ATSC) team on the Domestic Events Network (DEN).

***REFERENCE–***
*FAA Order JO 7110.65, Para 2−1−2, Duty Priority.*

***NOTE–***
*Additional information for ATC on identifying suspicious situations is located in FAA Order JO 7610.4, Sensitive Procedures and Requirements for Special Operations, Chapter 7, Section 3, Suspicious Aircraft/Pilot Activity.*

**b.** The NTSO ATSC must be notified as soon as possible of any suspicious activity, including the following:

1. Radio communications are lost or not established. Consider any IFR aircraft that is NORDO for more than 5 minutes as suspicious. This includes all aircraft (for example, general aviation, law enforcement, military, MEDEVAC) regardless of transponder code. ATC actions taken to establish communications with the NORDO aircraft must be reported to the NTSO ATSC.
2. An aircraft fails to turn on or changes from its assigned transponder beacon code (other than approved emergency/radio failure beacon code).
3. An aircraft deviates from its assigned route of flight/altitude and refuses to return to it when instructed.
4. Phantom or deceptive transmissions such as impersonating a pilot or controller relaying ATC instructions, or unusual questions about military activities or sensitive/secure areas.

***REFERENCE–***
*FAA Order JO 7110.65, Para 2−4−6, False or Deceptive Communications.*

5. Inconsistent or abnormal repetitive aircraft activity such as: flights over/near sites of interest or prohibited/restricted airspace; unanticipated speed or rate of climb/descent; or missed crossing restrictions or reporting points.
6. Pilot reports flight difficulties with no eventual explanation or response to ATC.
7. Any air carrier, cargo, or scheduled air taxi that requests to divert from its original destination or route for any reason other than weather or routine route changes should be considered by ATC as suspicious activity.
8. Any general aviation arriving from an international departure point that requests to divert from the original U.S. destination airport.
9. Other general aviation and non-scheduled air taxi or charter services that request to divert from the original destination or route for any unusual reason (e.g., reasons other than weather, company request, passenger request, mechanical, etc.) should be considered by ATC as suspicious activity.
10. All reported or identified balloon activities of unknown origin or intent that are near, entering or within U.S. territorial airspace, and/or other balloon flights that deviate from coordinated mission parameters.
11. Any other situation that may indicate a suspicious aircraft.

***REFERENCE−***
*FAA Order JO 7210.3, Para 2−1−34, Reporting Suspicious UAS Activities.*

12. Any situation or pilot activity (for example, background noise, change in pilot's voice characteristics, etc.) that may indicate a hijacked aircraft. Due to air to ground communications capabilities (e.g., data links, cellular phones), controllers may learn of a hijack situation from alternate sources (for example, airline air operations center) rather than from the aircrew itself.

## 2−1−32. REPORTING DIVERTED AIRCRAFT ARRIVING FROM INTERNATIONAL LOCATIONS

Any aircraft departing from an international location that diverts to a U.S. Airport, or is diverted and lands at a U.S. airport different from the original U.S. destination airport, must be reported to the Domestic Events Network (DEN) Air Traffic Security Coordinator (ATSC). In addition, any diverted aircraft that ATC identifies as suspicious (in accordance with paragraph 2−1−31) must be promptly reported to the DEN ATSC.

***NOTE−***
*Weather, airport/runway conditions, or other unforeseen reasons may necessitate an aircraft to divert or be diverted on short notice. Reporting via the DEN assists U.S. Customs and Border Protection (CBP) with real-time notification of the airport change.*

## 2−1−33. REPORTING INOPERATIVE OR MALFUNCTIONING ADS-B TRANSMITTERS

FAA Flight Standards Service (AFS), Safety Standards Division is responsible for working with aircraft operators to correct ADS-B malfunctions. Reports of inoperative or malfunctioning ADS-B transmitters must be forwarded to adsbfocusteam@faa.gov and must include the following information:

**a.** The aircraft identification used for the flight;
**b.** Location of the occurrence;
**c.** Date and time of the occurrence (UTC); and
**d.** Any additional information or observations that may be pertinent or helpful to AFS in their investigation.

***NOTE−***
*The intent of this paragraph is to capture ADS-B anomalies observed by ATC, such as errors in the data (other than Call Sign Mis-Match events, which are detected and reported to AFS automatically) or instances when civil ADS-B transmissions would normally be expected but are not received (e.g., ADS-B transmissions were observed on a previous flight leg).*

***REFERENCE−***
*FAA Order JO 7210.3, Para 5−4−2, Requests for Deviation from ADS-B Out Requirements.*
*FAA Order JO 7210.3, Para 5−4−9, ADS-B Out OFF Operations.*
*FAA Order JO 7110.65, Para 5–2–22, Inoperative or Malfunctioning ADS-B Transmitter.*
*FAA Order JO 7110.65, Para 5–2–23, ADS-B Alerts.*
*FAA Order JO 7110.65, Para 5–2–24, ADS-B Out OFF Operations.*

## 2−1−34. REPORTING SUSPICIOUS UAS ACTIVITIES

Consistent with the provisions of Air Traffic Service, Duty, and Operational Priorities, all Air Traffic Control facilities, FAA Contract Towers, and Flight Service Stations must report suspicious UAS. Suspicious UAS operations may include operating without authorization; loitering in the vicinity of sensitive locations (e.g., national security and law enforcement facilities and critical infrastructure); or disrupting normal air traffic operations resulting in runway changes, ground stops, pilot evasive action, etc. Reports of a UAS operation alone do not constitute suspicious activity. Development of a comprehensive list of suspicious activities is not possible due to the vast number of situations that could be considered suspicious. ATC must exercise sound judgment when identifying situations that could constitute or indicate a suspicious activity.

**a.** Notify local authorities (e.g., airport/local law enforcement; airport operations; and/or the responsible Federal Security Director Coordination Center) in accordance with local facility directives, including Letters of Agreement with the airport owner/operator.
**b.** Report the incident to the Domestic Events Network (DEN) Air Traffic Security Coordinator (ATSC).
**c.** Record the incident via the Comprehensive Electronic Data Analysis and Reporting (CEDAR) program or, if CEDAR is not available, via the appropriate means, in accordance with FAA Order JO 7210.632, Air Traffic Organization Occurrence Reporting.
**d.** Notify the air traffic manager.
**e.** Provide the following information when reporting the incident via the DEN and CEDAR:
  **1.** UTC date and time of incident.
  **2.** Reporting source(s).
  **3.** Position: fixed radial distance, bearing and distance, landmark, altitude, and heading.
  **4.** Flight behavior (i.e., loitering, heading toward the airport).
  **5.** UAS type (e.g., quadcopter, fixed wing), if known.

6. Report operational impacts in accordance with paragraph 21−4−1, Domestic Events Network (DEN), of this order.

**f.** Attempt to obtain additional information relevant to the suspicious UAS including:

1. Size and color.
2. Number of reported/sighted UAS.
3. Location of the person(s) operating the UAS.
4. Remote pilot information including name, address, and phone number, if obtained by local law authorities or other verifiable means.

**g.** Facilities must maintain a checklist that provides guidance on reporting suspicious UAS activities. At a minimum, this checklist must be available to Operations Supervisor (OS), Controller-in-Charge (CIC), and Operations Manager (OM) personnel. Facilities must consider the following for inclusion on the checklist:

1. Items a through f of this paragraph.
2. Contact information necessary for completing the notification requirements of this paragraph.
3. Local factors that may be necessary in determining if an operation is suspicious (e.g., location of critical infrastructure).
4. A requirement to notify the Regional Operations Center (ROC) for security-related events that may generate significant media or congressional interest as required by FAA Order JO 1030.3.
5. Any other information as deemed necessary by the air traffic manager.

***REFERENCE−***
*FAA Order JO 7110.65, Para 2−1−2, Duty Priority.*
*FAA Order JO 7610.4, Para 7−3−1, Application.*
*FAA Order JO 1030.3, Initial Event Response, Chapter 2, Upward Notification.*
*FAA Order JO 7210.632, Air Traffic Organization Occurrence Reporting.*
*Advisory Circular 91-57, Exception for Limited Recreational Operations of Unmanned Aircraft.*
*P/CG Term - Suspicious UAS.*

## 2−1−35. USE OF UAS DETECTION SYSTEMS

Airport owners/operators or local enforcement may contact ATC facilities to coordinate their acquisition, testing, and operational use of UAS detection systems. These systems and how they are used may have implications for FAA regulations for airports; potentially affect ATC and other Air Navigation Services systems (e.g., RF interference with radars); and/or trigger airport responses (e.g., closing runways), which must be coordinated with ATC.

**a.** Requests by airport authorities for ATC facility cooperation/authorization in the acquisition, testing, or use of UAS detection systems will be referred to the appropriate FAA Airports District Office (ADO). The ADO will initiate internal FAA coordination, including reviews by the responsible ATO offices and facilities.

**b.** ATC facilities must not enter into any verbal or written agreement with a government entity, commercial vendor, or an airport authority regarding UAS detection systems with detection-only capabilities without prior coordination and approval from ATO System Operations

Security, UAS Security and C-UAS Integration (AJR-26), via email at 9-AJR-UAS-Ops-Security@faa.gov.

***NOTE–***

1. *UAS detection systems do not include the interdiction components that characterize UAS mitigation technologies, also referred to as Counter Unmanned Aircraft System (C-UAS) technologies. Only select Federal Departments and Agencies have the legal authority to use C-UAS systems in the NAS. The FAA does not support the use of this technology by other entities without this legal authorization.*
2. *The FAA does not advocate the use of UAS detection in the airport environment until appropriate policy and procedures are developed.*

## 2–1–36. USE OF COUNTER UNMANNED AIRCRAFT SYSTEMS (C-UAS)

Select Departments and Agencies, which have been legally authorized to use counter unmanned aircraft systems (C-UAS), are operationally using this technology in the NAS to protect certain facilities and assets. C-UAS operations are capable of disabling, disrupting, or seizing control of a suspicious UAS, and may integrate or be linked to UAS detection capabilities. These Departments and Agencies are required to coordinate with the FAA to assess and mitigate risks to the NAS posed by C-UAS operations. C-UAS deployment may affect ATC and other Air Navigation Services systems (e.g., radio frequency (RF) interference with radars), which could impact other air traffic in the vicinity including legitimate, compliant UAS flights. Additionally, the C-UAS response may involve the deployment of ground/airborne operational security assets, which must be coordinated with ATC.

***NOTE–***

*Only select Federal Departments/Agencies have been legally authorized to utilize C-UAS to cover certain facilities and assets, and with coordination with the FAA to address risks to the NAS. Risk mitigation for the NAS typically includes notification to potentially affected ATC facilities.*

**a.** ATO System Operations Security, UAS Security and C-UAS Integration (AJR-26), is responsible for coordinating known C-UAS activities with affected ATC facilities, as needed.

**b.** C-UAS operations performed by interagency partners are law enforcement sensitive and/or classified. The Air Traffic Manager must ensure that controllers and other facility personnel maintain the security of C-UAS operations as follows:

1. C-UAS communications must be made via landline and not be broadcast over radios, shout lines, or direct dial lines to air traffic controllers on position.
2. Personnel must only discuss C-UAS operations with FAA personnel (e.g., DEN ATSC, overlying TRACON or ARTCC), airport operations, or law enforcement.

**c.** ATC facilities must not enter into any verbal or written agreement with a government entity, commercial vendor, or an airport authority, regarding C-UAS activities without prior coordination and approval from ATO System Operations Security, UAS Security and C-UAS Integration (AJR-26).

**d.** Inquiries may be referred to UAS Security and C-UAS Integration (AJR-26) via email at 9-AJR-UAS-Ops-Security@faa.gov.

## 2−1−37. REPORTING DEATH, ILLNESS, OR OTHER PUBLIC HEALTH RISK ON BOARD AIRCRAFT

**a.** When an air traffic control facility is advised of a death, illness, and/or other public health risk, the following information must be forwarded to the DEN:

**1.** Call sign.
**2.** Number of suspected cases of illness on board.
**3.** Nature of the illness or other public health risk, if known.
**4.** Number of persons on board.
**5.** Number of deaths, if applicable.
**6.** Pilot's intent (for example, continue to destination or divert).
**7.** Any request for assistance (for example, needing emergency medical services to meet the aircraft at arrival).

***NOTE−***

*1. If the ATC facility is not actively monitoring the DEN or does not have a dedicated line to the DEN, they must call into the DEN directly via 844-432-2962 (toll free).*

*2. Except in extraordinary circumstances, such as a situation requiring ATC intervention, follow-on coordination regarding the incident will not involve ATC frequencies.*

*3. The initial report to a U.S. ATC facility may be passed from a prior ATC facility along the route of flight.*

**b.** Once notification of an in-flight death, illness, and/or other public health risk is provided by an ATC facility, the DEN Air Traffic Security Coordinator must ensure the Centers for Disease Control and Prevention (CDC) Emergency Operations Center (EOC) receives the following information:

**1.** Call sign.
**2.** Number of suspected cases of illness on board.
**3.** Nature of the illness or other public health risk, if known.
**4.** Number of persons on board.
**5.** Number of deaths, if applicable.
**6.** Departure airport.
**7.** Arrival airport.
**8.** Estimated time of arrival.
**9.** Pilot's intent (for example, continue to destination or divert).
**10.** Any request for assistance (for example, a need for emergency medical services to meet aircraft at arrival).

***REFERENCE−***

*FAA Order JO 7110.65, Para 10−2−19, Reporting Death, Illness, or Other Public Health Risk on Board Aircraft.*

## 2−1−38. OPPOSITE DIRECTION OPERATIONS

Opposite Direction Operations consists of IFR/VFR Operations conducted to the same or parallel runway where an aircraft is operating in a reciprocal direction of another aircraft arriving, departing, or conducting an approach.

***REFERENCE−***
*FAA Order JO 7110.65, Para 1−2−2, Course Definitions.*

**a.** Each facility must:

**1.** Determine the operational feasibility of conducting opposite direction operations.

**2.** At a minimum, develop the opposite direction operations procedures necessary to accommodate aircraft that have an operational need or receiving operational priority.

***REFERENCE−***
*FAA Order JO 7110.65, Para 2−1−4, Operational Priority.*

**b.** For aircraft receiving IFR services that are conducting opposite direction operations to the same runway, facility directives must:

**1.** Define minimum cutoff points identified by distance or fixes between:

**(a)** An arrival and a departure.

**(b)** An arrival and an arrival.

**2.** Specify that use of Visual Separation is not authorized, except at those unique locations that are operationally impacted by terrain and when issued a Letter of Authorization by the Service Area Director of Operations.

**3.** Require traffic advisories to both aircraft.

***EXAMPLE−***
*OPPOSITE DIRECTION TRAFFIC (distance) MILE FINAL, (type aircraft). OPPOSITE DIRECTION TRAFFIC DEPARTING RUNWAY (number), (type aircraft). OPPOSITE DIRECTION TRAFFIC, (position), (type aircraft).*

**4.** Require the use of a memory aid.

**5.** Prohibit opposite direction same runway operations with opposing traffic inside the applicable cutoff point unless an emergency situation exists.

**6.** Specify the position/facility responsible for ensuring compliance with cutoff points between aircraft conducting opposite direction operations.

**7.** Contain the following minimum coordination requirements:

**(a)** Define the facility/position that is responsible for initiating coordination.

**(b)** All coordination must be on a recorded line and state “Opposite Direction.” Initial coordination must include call sign, type, and arrival or departure runway.

**c.** The cutoff points established under subparagraph b1 must ensure that required lateral separation exists:

**1.** When a departing aircraft becomes airborne and has been issued a turn to avoid conflict; or

**2.** When the first aircraft has crossed the runway threshold for opposite direction arrivals.

**3.** If the conditions in subparagraphs c1 and c2 are not met, facility directives must require action be taken to ensure that control instructions are issued to protect the integrity of the cutoff points.

**d.** At a minimum, the following must be considered when developing cutoff points:

**1.** Aircraft performance.
**2.** Type of approach.
**3.** Operational position configuration.
**4.** Runway configuration.
**5.** Weather conditions.
**6.** Existing facility waivers.

**e.** For aircraft receiving IFR services that are conducting opposite direction operations to parallel runways regardless of the distance between centerlines, facility directives must:

**1.** Ensure that a turn away from opposing traffic is issued when opposing traffic is inside the cutoff points defined in b1 for the other runway.
**2.** Specify that use of Visual Separation is authorized once a turn away from opposing traffic is issued.

***REFERENCE−***
*FAA Order JO 7110.65, Para 7−2−1, Visual Separation.*

**3.** Require traffic advisories to both aircraft.

***EXAMPLE−***
*OPPOSITE DIRECTION TRAFFIC (distance) MILE FINAL, (type aircraft). OPPOSITE DIRECTION TRAFFIC DEPARTING RUNWAY (number), (type aircraft). OPPOSITE DIRECTION TRAFFIC, (position), (type aircraft).*

**4.** Require the use of a memory aid.
**5.** Contain the following minimum coordination requirements:

**(a)** Define the facility/position that is responsible for initiating coordination.
**(b)** All coordination must be on a recorded line and state “Opposite Direction.” Initial coordination must include call sign, type, and arrival or departure runway.
**(c)** At those locations that routinely conduct Opposite Direction Operations due to noise abatement at night and when issued a Letter of Authorization by the Service Area Director of Operations, the provisions of paragraph e5 above are not required.

**f.** For VFR aircraft that are conducting opposite direction operations to same or parallel runways, facility directives must contain procedures requiring the use of the following, including but not limited to:

**1.** Ensuring departing VFR aircraft are issued a turn to avoid conflict with opposing IFR/VFR traffic.
**2.** Traffic advisories to both aircraft.
**3.** State the phrase “opposite direction” if coordination is required.
**4.** Memory Aids.

**g.** All facility directives and letters of agreement addressing opposite direction operations must be approved by the Service Area Director of Operations.

***REFERENCE−***
*FAA Order JO 7110.65, Para 3−8−4, Simultaneous Opposite Direction Operation.*

## 2−1−39. SPECIAL INTEREST SITES

**a.** Supervisory/CIC personnel receiving any reports or information regarding unusual aircraft activities in the vicinity of special interest sites such as nuclear power plants, power plants, dams, refineries, etc., must immediately notify local law enforcement authorities of these reports/information and notify the overlying air traffic facility of any of these reports and the action taken. Supervisory/CIC personnel may receive reports/information from the Nuclear Regulatory Commission or other sources.

**b.** Air traffic facilities must promptly advise the Domestic Events Network (DEN) of any actions taken in accordance with this paragraph.

**c.** Individual facilities must determine which special interest sites, if any, should be displayed on maps, charts, and video displays.

## 2−1−40. TRANSPORTATION SECURITY ADMINISTRATION AND FAA JOINT OPERATING PROCEDURES

The requirements for Air Traffic Managers (ATM) to follow during security events, according to the Transportation Security Administration (TSA) and the FAA Joint Operating Procedures Agreement, are as follows:

**a.** If the TSA Federal Security Director (FSD) informs the ATM of an imminent and potentially life threatening security situation, the ATM, consistent with safety, must comply with the FSD's requested operational response. As soon as possible after action is taken, the ATM must contact the Domestic Events Network (DEN) Air Traffic Security Coordinator (ATSC) and report any action taken.

**b.** The above guidance does not preclude the ATM from taking immediate action in the event the ATM learns of an imminent and potentially life threatening security situation. In such situations, as soon as possible, the ATM must notify the DEN ATSC and the FSD of the situation, along with any action taken.

***NOTE−***
*For information concerning reporting of suspicious activities around airports and FAA facilities, see JO 7210.3, paragraph 2−7−6, Suspicious Activities Around Airports or FAA Facilities.*

**c.** For any security situation identified by TSA, in addition to those that are “imminent and life threatening,” the ATM must contact the DEN ATSC and the FSD to report the situation.

**d.** At airports that have both an FAA and TSA presence, the ATM and FSD must meet at least every 6 months, or within sixty days of a new ATM or FSD entering into their position, to exchange/update contact information and to discuss security-related information and plans of mutual interest.

**e.** The responsibilities outlined in this paragraph may be delegated as necessary.

## 2−1−41. DISPLAYING SPACE LAUNCH AND REENTRY AREAS ON THE SITUATION DISPLAY

Facility ATMs must develop a means to ensure that volumes of airspace depicted on an operational situation display for space launch and reentry operations are verified to be accurate.

## 2−1−42. DISPLAYING DEBRIS RESPONSE AREAS ON THE SITUATION DISPLAY

Facility ATMs must develop a means to ensure that, when possible, debris response areas (DRA) are displayable on operational situation displays at the start of a launch or reentry window.

> ***NOTE−***
> *The intent of this requirement is to allow controllers to quickly display a DRA if it is activated. If technical limitations prevent the DRA from being drawn on the operational situation display in advance of a space operation, such as if the DRA would cover an entire sector or facility, then an alternative means of providing the needed geographic area of the DRA to the controller must be used. This could be accomplished using the TSD, a paper map, or some other means.*

## 2−1−43. ACCESS TO FALCON REPLAY SYSTEM

Air traffic managers (ATM) must assign access to the Falcon Replay System with voice for:

**a.** Facility management and Quality Control personnel.
**b.** Training Team Members.
**c.** Local Safety Council Members.
**d.** Controllers-in-Charge / National Traffic Management Specialists-in-Charge / Traffic Management Coordinators-in-Charge / NOTAM Specialists-in-Charge.
**e.** Certified Professional Controllers, Certified Professional Controllers-in-Training, Traffic Management Coordinators, and Traffic Management Coordinators-in-Training.
**f.** Other facility personnel deemed appropriate by the ATM or their designee.

## 2−1−44. OBTAINING PILOT CONTACT INFORMATION

There are times when it is necessary for ATC to obtain pilot contact information, including urgent or emergency situations where acquiring this information may be time sensitive. If contacting the pilot of an aircraft is necessary, utilize one of the following options or any other methods appropriate for the situation:

**a.** Use ERAM/FDIO entries to display or print flight plan item 18/ORGN or item 18/OPR.
**b.** Use Aeronautical Information System Replacement (AISR).
**c.** Contact the appropriate FSS.
**d.** Contact the appropriate ARTCC Flight Data position.
**e.** Contact the aircraft's departure or destination airport authority. Local airport authorities may have access to tenant or transient pilot contact information.

# Section 2. Responsibilities

## 2−2−1. LEGAL LIABILITIES OF PERSONNEL

**a.** Guidelines for representing Federal employees named in tort claims are promulgated by the Department of Justice (28 CFR part 50).

**b.** When warranted, disciplinary action must be taken without regard to possible adverse effects on the FAA position in subsequent lawsuits, enforcement proceedings, or similar actions.

**c.** In the case of an accident or incident resulting in a National Transportation Safety Board (NTSB) or a military investigation or hearing, it may be necessary to delay disciplinary action until the determination of the investigation or hearing. This is done only to ensure that all facts are known before final action is taken. The determination in such investigations must not be used as a basis for initiating disciplinary action.

## 2−2−2. JOB REQUIREMENTS

Each person must be familiar with the duties and responsibilities of his/her own position, those of his/her subordinates, if applicable, and to a limited extent, with those of his/her immediate supervisor. Each specialist, when designated, must supervise and assist in training other specialists as appropriate.

## 2−2−3. POSITION RESPONSIBILITY

**a.** Air traffic managers must ensure that only one certified air traffic controller is signed on and responsible for each open position, to include consolidated positions, at any given time. At the ATCSCC, the national traffic management officer (NTMO), national traffic management specialist-in-charge (NTMSIC), and national traffic management specialist (NTMS) work as a team in order to accomplish the traffic management goals of an entire operational area. Due to the management functionality involved in overseeing the NAS, more than one NTMO, NTMSIC, and/or NTMS can be signed on and responsible for an open and/or consolidated control position.

***NOTE−***
*When a developmental and an instructor are both signed on at a position, the instructor is responsible for all activity at that position.*

**b.** Anytime an operational area is operated with one air traffic control specialist (ATCS), the following procedure must be followed: Prior to leaving the operational area, for any reason, the ATCS must advise all applicable facilities (tower, approach control, and/or center) that they are leaving the operational area and must advise the same facility/facilities upon return. Leaving the operational area should only be done during periods when the controller is not responsible for any aircraft.

**c.** Aeronautical Information System Replacement (AISR). Assign AISR responsibilities to a specific position of operation at facilities that have AISR entry responsibilities. These must include updating AISR messages, verifying the accuracy and completeness of entered data, and disseminating messages to pertinent positions of operation.

## 2−2−4. DUTY FAMILIARIZATION AND THE TRANSFER OF POSITION RESPONSIBILITY

**a.** Air traffic managers must determine which sectors or positions require "duty familiarization" for each shift and must provide a facility directive which specifies all sources of operational information which must be read and/or discussed as a part of the familiarization. Familiarizations should be scheduled within an 8-hour shift to the extent possible.

**b.** All operational personnel, with the exception of Flight Service Specialists and those assigned to the David J. Hurley Air Traffic Control System Command Center, prior to working their first control position of the duty day, must view and listen to the recorded Center Weather Service Unit (CWSU) briefing, when available.

**1.** ATMs must designate, through a facility directive, the procedures to have CWSU recorded weather briefings available for viewing and listening by operational personnel.

**2.** Viewing this briefing does not eliminate the responsibility to get a complete position relief briefing (including weather) when assuming a control position.

**c.** Air traffic managers must determine which sectors or positions must maintain operational continuity through a transfer of position responsibility and must:

**1.** Review each sector or position and provide a tailored checklist which lists the equipment and the operational conditions which are likely to be a factor at that position. Checklists must be reviewed annually to ensure the sector/position checklist items are current.

**(a)** Items which should be included on the checklist, if relevant, are:

**(1)** STATUS INFORMATION AREAs (SIAs).

**(2)** EQUIPMENT: NAVAIDs, Radar(s), Radios, Automated Weather Observing Systems, etc.

**(3)** AIRPORT CONDITIONS/STATUS.

**(4)** AIRPORT ACTIVITIES; e.g., snow removal, vehicles on runway, etc.

**(5)** ALTIMETER/TRENDS.

**(6)** WEATHER/TRENDS.

**(7)** FLOW CONTROL.

**(8)** SPECIAL ACTIVITIES; e.g., restricted/warning areas in use, airshows, flight checks, new procedures, etc.

**(9)** SPECIAL INSTRUCTIONS/RESTRICTIONS; e.g., due to adjacent position training, nonstandard staffing/configuration, etc.

**(10)** STAFFING.

**(11)** TRAINING IN PROGRESS.

**(12)** VERBALLY STATE RUNWAY STATUS; unavailable, closed, occupied.

**(13)** PERTINENT OPERATIONAL NOTAMs, UNLESS PREVIOUSLY COVERED.

***NOTE-***
*Air traffic managers at facilities equipped with automated NOTAM systems, such as the Aeronautical Information System Replacement (AISR), must designate those systems as the primary source of NOTAM information.*

**(14)** Non-RVSM aircraft operations.

**(15)** COMMUNICATION STATUS and TRAFFIC.

**(b)** The checklist for a specific position need not include those items which are incorporated into the SIAs used by that position.

**(c)** SIAs, when available, must be the first item listed on the position checklist.

**(d)** When traffic is included on the position checklist, it must be the last item listed. When relevant to the position, include the following sub-items under the traffic heading so that they will not be inadvertently overlooked:

**(1)** Special Activity Aircraft; e.g., aircraft operating in a special use area/airspace, helicopters on prescribed routes, etc.

**(2)** Point out aircraft.

**(3)** Holding aircraft.

**(4)** Primary targets with no associated alphanumerics.

**(5)** Aircraft handed off but still in the airspace.

**(6)** Aircraft released but not yet airborne.

**(7)** Nonradar operations.

**(8)** VFR advisory aircraft.

**(9)** Aircraft standing by for service.

**(10)** Coordination agreements with other positions.

**(11)** Special problems, requests, or instructions.

**(12)** UAS activity of operational importance.

**(e)** Air traffic managers may *increase* the number of items and/or the level of detail of the position relief checklists as they deem necessary.

**2.** Unless other mitigations are in place, provide SIAs from which specialists may obtain the operational information and airport conditions relevant to the position being worked. The SIAs may consist of a single or any combination of informational sources where status information can be recorded and displayed. These areas may include, but are not limited to, Information Display System (IDS), facility/area/position status boards, weather status boards, "hot item" binders, clip board information sheets, and designated areas for written notes.

**(a)** Prioritize airport conditions/status changes that have occurred within the last 24 hours.

**(b)** Airport conditions information, in the provision of approach control services, does not include the following:

**(1)** The airport surface environment other than the landing area(s) (e.g., TAXIWAY, APRON or SERVICE keyword NOTAMs).

**(2)** Obstruction information (e.g., OBST NOTAMs) for aircraft that will be cleared for an instrument approach.

**(3)** Information pertaining to cold temperature compensation.

***REFERENCE-***
*FAA Order JO 7110.65, Para 4–7–12, Airport Conditions.*

**3.** Designate, through a facility directive, the position(s) responsible for ensuring the accuracy of the various items contained on the SIAs. The designated position(s) should serve as the focal point for the type of status information for which they are responsible. Except for

the accuracy of written notes located at the position, this should not be a specialist having primary and direct responsibility for providing service or separation to aircraft.

**d.** To the maximum extent practicable the position relief briefing must be recorded.

**e.** Specialists staffing the positions identified under subparagraph 2-2-4a, which require continuity of operation, must conduct a position relief briefing in accordance with FAA Order JO 7110.65, Air Traffic Control, Appendix A, Standard Operating Practice (SOP) for the Transfer of Position Responsibility.

**f.** Responsibilities:

**1.** The specialist being relieved must be responsible for ensuring that any pertinent status information of which he/she is aware is relayed to the relieving specialist and is either:

**(a)** Accurately displayed on the SIA/s for which he/she has responsibility, or

**(b)** Relayed to the position having the responsibility for accurately displaying that status information.

**2.** The relieving specialist must be responsible for ensuring that any unresolved questions pertaining to the operation of the position are resolved prior to accepting responsibility for the position.

**3.** The relieving specialist and the specialist being relieved must share equal responsibility for the completeness and the accuracy of the position relief briefing.

***NOTE-***
*The sharing of this responsibility means that the specialist being relieved is obligated to provide a complete, accurate briefing, and the relieving specialist is obligated to ensure that a briefing takes place and is to his/her total satisfaction.*

**4.** The specialists engaged in a position relief must conduct the relief process at the position being relieved unless other procedures have been established and authorized by the facility air traffic manager.

## 2−2−5. OPERATING INITIALS

**a.** Specialists must be assigned two-letter operating initials to identify the employee for record purposes. When all combinations of letters are depleted, duplicate initials may be assigned to personnel working in different areas of specialization.

**b.** Unless signatures are specifically requested, use assigned operating initials for all operating forms, interphone contacts, marking of recorder audio files, and other records.

**c.** A current file of assigned initials must be maintained.

## 2−2−6. SIGN IN/OUT AND ON/OFF PROCEDURES

The following is applicable to all FAA air traffic facilities, but does not apply to FAA contract facilities.

Cru-X/ART is the official time and attendance system for both signing in/out for a shift and on and off positions, not paper logs nor Common ARTS/ERAM/NTML/FSS or other Agency or local programs. Facilities may use Common ARTS/ERAM/NTML/FSS to sign on positions for position preference settings; however, these systems/programs must not be used for official time and attendance nor position times. Duplicate paper logs for sign in/out of the shift and on and off positions must not be utilized during normal daily operations.

**a.** FAA operations managers-in-charge (OMIC)/ operations supervisor (OS)/supervisory traffic management coordinators (STMC)/national operations managers (NOM)/national traffic

management officers (NTMO)/controllers-in-charge (CIC) of the watch are responsible for ensuring the accuracy of the personnel log for time and attendance (T&A) recording. T&A information must be entered into and maintained within the ATO Resource Tool (ART) system approved.

1. The facility air traffic manager must ensure that procedures are in place so that operational schedules are entered correctly into ART.
2. Employees must use ART to sign in and out of their shifts.
   **(a)** Sign in for a shift must be accomplished no later than the shift assigned time unless the OS/STMC/NTMO/CIC and/or OMIC has approved leave at the start of the assigned shift. Sign in, using the assigned shift start time, may occur up to 15 minutes before an employee's assigned shift. Earning of, and signing in for, Time Outside Shift time at the beginning of an assigned shift must receive approval by the OS/STMC/NTMO/CIC or OMIC prior to earning or recording it into Cru-X/ART.

***NOTE–***
*Shift/Core hour changes must be in accordance with local and national policy. Earning Time Outside Shift (overtime, credit hours, etc.) must be approved by the OS/STMC/NTMO/CIC or OMIC prior to entering it into Cru-X/ART or working it.*

   **(b)** In situations where it is known in advance that employees will not report to the facility, such as when attending an all day meeting outside the facility, facilities should enter the employee's shift in the schedule as an Other Duty Code.
   **(c)** Sign out must be accomplished at the end of an employee's assigned shift. Sign out using the assigned shift end time may be accomplished no earlier than 15 minutes prior to the end of the shift, or no later than 15 minutes after the end of the assigned shift. Any Time Outside Shift at the end of an assigned shift, or leave, must first receive OS/STMC/NTMO/CIC or OMIC approval prior to earning/using and recording such time in Cru X/ART.
3. The supervisor/CIC position relief briefing check list must include:
   **(a)** T&A status,
   **(b)** Other Duties,
   **(c)** Time Outside Shift (TOS) requests/approvals, and
   **(d)** Leave requests/approvals.

***NOTE–***
*Upon signing on position the OMIC/OS/STMC/NOM/NTMO/CIC assumes full responsibility of all check list items including those identified above.*

4. It is the employee's responsibility to notify the OMIC/OS/STMC/NOM/NTMO/CIC of the watch of any changes to “Other Duty" shifts. For example, an employee is outside of the facility on another duty and requests a day of sick leave.
5. In the event of electronic system failure, scheduled system outage, or facility evacuation, the paper FAA Form 7230-10, “Position Log,” must be used to indicate position responsibility. When the ART system has been restored or the facility reoccupied, the facility must ensure that all data collected with the paper FAA Form 7230-10's is entered into ART. In instances

where the data cannot be entered into ART, the paper FAA Form 7230-10's must be retained in accordance with document retention guidance.

**b.** The Cru-X/ART electronic logs must be used to indicate responsibility at all operational positions and for supervisory traffic management coordinator-in-charge (STMCIC), operations supervisor-in-charge (OSIC), traffic management coordinator-in-charge (TMCIC), and CIC functions. It is the responsibility of the relieved controller to enter the correct change of position responsibility time in Cru-X/ART. In situations where there is no relieved controller, such as when opening a position, the person opening the position is responsible for entering the correct position time or notifying the supervisor/STMC/CIC of the position opening time. The supervisor/STMC/NTMO/CIC must then enter that time into Cru-X/ART.

## 2−2−7. CIRNOT HANDLING

A CIRNOT initiated by WMSCR/NNCC must be transmitted to all circuit users.

**a.** WMSCR/NNCC must maintain a record of all CIRNOTs and forward a hard copy to the appropriate Service Area Director of Air Traffic Operations by the most expeditious means available.

**b.** FSS air traffic managers must provide CIRNOTs to the appropriate Service Area Director of Air Traffic Operations and/or other field facilities upon request.

**c.** CIRNOTs should be retained at the receiving facility for 120 days.

***NOTE−***
*The most expeditious means is transmitting the CIRNOT via facsimile, telephone, mail, electronic mail, etc.*

## 2−2−8. GENOT HANDLING

A General Notice (GENOT) is issued by headquarters ATO organizations via the Washington Operations Center (WOC) and is transmitted to all FAA and contract air traffic facilities via Aeronautical Information System-Replacement (AIS-R).

**a.** Facility ATMs must establish local procedures to ensure AIS-R, or equivalent Service B message provider via NADIN/NMR, is checked at least daily for new GENOTs.

**b.** Upon receipt, facility ATMs must:

**1.** Determine if the content of the GENOT is applicable to their facility.

**2.** Ensure required information is briefed to employees prior to performing operational duties.

***NOTE−***
*Managers should update employee's Training and Proficiency Record in accordance with FAA Order JO 3120.4, Air Traffic Technical Training.*

## 2−2−9. PERSONNEL BRIEFINGS REGARDING AIR TRAFFIC PROCEDURES BULLETIN ITEMS

**a.** The Operational Policy Directorate is the ATO authority on all matters pertaining to Air Traffic Procedures; hence, the development of an Air Traffic Procedures Bulletin (ATPB).

**b.** The ATPB is:

**1.** A tool that the Operational Policy Directorate utilizes to share additional Air Traffic Procedures information with field facilities.

**2.** Published on an *as needed basis*, to provide additional clarity or to communicate useful information concerning the proper application of air traffic standards, policies, and procedures.

**3.** Published on the FAA's publication website. Archived ATPBs accessed on the website should be deemed reliable only for historical reference purposes as some references contained within the article(s) may have changed.

***NOTE−***
*ATPBs may be accessed at: https://www.faa.gov/air_traffic/publications/#atpb.*

**c.** While this list is not all inclusive, the ATPB can be used to:

**1.** Respond to field facility questions or concerns that are typically generated with the establishment of new separation minima.

**2.** Address the misapplication of existing procedures as identified through a Safety Assurance Program (e.g., internal/external audit).

**3.** Address safety recommendations received from any safety related program or organization (e.g., Runway Safety, ATSAP, AJS, ASM, and NTSB).

**4.** Communicate the need for changing air traffic procedures based on a pressing safety need (risk mitigation).

**5.** Communicate the development of new air traffic procedures associated with the deployment of new technologies.

**d.** Facility Air Traffic Managers must:

**1.** Ensure that their facility is on the distribution list for the Air Traffic Procedures Bulletin. Any corrections, additions or deletions should be directed through the appropriate Service Center.

**2.** Ensure that ATPB items that are appropriate to a particular facility are verbally briefed with facility personnel.

**(a)** The Operational Policy Directorate will annotate the ATPB with the type of facilities that the subjects are applicable to.

**(b)** These briefings must take place within 45 days after receipt of the bulletin. Record briefings in accordance with FAA Order 3120.4, Appendix A.

**3.** Encourage submissions of suggested ATPB items that have an operational or procedural impact from facility personnel at regular crew and personnel briefings.

**(a)** Evaluate and forward those suggestions considered appropriate for Service Area office review.

**(b)** Service Center offices must evaluate the suggested items and forward those considered significant and/or national in scope to the Operational Policy Directorate via the electronic mailbox at 9-AJV-P-HQ-Correspondence@faa.gov, in *Microsoft Word* format.

## 2−2−10. LAW ENFORCEMENT INFORMATION

Law enforcement information; e.g., aircraft identification, flight schedules, flight operations, procedures, aircraft lookouts, etc., is of great value to drug traffickers and others attempting to circumvent the law. Although law enforcement information is normally unclassified, it is considered to be inherently sensitive, of a confidential nature, and is to be handled on a "For Official Use Only" (FOUO) basis. Facility air traffic managers must ensure that such information is safeguarded from disclosure in accordance with FAA Order 1600.2, Safeguarding Controls and Procedures for Classified National Security Information and Sensitive Information, whether the information is physically marked with the FOUO term or not. "Safeguarded from disclosure" includes precaution against oral disclosure, prevention of visual access, and precaution against unauthorized release, gratuitously or in response to a specific request.

## 2−2−11. PERSONNEL BRIEFINGS REGARDING ORDERS, PUBLISHED AERONAUTICAL DATA, AND FLIGHT PROCEDURES

**a.** Air traffic managers must ensure that facility air traffic personnel are verbally briefed on changes to FAA Order JO 7110.65, Air Traffic Control, FAA Order JO 7210.3,Facility Operation and Administration, and FAA Order JO 7110.10, Flight Services, and other appropriate directives, that have operational/procedural significance.

**b.** Air traffic managers must ensure that facility air traffic personnel are briefed prior to implementation on changes identified in the review of published aeronautical data and flight procedures that have operational/procedural significance or will likely have an effect on their facility's air traffic services. To the extent possible these briefings should be initiated within 30 days prior to the date of the change.

***REFERENCE−***
*FAA Order JO 7210.3, Para 2−1−6, Checking Accuracy of Published Data.*

**c.** The Aeronautical Information System Replacement (AISR) is an authorized source for NOTAMs. To the extent available, Air Traffic Managers must permit review of AISR for NOTAMs impacting the facility's area of jurisdiction, or an alternative authorized source; for example, the NOTAM Management Service (NMS) Public NOTAM Search website at: https://nms.aim.faa.gov/.

## 2−2−12. SYSTEMS MANAGEMENT OF VSCS EQUIPMENT

Air traffic facility managers must determine which VSCS console equipment (VCE) positions require tailored checklists. The checklist must include as a minimum, the configuration map in use and the specific position eligibility/capability (classmark) adapted to maintain operational continuity.

## 2−2−13. REPORTING EQUIPMENT TROUBLE

Equipment trouble reports must be delivered by air traffic personnel to the appropriate Technical Operations Control Center. Locally developed procedures, which are agreed to jointly by Air Traffic and Technical Operations managers, must include notification to the Technical Operations Control Center. Trouble reports must specify the facility, sector, and/or position affected and include a brief description of the problem. In addition:

**a.** For air/ground communications problems, the frequency or frequencies affected must be specified.

***EXAMPLE−***
*"Atlanta Sector 66R side 123.4 no transmit."*

**b.** For ground/ground communications problems, the calling and the called locations must be specified.

***EXAMPLE−***
*"Seattle Sector 46D side hot line to Salt Lake City is not working."*

## 2−2−14. FACILITY DIRECTIVES REPOSITORY (FDR)

The FDR is a web-based library for FAA employees and authorized users to access Letters of Agreement (LOAs) and facility directives. The FDR is available on the FAA intranet site at: https://loa.faa.gov.

***NOTE−***
*Directives information for Flight Service Stations is only required for those located in Alaska.*

**a.** The Vice President of Air Traffic Services and the Vice President of System Operations Services must provide oversight within their respective service units to ensure FDR responsibilities are administered.

**b.** Facility Managers must:

**1.** Ensure that LOAs and facility directives are posted to the FDR.

**2.** Ensure that new and revised LOAs and facility directives are posted to the FDR before the effective date of the documents.

**3.** Ensure Classified, Contractor Proprietary, and For Official Use Only information is removed or excluded from posted documents.

**4.** Ensure that all outdated and canceled documents are removed from the FDR.

**c.** General Managers must:

**1.** Assist in the posting of documents, required in b1 and 2 above, for facilities that do not have FAA intranet access or automation capability.

**2.** Establish an administrative process to ensure facility compliance.

**3.** Ensure Classified, Contractor Proprietary, and For Official Use Only information is removed or excluded from posted documents.

**d.** Safety/Quality Assurance Offices must ensure facility compliance with posting LOAs and facility directives to the FDR.

**e.** FDR functionality and administration:

**1.** Personnel with access to the FAA intranet may view documents without the need for a log-in or user account.

**2.** Personnel external to the firewall may view documents on a mirrored internet site with authorization by an FAA sponsor. Access to the mirror site requires a User ID and password

that are valid for the period necessary to execute the sponsored activity. Contact information and instructions are available on the internet site.

**3.** Personnel responsible for maintaining the facility's documents must register with the site to establish a user account.

**4.** A facility may have up to three user accounts. User information is located in the user manual on the site's homepage.

**5.** Facility/General managers are the approving authority for user account privileges for their facilities.

**(a)** Users must complete an electronic registration page on the site to request access.

**(b)** The Facility/General manager will be notified via an email message when a user makes a request for account privileges. Approval must be made via the automated privilege link.

**(c)** Users will be notified of their approval by email.

**(d)** Direct problems or questions to the facility point of contact identified on the facility homepage in the repository.

# Section 3. Air Traffic Familiarization/Currency Requirements for En Route/Terminal/System Operations Facilities

## 2−3−1. GENERAL

**a.** It is the responsibility of the employees identified in paragraph 2−3−2, Application, to work in conjunction with their supervisors to ensure they adhere to the requirements of this section.

**b.** Facility managers must develop procedures for tracking and reporting currency for those employees identified in subparagraph 2−3−2b.

## 2−3−2. APPLICATION

**a.** Air traffic managers, assistant managers, executive officers, staff managers, operations managers, support managers, traffic management officers and support specialists, who as a condition of employment are not required to maintain currency, must maintain familiarity with control room operations to perform their required duties in an efficient manner.

**b.** Air traffic control specialists (ATCS), traffic management coordinators (TMC), national traffic management specialists (NTMS), developmental specialists (ATCS/TMC/NTMS), first-level supervisors (including facility managers who also serve as first-level supervisors), operations supervisors (OS), supervisory traffic management coordinators (STMC), national traffic manager officers (NTMO), and air traffic assistants (ATA) are required to meet currency requirements in order to perform their duties.

## 2−3−3. REQUIREMENTS

**a.** *Familiarization*. The methods used for personnel identified in paragraph 2−3−2a, Application, to maintain familiarization must be specified in a local facility directive.

**b.** *Currency*. Personnel must rotate through all positions on which they maintain currency each calendar month. Additionally, they must meet the following requirements:

**1.** Number of positions required to maintain currency.

**(a)** ATCSs, TMCs, NTMSs, developmental specialists (ATCS/TMC/NTMS) and ATAs must maintain currency on all operational/control positions on which certified.

**(b)** First-level supervisors (OS, STMC, NTMO) and support specialists (who maintain currency) must maintain currency on a minimum of two operational/control positions.

**(c)** TMCs/STMCs required to maintain currency on operational positions within the traffic management unit (TMU), and control positions outside the TMU (dual currency), must maintain currency on a minimum of two operational/control positions outside the TMU.

***NOTE−***
*Operational/control positions are: Local and/or Ground (Tower), Satellite Radar, Departure Radar, Arrival Radar and/or Final Radar (TRACON), Radar Position, Radar Associate Position and/or ATOP Position (ARTCC).*

**2.** The following minimum time must be met each calendar month: a minimum of one hour per position is required; time working combined positions satisfies the requirement for each of the combined positions. Time working the assistant controller, flight data, and clearance delivery position is counted for flight service stations (FSS) and air traffic assistants only.

***NOTE−***
*Hand-off, Tracker, CAB/TRACON/NTMS Coordinator, Final Monitor, OS/OSIC, and managerial (in-charge) positions do not have a currency requirement and time spent working those positions is not counted.*

**(a)** ATCSs, Developmental (Dev) ATCSs, and ATAs.

**(1)** TERMINAL. Radar/tower operational/control positions: A minimum of eight hours tower and eight hours radar. If certified in only one area of operation (tower or radar), a minimum of 16 hours is required.

**(2)** EN ROUTE, FSS, and ATAs. A minimum of 16 hours on operational/control positions is required.

**(b)** TMCs, NTMSs, and developmental TMCs/NTMS are required to maintain operational/control position currency as follows: a minimum of 16 hours on operational/control positions.

**(c)** Support specialists who maintain currency.

**(1)** TERMINAL. Radar/tower operational/control positions: a minimum of four hours tower and four hours radar. If certified in only one area of operation (tower or radar), a minimum of eight hours is required.

**(2)** EN ROUTE/ATCSCC. A minimum of eight hours on operational/control positions is required.

**(d)** OSs (including facility managers who also serve as first-level supervisors).

**(1)** TERMINAL. Radar/tower operational/control positions (excluding the OS/OSIC position): a minimum of four hours tower and four hours radar. If certified in only one area of operation (tower or radar), a minimum of eight hours is required.

**(2)** EN ROUTE, FSS. A minimum of eight hours on operational/control positions (excluding managerial (in-charge) positions) is required.

**(e)** STMCs/NTMOs are required to maintain operational/control position currency as follows: a minimum of eight hours on operational/control positions excluding managerial (in-charge) positions.

**(f)** Dual Currency. TMCs/STMCs at all Air Route Traffic Control Centers (ARTCCs), New York TRACON (N90), Northern California TRACON (NCT), Philadelphia TRACON (PHL), Potomac TRACON (PCT), and Southern California TRACON (SCT) are required to maintain currency only within the TMU. TMCs/STMCs at all other facilities are required to maintain dual currency.

**(1)** TERMINAL. Radar/tower operational/control positions: a minimum of four hours tower and four hours radar. If certified in only one area of operation (tower or radar), a minimum of 8 hours is required.

**(2)** EN ROUTE. A minimum of eight hours on operational/control positions is required.

**(3)** TMC/STMC optional. Staffing and workload permitting, TMCs/STMCs not required to maintain dual currency may elect to maintain dual currency. Dual currency is not subject to the provisions of paragraph 2−3−4; Differential.

**(g)** Airport Surveillance Radar (ASR) approaches (where published): three each calendar quarter, one of which must be a no-gyro. Radar simulation may be used to satisfy these requirements.

3. Time spent performing on-the-job-training (OJT) instruction as an OJT instructor (OJTI) is not counted toward operational/control position currency.
4. Time spent receiving OJT on combined positions, where the employee is certified on some of the combined positions:
   **(a)** TERMINAL: does not count toward operational/control position currency.
   **(b)** EN ROUTE: does count toward operational/control position currency on the Radar Associate position when receiving OJT on the Radar Position.

***NOTE–***
*OJTI is responsible for all positions combined during OJT.*

***REFERENCE–***
*FAA Order JO 3120.4 Air Traffic Technical Training, Chapter 2. Roles and Responsibilities, Para 5f(6) OJTI.*

5. Time spent performing certification skills checks, operational skills assessments, skills checks, over-the-shoulders, etc., is not counted toward operational/control position currency.

***NOTE–***
*Initial operational/control position certification completed in a month meets the requirements for that position for that month. Individuals recertified in a month must meet currency requirements for that month regardless of the day of recertification.*

***TBL 2–3–1***
**Currency Requirements**

| Position | Operational/ Control Position Currency | Total Minimum Currency Requirements |
|---|---|---|
| ATCS/Developmental ATCSTMC/ Developmental TMC FSS Specialist/ Dev FSS Spec NTMS/Dev NTMS/ ATA | Min 16 hours/month Min 1 hr per position | 16 hours |
| Support Specialist (if maintaining currency) | Min 8 hours/month<br>Min 1 hr per position<br>Min 2 positions | 8 hours |
| OS<br>STMC/NTMO<br>FSS OS | Min 8 hours/month<br>Min 1 hr per position<br>Min 2 positions | 8 hours |

| Position | Operational/ Control Position Currency | Total Minimum Currency Requirements |
|---|---|---|
| TMC - Dual Currency | Within TMU:<br>Min 16 hours/month<br>Min 1 hr per position<br>Outside TMU:<br>Min 8 hours/month<br>Min 1 hr per position<br>Min 2 positions | 24 hours |
| STMC – Dual Currency | Within TMU:<br>Min 8 hours/month<br>Min 1 hr per position<br>Min 2 positions<br>Outside TMU:<br>Min 8 hours/month<br>Min 1 hr per position<br>Min 2 positions | 16 hours |

## 2−3−4. DIFFERENTIAL

To qualify for currency differential as outlined in the Air Traffic Control Revitalization Act, personnel must be certified and maintain currency on at least two positions excluding clearance delivery and flight data positions.

## 2−3−5. TRACKING

**a.** Operational/control position currency time must be documented in accordance with processes described in paragraph 2−2−6, Sign In/Out and On/Off Procedures, and tracked.

**b.** Air traffic managers must document, in a facility directive, a quality control process to ensure that personnel who do not meet currency requirements in a calendar month do not work an operational/control position prior to recertification in accordance with FAA Order JO 3120.4, Air Traffic Technical Training.

# Section 4. Hours of Duty

## 2−4−1. SERVICE HOURS

ATC must be provided during published hours of operation. Early opening or late closing may be occasionally necessary to accommodate traffic which may otherwise divert or cancel its operation because air traffic control is not available at the airport. Good judgment, based on known or observed traffic, must be exercised when deciding to extend operating hours.

## 2−4−2. TIME STANDARDS

Use Coordinated Universal Time (UTC) in all operational activities. The word "local" or the time zone equivalent must be used to denote local when local time is given during radio and telephone communications. When written, a time zone designator is used to indicate local time, e.g., "0205M" (Mountain). The local time may be based on the 24-hour clock system. The day begins 0000 and ends 2359. The term "ZULU" may be used to denote UTC. In general, operational forms will be recorded in UTC and administrative forms recorded in local time.

## 2−4−3. TIME CHECKS

**a.** Facilities without a direct coded time source must, at 8-hour intervals, obtain an accurate time check from ARTCC/s equipped with coded time source, FAA equipment within their facility with a direct coded time source, or from any one of the following standard frequency and time radio stations:

**1.** WWV, Fort Collins, Colorado, on 2.5, 5, 10, 20, and 25 MHz, which broadcasts continuously except 45 to 49 minutes after each hour. The telephone number for WWV is (303) 499-7111.

**2.** WWVH, Kekaha, Kauai, Hawaii, on 2.5, 5, 10, 15 and 20 MHz, which broadcasts continuously except 15 to 19 minutes after each hour.

**3.** CHU, Ottawa, Canada, on 3.33, 7.34, and 14.670 MHz, which broadcasts continuously on all frequencies.

**4.** U.S. Naval Observatory, Washington, D.C., telephone number (202) 762-1401.

***NOTE−***
*Facility Technical Operations may assist Air Traffic in determining equipment to reference that has an embedded direct coded time source. Equipment may be listed in a local SOP.*

**b.** Facilities are exempt from performing time checks if they meet the following requirements:

**1.** The facility clocks are digital.

**2.** The clocks are tied to the direct coded time source or Global Positioning System (GPS) receiver on the Digital Audio Legal Recorder (DALR) system, National Voice Recorder (NVR) system, or a facility GPS or Network Time Protocol (NTP) synchronized time server.

## 2−4−4. STATUS OF SERVICE

Part-time facilities must establish procedures for opening and closing their facilities. The procedures must be coordinated with the facility having IFR jurisdiction and must include, as a minimum, the following:

**a.** Broadcast an announcement upon resuming/ terminating service on appropriate frequencies. This broadcast must include, as a minimum, a statement that indicates ATC service and the airspace class of service being resumed or terminated, e.g, “[Time] Waukesha Tower is terminating airport traffic control service; Class E/G airspace now in effect."

**b.** At locations where neither a tower nor FSS continues service or the FSS does not have lighting controls/approach aid monitoring capability, do the following as appropriate:

**1.** Include, in the termination broadcast, the status of the airport and essential components; e.g., Navigational Aids (NAVAIDs), airport and approach lighting, weather, NOTAMs concerning NAS, and field conditions.

**2.** If there is an approach procedure for the airport, inform the facility having IFR jurisdiction of the information determined appropriate in subparagraph b1. Runway information, approach information, airport status information, and pertinent NOTAMs must be verbally relayed, to include any pertinent NOTAMs planned to take effect during the hours the facility is closed.

**c.** At the time of closure, the facility having IFR jurisdiction must inform all inbound flights with which it has communications and which will use any of the components associated with the airport of the information received from the closing facility.

**d.** If a collocated FSS operates when the tower is closed, pertinent flight data must be exchanged before the tower opens/closes.

# Section 5. Watch Coverage-Flight Service Stations

## 2−5−1. BASIC WATCH SCHEDULES

**a.** Facility air traffic managers are responsible for preparing watch schedules for their facilities. These schedules must take into account normal traffic flow thereby permitting the posting of a continuing rotational schedule for an indefinite period of time. Facility management is responsible for appropriate consultation with local unions.

**b.** Facility air traffic managers must, to the maximum extent possible, establish overlapping shifts thereby providing an opportunity for personnel to accomplish a majority of briefings without need for overtime assignment.

**c.** Facility air traffic managers must ensure that air traffic control specialists (ATCS) assigned to a position of operation:

**1.** Do not work more than 6 consecutive days.

**2.** Do not work more than a 10-hour day.

**3.** Have an off-duty period of at least 10 hours between watches.

**4.** Have an off-duty period of at least 12 hours preceding and following the midnight shift.

## 2−5−2. DESIGNATING WATCH SUPERVISION COVERAGE

**a.** Efficient air traffic services require supervision of each watch regardless of the number of people assigned.

**b.** At facilities where a specialist stands a watch alone, responsibility for the overall operation of the facility during the watch becomes a part of his/her duties.

**c.** When two or more specialists are on duty and no supervisory personnel are available (see Note), one specialist who is fully qualified and rated in the assigned operational area must be designated by the facility air traffic manager as CIC/DLS for that watch. Specialists so designated may be required to perform specialist duties in addition to those associated with watch supervision. The CIC/DLS designation must be rotated among qualified specialists. Persons so designated perform the full range of duties associated with watch supervision. Watch supervision by itself does not justify a higher grade; i.e., the CIC/DLS does not perform supervisory duties, such as:

**1.** Evaluating employee performance.

**2.** Recommending selections, promotions, awards, disciplinary actions, and separations.

**3.** Explaining and gaining support of employees for management policies and goals.

**4.** Counseling employees on their performance ratings.

**5.** Monitoring presidential aircraft movement.

***NOTE−***
*A supervisor is considered available for watch supervision when he/she is physically present in the operational area and is able to perform the primary duties of the supervisory function. If the supervisor leaves the operational area or is engaged in an activity which may interfere with or preclude the performance of watch supervision duties, then a CIC/DLS must be designated.*

## 2−5−3. AREA SUPERVISION

OSs primary function is the supervision of their area and assistance to specialists. It is particularly important that supervisors carefully monitor current and anticipated sector activity to ensure that available controller staffing is deployed at optimal efficiency. Managers/supervisors must be responsible for managing the operational environment with a goal toward eliminating distractions in the operational environment. Managers must, to the extent practicable, avoid scheduling supervisors for nonoperational duties during periods of known heavy traffic.

## 2−5−4. RELIEF PERIODS

**a.** Facility air traffic managers must use all available qualified personnel to provide relief periods. First priority should be given to providing a reasonable amount of time away from the position of operation for meals. Additionally, time for such things as briefings and training should be made by rotating work assignments among qualified employees.

**b.** Supervisors in charge are responsible for knowing the whereabouts of employees to ensure their operational availability. Supervisors are also responsible for ensuring that relief periods are applied in such a manner as to maximize the usage of personnel and to promote the efficiency of the agency.

**c.** Relief period, i.e., break, is defined by the Comptroller General as being a “brief” rest period that may be assigned by the agency. While no specific timeframe is placed on the duration of relief periods, supervisors and managers will be held accountable to ensure that breaks are of a reasonable duration.

**d.** Personnel performing watch supervision duties must not condone or permit individuals to sleep within operational areas where the control and separation of aircraft occurs. Any such instance must be handled in accordance with applicable Agency policy and the applicable collective bargaining agreement, or applicable corporate policy (for FCFSS contract facilities).

## 2−5−5. OVERTIME DUTY

Facility air traffic managers must ensure that overtime duty is equitably distributed among all eligible employees who desire it. Retain overtime duty records for 12 months.

## 2−5−6. HOLIDAY STAFFING

**a.** Facility air traffic managers must ensure that the scheduled staffing is adjusted on holidays to a level consistent with the anticipated workload. Application of this policy is not intended to result in a standardized holiday staffing schedule for all holidays. Holiday staffing schedules may vary for individual holidays since the traffic in a particular area cannot always be expected to be the same for each holiday.

**b.** Prior to establishing work schedules for a Federal holiday, facility air traffic managers must:

**1.** Consider the previous year's traffic statistics for each holiday.

**2.** Check, as appropriate, with local sources (Air National Guard, USN, USAF Reserves, local flying schools, fixed base operators, etc.) for information concerning anticipated activity.

## 2−5−7. CONSOLIDATING POSITIONS

Assign personnel to positions as required by activity, equipment, and facility function. Positions may be consolidated in consideration of activity and the qualifications of the personnel involved.

## 2−5−8. SUPERVISORS HOURS OF DUTY (ALASKA ONLY)

Hours of duty of facility air traffic managers and administrative staffs should conform with the duty hours of the Alaska Flight Service Information Area Group.

## 2−5−9. FACILITY COMPLEMENTS

Facility air traffic managers in Alaska will be informed by the Director of Flight Service of their authorized facility personnel complements. The authorized complement will always be the end-of-year employment ceiling authorization. Circumstances may result in the establishment of a complement different from that provided in workload formulas.

## 2−5−10. CONTROLLER-IN-CHARGE (CIC)/DESIGNATED LEAD SPECIALIST (DLS) TRAINING

**a.** Prior to being designated as CIC/DLS, specialists must have been facility/area rated/certified for 6 months, except as provided in paragraph 2–6–4c. The specialist must also have completed an agency-approved and established CIC/DLS training course for Flight Service (Alaska) or Federal Contract Flight Service Stations (FCFSS). The Director of Flight Service may issue a facility waiver for the 6 months criteria where a more immediate assignment is indicated. Upon receipt of a waiver from the Director of Flight Services, the facility manager can then issue individual waivers to the 6 months requirement on a case-by-case basis. Waivers to facilities will be for 1 year with renewals based on the result of a yearly evaluation by the region.

***NOTE-***
*In facilities that use CICs/DLSs to provide midwatch coverage, all facility/area rated/certified specialists that provide such coverage must complete an agency-approved and established CIC/DLS training course for Flight Service as described above, within 30 days of final certification/rating.*

**b.** Specialists that have completed the CIC/DLS course, have performed such duties, and subsequently transfer to another facility, must be required to complete those portions of the course that are specific to the new facility before assuming CIC/DLS duties, except as provided in paragraph 2–6–43. They must not be required to fulfill the 6 months experience requirement at the new facility.

**c.** Upon completion of the CIC/DLS course, record an entry noting this in the specialist's Training and Proficiency Record, FAA Form 3120-1, section 3 or electronic equivalent; or the FCFSS equivalent.

# Section 6. Watch Supervision-Terminal/En Route

## 2−6−1. WATCH SUPERVISION

Watch supervision requires maintaining operational oversight. Operational oversight is the duty of the individual in charge of the operation to effectively lead and manage the delivery of air traffic services by maintaining intentional engagement, situational awareness, and accountability within the area of supervision. Situational awareness is defined as a continuous extraction of environmental information, integration of this information with previous knowledge to form a coherent mental picture, and the use of that picture in directing further perception and anticipating future events. Watch supervision requires the active monitoring of operational conditions to provide timely assistance to specialists and ensures resources are deployed for optimal efficiency.

**a.** Watch supervision may be performed by a manager, supervisor, or controller-in-charge (CIC).

**b.** Administrative duties must not be accomplished to the detriment of any operational duty.

**c.** The minimum objectives and tasks of watch supervision are listed below. Any additional objectives or tasks necessary to maintain a safe and efficient operation must be specified in a facility directive that is focused on operational requirements.

**1.** Providing guidance and goals for the shift.

**2.** Workload permitting, monitoring of frequency and landline communications.

**3.** Making on-the-spot corrections.

**4.** Monitoring/managing traffic volume/flow.

**5.** Managing the operational environment with a goal toward reducing or eliminating distractions of:

**(a)** Non-operationally related activities or tasks.

**(b)** Non-operationally needed items and equipment.

**6.** Assigning positions/relief from positions.

**7.** Assigning training.

**8.** Processing leave requests.

**9.** Configuring/monitoring/reporting equipment status.

**10.** Performing data collection and reporting.

**11.** Active monitoring and reporting of NAS operations security requirements. This includes, but is not limited to, the monitoring of presidential movements, reporting of suspicious aircraft/pilot, UAS and other activities, and maintaining situational awareness of security TFRs.

***NOTE-***

***1.*** *On-the-spot corrections are not considered an evaluation of performance and are required as part of CIC duties.*

***2.*** *Individuals medically disqualified or taking medically disqualifying substances must not be assigned watch supervision duties, in accordance with paragraph 2-8-6, Restricted Drugs.*

**d.** In the role of watch supervision, a CIC must perform these duties in accordance with management direction, with the following exceptions:

**1.** Evaluating and counseling employees on their performance.

**2.** Recommending selections, promotions, awards, disciplinary actions, and separations.

3. Site Coordinator for drug or alcohol testing.

## 2−6−2. WATCH SUPERVISION ASSIGNMENTS

**a.** Standalone watch supervision is critical to the safety and efficiency of air traffic services. Facilities must establish local procedures to ensure the standalone watch supervision position is staffed to the maximum extent possible. All periods when standalone watch supervision is not possible must be reported by facility management to the District General Manager.

***NOTE−***

1. *Standalone watch supervision is achieved when no other operational duties are assigned.*
2. *Unless resources permit or the circumstances warrant it, this would not generally apply to midwatch operations, where the majority of hours fall between 10:30 p.m. and 6:30 a.m.*

**b.** Where authorized, when two or more operations managers are assigned to the shift, one must be designated as the Operations Manager in Charge (OMIC). The OMIC is responsible for the day-to-day, shift by shift, management of the control room operation.

**c.** When two or more supervisory traffic management coordinators (STMC) are on duty, one must be assigned as supervisory traffic management coordinator-in-charge (STMCIC).

**d.** When two or more operations supervisory personnel are on duty in an operational area (for example, radar room, tower, ARTCC area, etc.), one must be assigned as in charge.

***NOTE−***

*These "in charge" personnel may be called OSIC, operations supervisor-in-charge (OS/CIC), or other names designated by the facility manager.*

**e.** When two or more specialists are on duty and no supervisory personnel are available, one specialist who is fully qualified and rated in the assigned operational area must be designated as CIC to perform the watch supervision duties.

***NOTE−***

*In combined radar/tower facilities, when there's a tower CIC and TRACON CIC, one must be designated as the overall controller-in-charge (OCIC).*

**f.** At facilities where a specialist stands a watch alone, the responsibility for watch supervision becomes part of his/her duties.

**g.** Personnel performing watch supervision duties may be required to perform operational duties in addition to watch supervision duties. The performance of operational duties should be done on a limited basis such as during periods of low activity.

**h.** An individual is considered available for watch supervision when he/she is physically present in the operational area and is able to perform the primary duties of the function. If the supervisor/CIC leaves the operational area or is engaged inan activity whichwill interfere with or preclude the performance of watch supervision duties, then another qualified individual must be designated to supervise the watch.

**i.** EN ROUTE. Operations Supervisors (OS) may only be assigned watch supervision for one area of specialization. The Service Area Director of Air Traffic Operations may approve an air

traffic facility manager (ATM) to assign a OS watch supervision to one additional area outside their home area of specialization. The approval must be renewed annually**.**

**1.** The ATM must document training requirements in their local orders.

**2.** The OS must comply with the required tasks in paragraph 2−6−1, Watch Supervision.

**3.** The OS may provide watch supervision in their two approved areas simultaneously provided the following conditions are met:

**(a)** The supervisor must have direct line of sight to both areas.

**(b)** May only be assigned during mid-shift configurations and/or during facility defined times included in the approval.

***NOTE−***
*This does not apply when the OS is assigned the Operations Manager in Charge (OMIC) position during midnight operations.*

## 2−6−3. OPERATIONS SUPERVISOR FATIGUE AND COVERAGE

**a.** Except when operational requirements dictate otherwise, Operations Supervisors must not normally work more than 2 consecutive hours performing operational duties without a break away from operational areas.

**b.** Facilities must maximize supervisory coverage between 0600 and 2300 local time, considering forecasted traffic demand and staffing availability.

**c.** En Route and Consolidated TRACON facilities with one Operations Supervisor scheduled for the midnight shift must maximize supervisory overlap with the evening and day shifts to reduce single supervisor staffing.

***NOTE-***
*These requirements apply to FAA facilities staffed with Operations Supervisors and are not intended for FAA Contract Tower operations staffed by Controllers-in-Charge (CICs).*

## 2−6−4. CIC DESIGNATION AT FAA-OPERATED FACILITIES

CIC designation at FAA-operated facilities differs from CIC designation at FAA Contract Tower (FCT) facilities due to administrative differences. For FCT CIC policy, see Chapter 11 of this order.

**a.** At FAA-operated facilities, candidates for CIC must:

**1.** Be certified for 6 months in the area/facility where CIC duties will be performed. The Service Area Director of Air Traffic Operations may issue a facility waiver for the 6-month requirement where a more immediate assignment is needed. Waivers to facilities will be valid for 2 years.

**2.** Be operationally current.

**3.** Be selected by the ATM.

**b.** Specialists who have been designated as a CIC and subsequently transfer to another facility are not required to fulfill the requirement of subparagraph 2–6–4a1 at the new facility; however, they must meet all other prerequisites.

**c.** In facilities that use CICs to provide midwatch coverage, specialists that provide such coverage must be designated as a CIC only for the purpose of providing midwatch coverage upon facility/

area certification and completion of the local CIC training course. Air traffic managers must ensure the local CIC training course is completed within 30 days of facility/area certification/rating.

**d.** In combined radar/tower facilities, specialists certified in the tower may be designated as CIC in the tower, provided all the above prerequisites are met.

## 2−6−5. CONTROLLER-IN-CHARGE (CIC) SELECTION PROCESS

**a.** All eligible employees who meet the prerequisites of subparagraphs 2–6–4a1 and 2 must be considered for selection as CIC. Air traffic managers, when determining facility requirements for CICs, must consider the following:

**1.** Facility operational needs.
**2.** Scheduling concerns.
**3.** Staffing concerns.
**4.** Special events.
**5.** Other issues.

**b.** When facility requirements are established, air traffic managers may designate a panel to forward recommendations for CIC candidates to the designated selecting official. A facility may have one recommendation panel for each area of specialization.

**c.** The recommendation panel must consider the following knowledge, skills, and abilities (KSA) in reviewing each candidate. These KSAs must include but are not limited to:

**1.** Problem solving and analytical ability.
**2.** Planning and organizing.
**3.** Decisiveness.
**4.** Judgement.
**5.** Communication skill.
**6.** Interpersonal skill.

**d.** The recommendation panel must forward its recommendations to the air traffic manager or his/her designee. Written feedback must be provided to the selecting official for all candidates not recommended including dissenting opinions.

**e.** Candidates who are not selected to be a CIC, upon request, must be advised of the reasons for nonselection. If applicable, specific areas the employee needs to improve must be identified. Employees may request assistance from their immediate supervisor in developing options to improve the identified areas.

***NOTE-***
*These provisions do not apply to midwatch CIC coverage.*

## 2−6−6. CONSOLIDATING POSITIONS

**a.** Assign personnel to positions as required by activity, equipment, and facility function. Positions may be consolidated in consideration of activity and the qualifications of the personnel involved.

**b.** To the extent staffing resources permit, and where the position is established, the tower associate (local assist) position must be staffed. This position is considered essential to the operational

integrity and safety levels required to minimize the potential for surface errors and land-over incidents. Nonlocal control functions must not be consolidated/combined at the local control position except during periods of significantly reduced traffic levels.

**c.** When conducting line up and wait (LUAW) operations, local control position must not be consolidated/combined with any other non-local control position.

***REFERENCE-***
*FAA Order JO 7210.3, Para 10-3-8, Line Up and Wait (LUAW) Operations.*

## 2−6−7. RELIEF PERIODS

**a.** Personnel performing watch supervision duties are responsible for ensuring that breaks are administered in an equitable manner and applied so as to promote the efficiency of the agency. They are also responsible for ensuring that breaks are of a reasonable duration.

***NOTE-***
*Breaks to recuperate are provided to enable employees to engage in activities necessary to rejuvenate themselves in order to effectively manage fatigue.*

**b.** Personnel performing watch supervision duties are responsible for knowing the whereabouts of employees to ensure their availability for position assignments.

**c.** Personnel performing watch supervision duties must not condone or permit individuals to sleep within operational areas where the control and separation of aircraft occurs. Any such instance must be handled in accordance with applicable Agency policy and the applicable collective bargaining agreement.

## 2−6−8. BASIC WATCH SCHEDULE

**a.** Facility watch schedules must take into account normal traffic flow, thereby permitting the posting of a continuing schedule for an indefinite period of time. Facility management is responsible for ensuring watch schedules are in accordance with collective bargaining agreements.

**b.** Air traffic control specialists whose primary duties are those directly related to the control and separation of aircraft must meet the following criteria:

**1.** Do not work more than 10 operational hours in a shift.

**2.** Hours worked before a shift, whether operational or not, will count as operational hours.

**3.** All work beyond 10 hours must be nonoperational.

**4.** Have at least a 10-hour break from the time work ends to the start of any shift. This requirement applies to all shift changes, swaps, and overtime to include scheduled, call-in, and holdover assignments.

**5.** Have an off-duty period of at least 12 hours preceding and following a midnight shift. (A midnight shift is defined as a shift in which the majority of hours are worked between 10:30 p.m. and 6:30 a.m.)

**6.** If an employee is assigned more than two (2) consecutive ten (10) hour midnight shifts, all of the consecutive ten (10) hour midnight shifts require a 2100L (Non flex) start time.

**7.** Ten (10) hour midnight shifts are limited to no more than four (4) in any six (6) day period.

**8.** No day shift may immediately precede a ten (10) hour midnight shift.

**9.** Eight (8) hour midnight shifts may be extended by no more than one (1) hour per single shift.

**10.** A 0530L start time or later is required when working an eight (8) hour day shift prior to an eight (8) hour midnight shift. Employees may not flex to an earlier start time than 0530L.

**11.** Do not work more than six shifts without taking a regular day off.

**12.** Have at least 30 consecutive hours off-duty within each seven-day period.

**13.** Authorized leave, compensatory time used, and credit hours used are considered hours of work.

**14.** These criteria apply to shift adjustments, including the exchange of shifts and/or days off and the change of shifts and/or days off.

## 2−6−9. OVERTIME DUTY

Facility air traffic managers must ensure that overtime duty is equitably distributed among all eligible employees who desire it. Retain overtime duty records for 12 months.

## 2−6−10. HOLIDAY STAFFING

**a.** Facility Air Traffic Managers must ensure that the scheduled staffing is adjusted on holidays to a level consistent with the anticipated workload. Application of this policy is not intended to result in a standardized holiday staffing schedule for all holidays. Holiday staffing schedules may vary for individual holidays since the traffic in a particular area cannot always be expected to be the same for each holiday.

**b.** Prior to establishing work schedules for a Federal holiday, facility air traffic managers must:

**1.** Consider the previous year's traffic statistics for each holiday.

**2.** Check, as appropriate, with local sources (Air National Guard, USN, USAF Reserves, local flying schools, fixed base operators, etc.), for information concerning anticipated activity.

## 2−6−11. ADMINISTRATIVE HOURS OF DUTY

Hours of duty of facility air traffic managers and administrative staffs should conform with the duty hours of their respective service area office.

## 2−6−12. FACILITY COMPLEMENTS

Facility air traffic managers will be currently informed by the service area office of their authorized facility personnel complements. The authorized complement will always be the end-of-year employment ceiling authorization. Circumstances may result in the establishment of a complement different from that provided in workload formulas.

## 2−6−13. CONSOLIDATING TOWER/TRACON FUNCTIONS

**a.** At facilities where both tower and radar/nonradar approach control services are provided, the Air Traffic Manager (ATM) must ensure, to the maximum extent possible, that these functions are not normally consolidated during non-midwatch operations.

**b.** The ATM must stipulate, in a facility directive, procedures for consolidating approach control functions in the tower cab. The directive, at a minimum, must address:

**1.** When it is appropriate to permit the consolidation of operations to the tower cab.

**2.** Required upward reporting to the General Manager during non-midwatch operations.

**c.** At those locations with only one certified tower radar display (CTRD) in the tower cab, the facility directive must also address radar separation responsibilities, and other issues inherent in operations conducted with one CTRD in the tower cab.

**d.** During midwatch operations (where the majority of hours fall between 10:30 p.m. and 6:30 a.m.) when traffic permits, all functions may be consolidated for meals or breaks.

**e.** Air traffic managers must ensure that no less than two fully-certified and current operational personnel are assigned to midnight shift, unless no such personnel are available for assignment.

## 2−6−14. SINGLE PERSON MIDNIGHT OPERATIONS

**a.** In order to ensure that a receiving controller is prepared to accept an aircraft, coordination between facilities/operational areas must be accomplished either manually via landline, or positively acknowledged via automation, (for example, acceptance of the handoff by keystroke entry), when an operational area is operated with one ATCS between the hours of 0000L to 0500L.

**1.** Coordination procedures during the time period defined in paragraph a can be suspended during periods of increased of traffic. An increase of traffic may include, but is not limited to, the following:

**(a)** Late night SWAP events.

**(b)** Military movement/exercises.

**(c)** Multiple arrivals/departures in a short period of time.

**2.** The coordination procedures do not supersede existing requirements in FAA Order JO 7110.65.

**3.** Facilities must have local procedures to be used during the hours identified above. Such procedures are to be placed into local SOP or LOAs between facilities.

***NOTE-***
*Automated coordination cannot be hand-offs that do not include human interaction.*

**b.** In the event there is no response from the facility/operational area with which coordination is attempted, immediate action must be taken to determine the status of the unresponsive controller and begin appropriate notification.

**c.** When operations permit, it is expected that functions will be consolidated to facilitate breaks in up/down facilities during midnight shifts.

# Section 7. Appearance and Security

## 2−7−1. PERSONNEL APPEARANCE

Personnel must maintain a neat, clean, businesslike appearance during working hours. Personal grooming and clothing must be appropriate to the conduct of Government business.

## 2−7−2. QUARTERS APPEARANCE

The appearance of each air traffic facility must reflect the high standards of the agency at all times. Facility air traffic managers must ensure that adequate janitorial services are provided.

## 2−7−3. BULLETIN BOARDS

Air traffic bulletin boards should only display material authorized by the facility air traffic manager or his/her designee.

## 2−7−4. FOOD AND BEVERAGES

Food and beverages may be permitted in the operating quarters at the discretion of the facility air traffic manager.

## 2−7−5. FACILITY SECURITY

**a.** Facility air traffic managers are responsible for the security of operating quarters and must use appropriate agency directives for guidance in maintaining this security. This is not applicable to pilot briefing areas in flight service stations.

**b.** Facility air traffic managers must determine that adequate locks or other suitable devices are installed and operated so as to ensure security control over access to operating quarters.

**c.** In no case must ARTCC buildings be used as public fallout shelters.

## 2−7−6. SUSPICIOUS ACTIVITIES AROUND AIRPORTS OR FAA FACILITIES

ATC facilities must report suspicious activities (for example, unauthorized use of aircraft, tampering with aircraft or other property around airports or FAA facilities, placing packages or other objects in unusual locations, and any activity performed in a manner that is suspect of malice) on the Domestic Events Network (DEN) at 844-432-2962 (toll-free). In addition, these types of suspicious activities must be reported to local law enforcement, the airport manager, aircraft operator, or any combination thereof as appropriate. Do not attempt to delay, detain, or question suspects, but do attempt to keep the person or persons under surveillance until law enforcement representatives arrive.

***NOTE−***
*Procedures for reporting other suspicious activities or security events are located in JO 7210.3, paragraphs 2−1−31, Reporting Suspicious Aircraft/Pilot Activities; 2−1−34, Reporting Suspicious UAS Activities; 2−1−40, Transportation Security Administration and FAA Joint Operating Procedures; and 2−7−7, Cooperation with Law Enforcement Agencies.*

## 2−7−7. COOPERATION WITH LAW ENFORCEMENT AGENCIES

**a.** Theft of aircraft and other suspicious activities concerning aircraft have complicated the task of law enforcement agencies, particularly with federal drug enforcement efforts. Any information the Federal Bureau of Investigation (FBI) and Department of Homeland Security (DHS) obtains on these activities could assist their investigations. ATC facilities must report information pertaining to stolen aircraft and other suspicious activities concerning aircraft on the Domestic Events Network (DEN) as described in subparagraph c.

***REFERENCE−***
*FAA Order JO 7210.3, Para 2−7−6, Suspicious Activities Around Airports or FAA Facilities.*

**b.** The Blue Lightning Initiative, led by U.S. Customs and Border Protection and the Department of Transportation, trains airline personnel to identify potential traffickers and human trafficking victims, and to report their suspicions to federal law enforcement. Reports of suspected human trafficking must be reported on the DEN as described in subparagraph c.

**c.** Report on the DEN directly if the ATC facility is actively monitoring the DEN or has a dedicated line to the DEN. Otherwise, the ATC facility must immediately report the above referenced activities on the DEN via 844-432-2962 (toll free).

## 2−7−8. FACILITY VISITORS

**a.** Persons interested in the services and facilities provided by air traffic should be encouraged to visit facilities for familiarization. The facility air traffic manager or a designated representative may authorize these visits if:

**1.** The presence of visitors does not interfere with the operation of the facility.

**2.** There is no breach of security directives.

**3.** Personnel are or will be available to conduct an escorted tour.

**b.** Foreign national visits must be handled in accordance with current directives.

## 2−7−9. SECURITY OF JOINT-USE RADAR DATA

Personnel involved in a joint-use radar environment must be familiar with the provisions of directives concerning the security of joint-use radar.

# Section 8. Medical

## 2−8−1. GENERAL

The following explains methods and procedures for ensuring that employees engaged in the actual control of air traffic meet the medical requirements of the Office of Personnel and Management Qualification Standards as outlined by FAA Order 3930.3, Air Traffic Control Specialist Health Program, and Title 14 CFR part 65 and part 67. The Regional Flight Surgeon/Assistant Regional Flight Surgeon (hereinafter referred to as Flight Surgeon) will perform required examinations or review reports of medical examinations and ancillary tests to make a determination as to whether medical requirements are met. Supervisors should obtain the medical opinion of the Flight Surgeon concerning any employee whose medical condition appears questionable; details of the problem should be presented to the Flight Surgeon for an evaluation and determination in accordance with FAA Order 3930.3.

## 2−8−2. MEDICAL CLEARANCE REQUIREMENTS

**a.** Personnel actively engaged in the separation and control of air traffic, including Traffic Management Coordinators (TMCs) must possess a current medical clearance. ATCSs assigned to FSSs in Alaska are also required to be evaluated under and meet the requirements of FAA Order 3930.3.

**b.** If the facility air traffic manager determines that the permanent staff/support specialist (SP) must be operationally qualified, then the employee must possess a current medical clearance.

**c.** Employees who do not engage in ATC need not be medically cleared; however, if any employee is required to infrequently operate a control position, they must possess a current medical clearance.

**d.** The Flight Surgeon in consultation with facility officials may make a determination that although medical requirements are met, an ATCS should be temporarily restricted from actual ATC duties. An employee temporarily prohibited from ATC duties because of required medication or other questionable medical status may be assigned to temporary administrative duties dependent upon availability of productive work and the capability of the employee to do the work.

**e.** Employees who possess a current medical clearance are responsible to comply with all restrictions, limitations, or cancellations of the certificate applicable to the performance of ATC duties.

## 2−8−3. SPECIAL MEDICAL EVALUATIONS

In some cases, the Flight Surgeon may require additional medical information to determine if the medical requirements are met and will provide information to facility officials to arrange appointments for special medical evaluations. Results of these evaluations will be forwarded to the Flight Surgeon by the consultant physician.

## 2−8−4. SPECIAL CONSIDERATION

**a.** Personnel required to possess a current medical clearance may be granted special consideration if at any time it is determined that medical requirements are not met. Each case must be considered on an individual basis. The Flight Surgeon in coordination with the Service Area

Director will make a determination on which management officials may base administrative action.

**b.** The Service Area Director must document all special consideration determinations and forward copies to System Operations and Safety, System Safety and Procedures.

## 2−8−5. USE OF DRUGS AND SEDATIVES

The following policy must apply in regard to the use of drugs and sedatives:

**a.** Personnel may be assigned to their regular positions of operation within ARTCCs, terminal facilities, FSSs, even though they are taking innocuous medication, such as aspirin derivatives, vitamin preparations, nose drops, skin ointments, and routine immunizations.

**b.** Personnel taking either regular or prolonged antihistamines may be assigned to positions of operation provided individual special considerations are obtained. These special considerations may be granted on a permanent basis after it has been determined by the Flight Surgeon that there are no deleterious effects of the antihistamine or the condition for which it is being used.

## 2−8−6. RESTRICTED DRUGS

**a.** Personnel ordinarily assigned to an operating position, including those who have direct supervision of the specialists within the facility, must not use the types of drugs listed below within a 24-hour period before assumption of duty:

**1.** Sedative type drugs.

**2.** Tranquilizers.

**3.** Any drugs, such as but not limited to antihypertensive agents or duodenal ulcer medications, which have an effect on the central or autonomic nervous system.

**4.** Any other drug and/or medication likely to affect the alertness, judgment, vision, equilibrium, or state of consciousness.

**b.** When the employee is advised by a physician that adequate treatment of an ailment will require use of the types of drugs or medication referred to above, the employee must not perform control duties. If the period of required treatment by these types of drugs or medication is anticipated by the physician to exceed 2 weeks (especially if prolonged or permanent treatment is indicated), the supervisor should promptly obtain the opinion of the Flight Surgeon concerning the continued utilization of the employee. The medical determination as to continued operational duty by an ATCS on medication will be made by the Flight Surgeon after consultation with the supervisor on a case-by-case basis.

## 2−8−7. BLOOD DONORS

Personnel must not be assigned to traffic control duties until at least 12 hours have elapsed after blood donation.

## 2−8−8. USE OF ALCOHOL AND OTHER DRUGS

Standards of conduct for FAA employees regarding the use of intoxicants are contained in Human Resource Policy Manual (HRPM), Standards of Conduct. In addition to conforming to those standards, FG-2152s and FG-2154s must not perform ATC functions (including FG-2154 duties) or directly supervise personnel performing these functions within 8 hours after partaking in intoxicants.

## 2−8−9. MEDICAL STATUS DETERMINATIONS ON FG-2154S

FG-2154s, Air Traffic Assistants (ATAs), are not subject to FAA Order 3930.3, Air Traffic Control Specialist Health Program, and 14 CFR part 65 and part 67; however, FG-2154s, because of the importance of their duties, will have a medical opinion rendered on their abilities to perform the job. This opinion would be requested when the employee's medical condition appears questionable or when the individual is taking certain medication. For the purpose of securing these opinions, paragraph 2−8−5 through paragraph 2−8−8 apply to FG-2154s.

# Section 9. Weather/Visibility

## 2−9−1. BACKUP/AUGMENTATION OF WEATHER OBSERVATIONS

**a.** Facilities where air traffic personnel provide backup/augmentation of automated weather observations, or take manual observations, must use FAA Order 7900.5, Surface Weather Observing-METAR, as the basic source of guidance for completion of observations.

**b.** In an automated weather environment, elements of automated weather observations may be used for operational purposes (i.e., wind and altimeter).

**c.** Specialists responsible for providing backup/augmentation of automated weather observations, or manual observations, must be certified by the FAA.

***REFERENCE−***

*FAA Order JO 7900.5, Appendix J, Aviation Weather Observer Certification Process.*

## 2−9−2. RECEIPT AND DISSEMINATION OF WEATHER OBSERVATIONS

**a.** Facility air traffic managers must establish a means by which the receipt of weather observations are immediately known to facility personnel responsible for dissemination to other facility functions and that these functions are made aware of changes as they are posted. In addition, facility managers must establish procedures through the facility SOP that will ensure all positions of operation receive and acknowledge any change in reportable visibility value when the tower has the responsibility for visibility reporting. This may be accomplished by means of an alerting device, location of weather receiving equipment at positions so that any change of data is recognized, or any other means which may be best suited to the facility work environment.

**b.** To the extent possible, facility air traffic managers must establish procedures to acknowledge receipt of weather observations. Where possible, establish an agreement with the appropriate weather source to share the responsibility for ensuring the receipt of the observation. Automated Surface Observing System(s) (ASOS), Automated Weather Observing System(s) (AWOS), and Automatic Weather Information System (AWIS) locations are not required to acknowledge receipt of observations.

**c.** The addition or deletion of a weather reporting location must be coordinated through the appropriate Service Area office, for forwarding to System Safety and Procedures. System Safety and Procedures must initiate the required actions for additions and/or deletions to the national data base. When adding new weather reporting locations, include a statement that:

1. An aviation requirement exists.
2. The observers are/have been certified by the FAA.
3. No other observation exists in the surface area, if applicable.
4. Identifies the hours that the data will be available if less than 24 hours, i.e., 0800Z-2300Z.
5. Identify what facility will be responsible for observation entry into the system.

**d.** AWOS towers with LAWRS certified controllers should disable the AWOS long-line communications capability during facility operating hours and use the AWOS data when representative of airport conditions to generate a manual METAR/SPECI observation. If AWOS

is able to provide METAR/SPECI observations (for example, FAA AWOS-C) and allows augmentation and backup entries, the AWOS may be used the same as ASOS.

***NOTE–***
*Ensure AWOS long-line communication is enabled when the facility closes.*

## 2–9–3. LIMITED AVIATION WEATHER REPORTING STATION (LAWRS) HOURS OF OPERATION

**a.** Facility air traffic mangers must submit to System Operations Airspace and Aeronautical Information Management office the hours of operation with the date that the facility commences participation in the LAWRS program and any changes thereafter in the hours of participation.

**b.** All part-time terminal facilities must include sign ON/OFF procedures for the automated weather observation system in the facility opening/closing procedures.

***NOTE–***
*This includes LAWRS and tower visibility facilities.*

**c.** All LAWRS facilities must ensure the automated weather observation system equipment is added to the facility watch checklist.

## 2–9–4. NONAVIATION WEATHER SERVICE

Facilities must not enter into agreements with any person or office, including fixed-base operators, to provide weather data for property protection purposes. The FAA must not be responsible for providing weather information unless it is directly related to the actual or intended operation of aircraft. Personnel must not encourage nor solicit nonaviation weather activity. Refer requests for this type of weather information to the nearest WSO.

## 2–9–5. NATIONAL WEATHER RECORDS CENTER

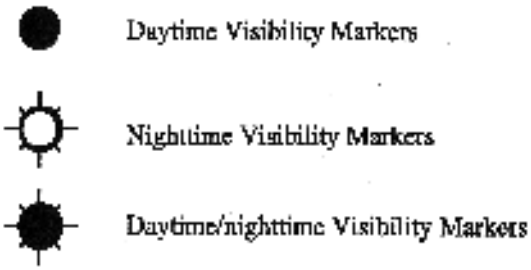
Refer requests for surface weather observations from non-aviation sources; e.g., requests from insurance companies for weather data relative to storm damage, to the National Weather Records Center, Environmental Data Service, Federal Building, Asheville, N.C., 28801.

## 2–9–6. VISIBILITY CHARTS

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

**1.** Prepare a chart(s) or list(s) for daytime and nighttime visibility markers. At local discretion, visibility markers may be depicted on separate daytime and nighttime charts or on a daytime/nighttime combination chart. Panoramic photographs marked with distances and cardinal compass points may also be used.

**2.** Daytime/Nighttime combination charts must use the following legend for each marker:




3. Each marker used must be identified and its distance from the observation point noted. Include the height of the marker if it is for estimating heights of clouds and obscuring phenomena.
4. Mapping programs, aircraft/vehicles, GPS and/or surveying equipment are all valid methods to develop visibility charts.

**b.** The air traffic manager must conduct an annual review and approve the visibility charts, lists, or photos to ensure their accuracy.

## 2−9−7. SITING CRITERIA FOR VISUAL WEATHER OBSERVATIONS

To give a proper indication of weather conditions in the areas of aircraft approaches, landings, and takeoffs, the site from which visual weather observations are made should ideally be the Airport Reference Point (ARP). If this is not practical, the site must be as close to the ARP as practical. Except in unusual circumstances, it should be no more than 2 miles from that point. The site must also have an essentially unobstructed view of:

**a.** The most frequently used instrument runway and its final approach area; and

**b.** At least half of each quadrant of the natural horizon.

## 2−9−8. RUNWAY VISUAL RANGE (RVR) EQUIPMENT

**a.** FAA is responsible for checking and determining the operational status of RVR systems. Air traffic personnel must report all actual or suspect RVR malfunctions to Technical Operations Control Center personnel who are responsible for:

1. All checks and adjustments to the RVR systems.
2. Determining the operational usability of all portions of the systems in accordance with applicable performance criteria in FAA Order JO 6560.8, Maintenance of Runway Visual Range (RVR) Equipment, or other appropriate RVR equipment instruction books.
3. Reporting immediately to authorized visibility observing personnel obvious error between information derived from the system and actual observed visibility conditions at the transmissometer site.

***NOTE−***
*Technical Operations personnel are not visibility observers. However, obvious errors or differences which are easily apparent to them will be reported to the visibility observer and the instrument-derived information should not be used.*

**b.** Air traffic personnel must also:

1. Verify accuracy with other displays in the facility when any meter and/or readout malfunction is suspected. Upon determining that at least one display is operating properly,

accomplish internal coordination to disseminate the current correct reading to all operating positions needing the information.

**2.** Notify the local weather observing facility immediately when malfunctioning of all airport traffic control tower (ATCT) and terminal radar approach control (TRACON) displays for the runway of concern is indicated or suspected. Upon verification of malfunction, request the weather observing facility to furnish RVR values for that runway. During such conditions, weather observing personnel will relay RVR information to tower personnel as long as equipment at the weather observing facility is known to be operating correctly and when the high intensity runway lights (HIRL) are on setting 3 or higher. RVR values provided during the malfunction will be based on a setting of 5 unless the control tower has specifically requested data for a lower light setting. The weather observing facility will provide the RVR at the time of notification that the traffic control facility readouts are inoperative. It will also provide notification as soon as possible when the values decrease to become equal to or less than, or increase to equal to or exceed:

**(a)** RVR 2,400 feet.

**(b)** The lowest authorized landing minimum for the runway of concern.

## 2−9−9. SPECIFIC AREA MESSAGE ENCODING (SAME) WEATHER RADIOS

*TERMINAL*

SAME Radios must only be used to provide weather information for occupants of Terminal facilities. This equipment is not certified for the purpose of providing weather or any other aviation-related information and therefore must not be used for any aviation-related purpose.

**a.** SAME Radios must not be used in lieu of pre-existing emergency evacuation procedures or FAA certified sources of aviation related weather data.

**b.** SAME Radios must only be programmed for the specific county/territory of the facility.

**c.** The following must be affixed to the SAME Weather Radio so as to be visible: “This equipment is not certified for the purpose of providing weather or any other aviation-related information and therefore must not be used for any aviation-related purpose.”

# Section 10. Wind/Altimeter Information

## 2−10−1. WIND INSTRUMENT SENSORS

Air traffic managers must designate in a facility directive which wind sources must be used for operational purposes.

**a.** Towers equipped with LLWAS may use direct dial or LLWAS wind information for weather observations, except where automated wind information is available.

**b.** Approach control facilities may use direct dial, LLWAS, or automated display wind information for operational purposes.

**c.** FSSs must use direct dial or automated display wind information for operational purposes.

**d.** Other exceptions must be referred to the Manager of System Safety and Procedures for approval.

## 2−10−2. WIND INDICATOR CROSS CHECK

All FAA facilities having an associated NWS office or military weather station using the same sensing equipment must compare wind direction and speed indicator readings at the beginning of each work day with those of the NWS or military weather station, keeping in mind that the NWS wind direction equipment are oriented to true north. Apply the magnetic variation to ensure a correct reading. Coordinate the time of the cross-check and the associated procedures with the meteorologist-in-charge or other appropriate officer. Wind instrument errors must be handled as follows:

**a.** If an FAA wind direction indicator is out of tolerance with other indicators on the same sensor by 5 degrees, or if the wind speed indicator reveals a disparity of plus or minus 5 knots, notify the appropriate maintenance personnel immediately for corrective action.

**b.** If the indicators show an error of over 10 degrees or 10 knots, the equipment must be considered inoperative. In this case, obtain further wind information from other properly functioning wind instruments in the tower, local FSS, the NWS, or military weather office. Notify the appropriate maintenance personnel of all outages.

## 2−10−3. ALTIMETER REQUIREMENTS

**a.** At least two sources of altimeter setting information or an approved pressure standard are required in a TRACON, Radar Approach Control facility (RAPCON), Terminal Radar Approach Control in tower cab (TRACAB), Combined Control Facility (CCF), Radar Air Traffic Control Facility (RATCF), Army Radar Approach Control (ARAC), tower cab, and a FSS that takes weather observations and/or provides Local Airport Advisories (LAA). When two or more facilities are located on the same airport, the requirement may be reduced to one source of altimeter setting information per facility. Aircraft altimeters must not be used in reporting altimeter settings.

***NOTE−***
*Stand alone RADAR approach control facilities (TRACON, RAPCON, RATCF, CCF) not associated with a control tower are only required to maintain altimeter settings for those airports under their jurisdiction.*

**b.** Each of the following systems is considered to be one (1) source of altimeter setting information for the purposes of this paragraph:

**1.** Automated Surface Observing System (ASOS)
**2.** Automated Weather Observing System (AWOS)
**3.** Stand Alone Weather Sensor (SAWS)
**4.** Surface Weather System (SWS)
**5.** Digital Altimeter Setting Indicator (DASI)
**6.** Altimeter Setting Indicator (ASI)

**c.** ASOS, AWOS, SAWS, and SWS systems are considered approved pressure standards for the purposes of this paragraph.

## 2−10−4. COMPARISON CHECKS

**a.** Comparison checks against another source of altimeter setting information are not required for ASOS, AWOS, SAWS or SWS.

***NOTE−***
*ASOS, AWOS, SAWS, and SWS are equipped with a minimum of two (2) and as many as three (3) digital pressure transducers.*

**b.** Facilities equipped with ASI or DASI:

**1.** Compare the reading of each ASI daily with a collocated ASOS/AWOS/SAWS/SWS or with the altimeter setting issued by an associated facility with a commissioned ASOS/AWOS/SAWS/SWS that is located either on the airport or within the distances set forth in subparagraphs c and d.
**2.** When the differences between the two altimeter settings exceeds 0.05 in. Hg. at nonprecision approach locations or 0.02 in. Hg. at precision approach locations, remove the instrument from service and notify Technical Operations personnel. When all ASI instruments in the facility are found to exceed the tolerances, report the altimeter setting as *missing*.
**3.** When the difference is less than the tolerances specified in subparagraph 2 above, the value (+ or -) is applied as the correction factor to determine the operational altimeter setting.
**(a)** On dial-type display ASIs, post the correction factor directly on the face of the instrument. Use the same comparison procedures and determine the correction factor for each instrument in the facility.
**(b)** On DASI systems, local facility procedures must be developed in coordination with the associated Technical Operations office to make routine comparison checks with ASOS/AWOS/SAWS/SWS and adjust the DASI to display the correct altimeter setting.

***NOTE−***
*Facilities that have DASI equipment that is not FAA owned or maintained must accomplish the procedures in paragraph 2−10−4, b1, b2 and b3(a) monthly.*

**c.** At ASI or DASI locations that are not collocated with a commissioned ASOS/AWOS/SAWS/SWS, make a comparison against the altimeter setting issued by an adjacent facility with a commissioned ASOS/AWOS/SAWS/SWS.

1. At locations where precision approaches are conducted, the facility used for comparison must be located within 10 NM, and at both locations the wind speed must be 12 knots or less with no gusts above 15 knots.
2. At all other locations the distance must not exceed 25 NM, and at both locations the wind speedmust be 15 knots or less with no gusts above 20 knots.
3. The difference in elevation does not exceed 100 feet at precision approach locations and 200 feet at all other locations.
4. The station's temperature at both locations must be within 30 degrees Fahrenheit of the standard atmosphere temperature for the station's elevation.

***NOTE–***
*The following formula may be used to determine the standard atmosphere temperature for station elevation:*

***TBL 2–10–1***

| |
|---|
| T = Standard Temperature is 59°F |
| H = Field Elevation. |
| 0.0036 Standard Atmospheric Temperature change per foot. |
| H x 0.0036 = Standard Temperature for station elevation. |

***EXAMPLE–***

1. *Tower A field elevation 600 feet: 600 x 0.0036 = 2.16°F of change, is rounded to 2°F.*
   *59°F - 2°F = 57°F standard temperature for Tower A adjusted for elevation.*
2. *Tower B field elevation 700 feet: 700 x 0.0036 = 2.52°F of change, is rounded to 3°F.*
   *59°F - 3°F = 56°F standard temperature for Tower B adjusted for elevation.*
   *If both sites are between ± 30°F {87°F and 27°F for Tower A and 86°F and 26°F for Tower B} a comparison check is appropriate for temperature.*

5. Do not use altimeter setting values when the difference exceeds ± 0.02 in. Hg. at precision approach locations or ± 0.05 in. Hg. at all other locations.

**d.** An approved pressure standard is required for routine altimeter setting comparison checks at all facilities that exceed the requirements of subparagraph c.

## 2–10–5. DELIVERY OF ALTIMETER SETTING TO ARTCC

ARTCCs having a requirement for interphone delivery of altimeter settings, or changes of report, must make arrangements with FSS/terminals for delivery to associated sector/s.

## 2–10–6. BROADCAST DENSITY ALTITUDE ADVISORY

Terminal and FSS facilities at airports with field elevations of 2,000 feet MSL or higher must broadcast a density altitude advisory to departing general aviation (GA) aircraft whenever the temperature reaches a certain level. These broadcasts must be made on ground control (GC), clearance delivery (CD), airport advisory, or automatic terminal information service (ATIS) as appropriate. Use the following table to determine broadcast applicability: (See TBL 2–10–1.)

*TBL 2−10−2*

**Broadcast Applicability**

| *Field Elevations (MSL)* | *Broadcast Advisory When Temperature is* |
|---|---|
| 2,000 to 2,999 | 85°F and higher |
| 3,000 to 3,999 | 80°F and higher |
| 4,000 to 4,999 | 75°F and higher |
| 5,000 to 5,999 | 70°F and higher |
| 6,000 to 6,999 | 65°F and higher |
| 7,000 and higher | 60°F and higher |

## 2−10−7. HIGH BAROMETRIC PRESSURE

When the barometric pressure within an ARTCC's area of jurisdiction is greater than, or forecast to be greater than, 31.00 inches of mercury (31"Hg), the affected ARTCC must request the U.S. NOTAM Office to issue a high barometric pressure restrictions NOTAM for the affected geographical area.

***REFERENCE-***

*FAA Order JO 7930.2, Para 7–1–4, High Barometric Pressure Warning.*

*FAA Order JO 7210.3, Para 19–3–1, Authorizations and Exemptions from Title 14, Code of Federal Regulations (14 CFR).*

*AIM, Para 7–2–3, Altimeter Errors.*

*14 CFR Section 91.144, Temporary Restriction on Flight Operations During Abnormally High Barometric Pressure Conditions.*

# Chapter 3. Facility Equipment

## Section 1. General

### 3−1−1. BASIC EQUIPMENT

**a.** The basic operating equipment for ARTCCs consists of flight progress boards, radar displays, communications, and automation equipment. At facilities utilizing ATOP, additional equipment consists of Air Traffic Situation Displays and Auxiliary Displays. This equipment is arranged in individual units called sectors and laid out in accordance with plans maintained by Technical Operations and Air Traffic Services. Air traffic managers may recommend changes to these plans.

**b.** The basic operating equipment for terminals consists of a control desk, frequency control panel, weather instruments, recorders and, as required, "data communication," radar, and automation equipment arranged in many different configurations according to the type of facility and generally conforming to plans by the ATO per FAA Order JO 6480.7, Airport Traffic Control Tower (ATCT) and Terminal Radar Approach Control (TRACON) Design Policy. Air traffic managers may recommend changes to these plans.

**1.** At terminal facilities where certified information display system (IDS) equipment is installed, the IDS must be the display source for the time, DASI, RVR, wind (including wind shear ribbon display terminals), and weather data from ASOS, AWOS, SAWS, SWS, etc.

**2.** If all control positions are using a certified IDS, no more than one legacy display for each type (DASI, RVR, etc.) may remain in the tower and/or TRACON for back-up purposes.

**3.** Facilities that use uncertified IDS must ensure the information is cross-checked with the actual source for accuracy in accordance with the facility's daily watch checklist (for example, ASOS, RVR, LLWAS, etc.).

***NOTE-***
*For facilities using certified systems, these comparisons are performed by technical operations personnel.*

**4.** Air traffic facilities that use electronic IDS must ensure that all displayed information is current. Facilities must ensure that any information with a scheduled expiration is removed from the controller display at the time of expiration unless operationally necessary.

***NOTE-***
*This includes Notice to Airmen (NOTAM) information which may be viewed on the Enterprise Information Display System (E-IDS), Aeronautical Information System Replacement (AISR), or at: https://notams.aim.faa.gov/notamSearch.*

**c.** The basic operating equipment for FSSs consists of radio and landline communications equipment, automation equipment, flight progress boards, pilot briefing equipment, recorders, data communications equipment, displays of aeronautical and meteorological information, and aircraft orientation plotting boards. Air traffic managers may recommend changes to these plans.

## 3−1−2. PERIODIC MAINTENANCE

**a.** Requests from Technical Operations personnel for approval to shut down air traffic system components for periodic maintenance are forwarded to the air traffic facility having approval authority.

**b.** If conditions prevent approval of the shutdown at the time requested, the OMIC/OSIC should cooperate fully and work with Technical Operations personnel in arranging an alternative time. Ordinarily, shutdowns of air traffic system components should be planned to occur during the hours of least traffic activity regardless of the time of day.

***NOTE−***
*The OMIC/OSIC should coordinate with System Operations Traffic Management in determining alternate times.*

**c.** When a NAVAID shutdown will affect another facility's operation, the facility having approval authority must coordinate with other facilities concerned.

## 3−1−3. NATIONAL AIRSPACE SYSTEM (NAS) CHANGES

When programs are initiated which will result in inauguration, commissioning, alteration, or decommissioning of NAS components (NAVAIDs, facilities, services, etc.), supervisors must ensure, to the extent practicable, that effective dates coincide with the U.S. 56-day cycle effective dates for charting publications.

## 3−1−4. TRAFFIC LIGHTS, GATES, AND SIGNALS

Air traffic personnel must not operate traffic lights, gates, signals, or similar devices for restricting or preventing transit of persons or vehicles between airport movement areas and other on/off airport areas, or to control vehicular traffic on streets, highways, rail, or other similar areas when traffic thereon may be incompatible with aircraft operations. The control of such traffic is the responsibility of airport management or other appropriate authorities.

## 3−1−5. CLEANING INSTRUMENT COVERS

Air traffic managers must ensure that personnel use a moist cloth when cleaning glass or plastic instrument covers to preclude the creation of static charges.

***NOTE−***
*FSS OASIS facilities should exercise caution in the handling of flat panel monitors. Do not touch the screen with any object, including hands. Damage to the screen will occur. Detailed instructions for the care of the monitors can be found in the WINGS Systems Users Guide.*

## 3−1−6. ENGINE GENERATOR TRANSFER PROCEDURES FOR ANTICIPATED POWER FAILURE

**a.** STMCIC or OSIC at terminal facilities and ARTCCs must inform the systems engineer (SE) or other appropriate Technical Operations supervisor of any severe storm activity approaching the facility. The STMCIC or OSIC must advise the OMIC.

**b.** At facilities without an operational power conditioning system (PCS), the STMCIC or OSIC must coordinate with the SE or other appropriate Technical Operations supervisor to determine a mutually acceptable time to change to/from generator power.

***NOTE−***

1. *Air traffic and Technical Operations personnel are required to monitor weather reports and radar to determine when severe storm activity is approaching a facility. At least 30 minutes prior to the estimated arrival of a severe storm in the area of a facility, maintenance personnel will start engine generators at facilities as indicated in appropriate agency directives. (These include the Facilities Master File; FAA Order JO 6030.31, National Airspace System Failure Response; local contingency/emergency plans, or any other directives pertaining to restoration of services.) This 30-minute start-up requirement does not apply at facilities where at least one of the following conditions exists:*
   - **a.** *The facility has an operational PCS.*
   - **b.** *Maintenance personnel are not on duty at the time action is required.*
   - **c.** *Air traffic has remote control of the engine generators.*
2. *After coordinating with air traffic, Technical Operations must (depending on the type of auxiliary power system) either place the facility on generator power or place the generator on the loadbank until the storm activity has left the area. (The change back to commercial power will be made at the coordinated time.)*
3. *It is important to note that at facilities with an operational PCS, no action other than the initial storm notification is required since the transfer to generator power occurs automatically with no power interruption when commercial power fails.*

***REFERENCE−***

*FAA Order JO 6030.31, National Airspace System Failure Response.*

# Section 2. Use of Communications

## 3−2−1. RESPONSIBILITY

The air traffic manager is responsible for taking action to detect, prevent, and report:

**a.** Obscene, indecent, or profane language used on any means of communications (e.g., voice frequencies, Satellite Communication(s) (SATCOM), Controller Pilot Data Link Communications (CPDLC)).

**b.** False, deceptive, or phantom controller communications to an aircraft or controller. The following must be accomplished when false or deceptive communications occur:

**1.** Collect pertinent information regarding the incident.

**2.** Notify the Regional Operations Center (ROC) of the phantom controller situation and request a conference call with the Technical Operations, System Management Office (SMO) manager, the Spectrum Management Officer, the Service Area Director and the Security and Hazardous Materials Division Manager.

**3.** Report all relevant information pertaining to the incident on the telephone conference.

**4.** Save the audio file(s) on Digital Audio Legal Recorder (DALR) and National Voice Recorder (NVR) systems associated with the false or deceptive communications to an Organizer incident. Add the pertinent information to the Organizer incident, export the Organizer incident to a folder and copy it to external media in accordance with FAA Order JO 8020.16, Air Traffic Organization Aircraft Accident and Incident Notification, Investigation, and Reporting. The folder containing incident files should be saved to other media (e.g., flash drive, CD, or DVD) and labeled in accordance with FAA Order JO 8020.16.

**c.** Identification used on frequencies not assigned or authorized by the FAA.

**d.** Willful or malicious interference with other communications.

**e.** Remarks of a personal nature on any means of communications (e.g., voice frequencies, SATCOM, CPDLC).

## 3−2−2. AUTHORIZED MESSAGES NOT DIRECTLY ASSOCIATED WITH AIR TRAFFIC SERVICES

Occasions may arise when messages by a third party pertaining to the safety of aircraft operation or the preservation of life and/or property are necessary. Such messages may be authorized on FAA radio communications channels. They may be handled by air traffic specialists or the individuals making the request. The latter may be given access to facilities to personally issue such messages provided (See FAA Order 6050.32, Spectrum Management Regulations and Procedures Manual):

**a.** Control instructions must not be issued.

**b.** Transmission can be interrupted when required to continue ATC services.

***REFERENCE−***

*Advisory Circular AC 150/5210-7, Aircraft Rescue and Fire Fighting Communications.*

## 3−2−3. USE OF OTHER THAN FAA COMMUNICATIONS CIRCUITS

FAA personnel must be responsive to any State or local governmental agency offering to use their communications facilities for the relay of flight plan information and to cooperate with such agencies in developing procedures for relaying flight plan information to FAA facilities.

## 3−2−4. FBI USE OF FAA FREQUENCIES

Local FBI offices have been authorized to contact FSSs and ATCTs to consummate local agreements for emergency use of specific frequencies using FBI transceiver equipment in hijacking situations. To facilitate the handling of these requests, the guidelines set forth below must be followed (see paragraph 3−2−2, Authorized Messages Not Directly Associated with Air Traffic Services):

**a.** Selection of FSS and ATCT radio frequencies is flexible, but it must be from existing local assignments and approved by the air traffic manager after coordination with the regional frequency management office.

**b.** Selection of tower radio frequencies is flexible, but it must be from existing local assignments and approved by the air traffic manager after coordination with the regional frequency management office. Requests for frequency between 121.60 and 121.90 MHz can be expected.

## 3−2−5. AERONAUTICAL ADVISORY STATIONS (UNICOM/MULTICOM)

Pursuant to FCC Rules and Regulations, Part 87, Subpart C, UNICOM stations are not authorized for ATC purposes other than the relay of certain ATC information between the pilot and the controller. Relay of ATC information is limited to:

**a.** Takeoff, arrival, or flight plan cancellation times.

**b.** ATC clearances, provided there is a LOA between the licensee of the advisory station and the FAA facility.

# Section 3. Communications Procedures

## 3−3−1. COMMUNICATIONS

Facility air traffic managers must establish a facility Contingency Plan that addresses procedures for providing interim communications during power outages, and other significant events.

## 3−3−2. TELEPHONE COMMUNICATIONS

**a.** Answer public access telephones by stating the facility's name and type. The employee may state his/her name at his/her discretion. If, for any reason, a caller specifically requests identification, the employee should provide his/her assigned operating initials in lieu of the actual name. Contract facilities must answer public access lines by stating the name of the service provider and type.

***EXAMPLE−***

*ARTCC: (The facility's name) Center; for example, "Washington Center."*

*FSS: (The facility's name) Flight Service; for example, "Juneau Flight Service" or "(Service Provider Name) Flight Service."*

*ATCT: (The facility's name) Tower; for example, "Atlanta Tower."*

*Approach Control: (The facility's name) Approach Control; for example, "Dulles Approach Control."*

**b.** Answer local airport, private exchange (PX), or interdepartmental system type telephones as outlined above, except omit the location name; e.g., Center, Tower, Flight Service, etc.

**c.** Where the public access telephone is recorded, a beeper tone is not required. In place of the "beep" tone, the FCC has substituted a mandatory requirement that persons to be recorded must be given notice that they are to be recorded and give consent. This notice is given to the public through an entry in the Aeronautical Information Manual (AIM). Consent to the record is assumed by the individual when placing the call to an operational facility.

**d.** When equipment capabilities exist, every effort should be made to conduct conversations regarding ATC services, aircraft accidents, incidents, and contingency operations on a recorded line.

**e.** Recorded telephone lines must be identified in the facility SOP.

## 3−3−3. MONITORING FREQUENCIES

**a.** Frequencies allocated to a facility must be continuously monitored except:

**1.** ARTCCs need not monitor 121.5 and 243.0 MHz if other ATC facilities monitor those frequencies in a given area.

**2.** FSSs equipped with ICSS equipment may reconfigure the ICSS to allow the temporary selection, muting, or rerouting of 121.5 and 243.0 MHz during the period of an interfering signal; e.g., continuous emergency locator transmitter (ELT), stuck mike, etc.

**b.** Facilities must establish procedures to ensure that frequencies used on a shared basis; e.g., single frequency approach operations, are continuously monitored by one of the positions of operation.

## 3−3−4. EMERGENCY FREQUENCIES 121.5 AND 243.0 MHZ

**a.** Air traffic facilities must have transmit and receive capability on emergency frequencies 121.5 and 243.0 MHz as necessary to meet emergency frequency network requirements.

**b.** At locations having more than one type of facility, such as a FSS and a tower, or a FSS, a tower, and an ARTCC, a common transmitter and receiver may be shared where practicable. Where this is done, the transmitter must be equipped with a lockout device to avoid inadvertent interference between facilities.

**c.** When facilities are in proximity and no derogation of services will result, transmit/receive capability should not be provided for each facility. The following requirements must be maintained:

**1.** Geographical area coverage must not be derogated.

**2.** Facilities without emergency frequency capability must have appropriate landlines for rapid relay of emergency information.

**d.** The two emergency channels must not be terminated on the same key in the transmitter-receiver selector panels. Neither emergency frequency must be terminated with any other frequency.

**e.** To preclude inadvertent use of these frequencies, a mechanical or other appropriate device must be provided which will require deliberate removal or bypass before any emergency frequency transmit key can be moved to the locked-operate position.

**f.** UHF emergency frequency 243.0 MHz is installed in military aircraft using an override arrangement. As a result, transmissions on this frequency are received by all military aircraft within the transmitter's area of coverage. Unnecessary emissions on this frequency derogate communications on ATC frequencies and may interfere with valid emergency communications. Reduce transmissions on 243.0 MHz to the absolute minimum consistent with safety.

**g.** As a minimum, conduct two-way, ground-to-air checks during low activity periods:

**1.** Once a week.

**2.** Following equipment repairs.

**3.** Following Technical Operations maintenance checks.

**h.** Control facilities should limit broadcasts on 243.0 MHz to the facility in the area of desired coverage and must ensure that broadcasts are not continued unnecessarily.

## 3−3−5. BATTERY-POWERED TRANSCEIVERS

Facilities equipped with battery-powered transceivers must ensure they are maintained in a state of readiness. Transceivers identified for use during a Contingency Plan Event must be checked weekly for receive and transmit capability on both battery and commercial power. These checks facilitate controller familiarization.

***REFERENCE−***

*FAA Order JO 7210.3, Subpara 4−6−5g, Preparation of FAA Form 7230-4.*

## 3−3−6. FACILITY STATUS REPORT

Facility air traffic managers must notify System Operations and Safety by message, attention Manager of System Safety and Procedures, with an information copy to the appropriate Service Area office, of changes in the operational status of communication facilities not covered by FAA Order

7900.2, Reporting of Electronic Navigation Aids and Communication Facilities Data to Aeronautical Information Services. The following data must be reported (include the RIS AT 7230-12 in the text):

**a.** The date and time FAA assumes operation of or decommissions an operations center, message center, data switching center, domestic or international aeronautical fixed telecommunication network (AFTN) "data communication circuit," or international voice circuit.

**b.** Change in the hours of operation of any of the above and the effective date.

**c.** Changes required in weather schedule publications and communications systems drawings.

## 3−3−7. TESTING EMERGENCY LOCATOR TRANSMITTERS

**a.** The frequencies 121.6, 121.65, 121.7, 121.75, 121.8, 121.85, and 121.9 MHz are authorized to ELT test stations and for use in ELT exercises by the Air Force, Coast Guard, and other search and rescue organizations. Coordination with regional frequency management offices must be effected prior to activating the transmitter. Non-Federal assignments must be obtained through the FCC.

**b.** Airborne ELT tests must not be authorized.

**c.** Aircraft operational testing of an ELT is authorized on 121.5 MHz and 243.0 MHz as follows:

**1.** Tests should be no longer than three audio sweeps.

**2.** If the antenna is removable, a dummy load should be substituted during test procedures.

**3.** Tests must only be conducted the first 5 minutes of any hour.

**d.** Normally, there will be no interference on 121.5 MHz or 243.0 MHz as testing will be conducted in a screened or shielded room or test enclosure that will hold the self-contained ELT unit with the antenna fully extended. If interference is noted, it must be brought to the attention of the repair station operator for corrective action. If the repair station operator does not correct the fault and the interference continues, make a verbal report to the appropriate FSDO.

## 3−3−8. VSCS FREQUENCY BACKUP

**a.** Assign each "Radar Associate" position the identical frequencies as the "Radar" position except where precluded by system hardware/software limitations or facility needs.

**b.** If the conditions of paragraph a cannot be met, the frequencies needed to control each sector must be available at another position. This level of redundancy assures all A/G frequencies can readily be covered in the case of VCE outage.

## 3−3−9. VSCS RECONFIGURATIONS

**a.** Air traffic VSCS positions listed as "released to maintenance" must not be reconfigured unless prior approval has been received from Technical Operations.

**b.** When approval has been obtained and the reconfiguration action has been completed, return the previously released position to Technical Operations and continue to list the position as "released to maintenance," or as directed by Technical Operations.

***NOTE−***
*During the period that the VSCS position is listed as "released to maintenance," this procedure must be utilized whenever a reconfiguration to the position is required.*

## 3−3−10. VTABS (VSCS TRAINING AND BACKUP SYSTEM)

**a.** Facility air traffic managers must ensure that local procedures are developed which will accommodate switching from VSCS to a VTABS operation. These procedures must include, but not be limited to:

**1.** Controllers must, in the event that VSCS air/ground communications capabilities are lost, notify the operational supervisor and attempt to access all air/ground resources through the VSCS via Main, Standby, and BUEC.

**2.** The operational supervisor must notify the operations manager-in-charge (OMIC) and consider combining sectors within the area before going to a VTABS operation. The VTABS system is designed wherein the entire facility must be switched over to VTABS. Consider all alternatives before making the transition to VTABS. If these resources are unsuccessful, the OMIC must coordinate with the NOM to transition to VTABS.

**3.** Operational supervisors must ensure the VTABS sector map configurations are appropriate for the operation.

**4.** Controllers must verify the appropriate VTABS frequency mode; i.e., main, standby, or BUEC, for their operating position, since the VTABS frequency selection will be in the same mode as when it was last used.

**b.** When a catastrophic loss of VSCS occurs and transfer to a VTABS configuration becomes necessary, the OMIC must assure that the procedures established in paragraph 2−1−7, Air Traffic Service During Planned and Unplanned Outages, are adhered to.

## 3−3−11. HEADSET TONE INCIDENTS

FAA Contract Towers (FCT) NOT APPLICABLE.

**a.** Facility air traffic managers will ensure that reported headset tones are documented, the Safety Management Information System (SMIS) is updated, and affected equipment tested. Headset tone incidents must be handled in accordance with Appendix 5, Checklist for Reported Headset Tone Incidents.

**b.** If an employee wishes to file a claim due to a headset tone, the OS/CIC will ensure reporting is done in accordance with FAA Order 3900.19, Chapter 3, Recording and Reporting Occupational Injuries and Illnesses.

**1.** FAA employees must file Injury and Illness Incident Reports (OSHA Form 301) electronically via the Department of Labor's (DOL) Employees' Compensation Operations & Management Portal (ECOMP). FAA employees file CA-1, CA-2, and CA-7 claims forms via ECOMP.

**2.** Employees must be provided access to a computer and printer for the purpose of using ECOMP in a location at the facility/office level that provides the employee with privacy. ECOMP is accessible from the public internet. If the employee is unable to upload a witness statement(s) or other supporting documentation, the employee can provide the document(s) to the Agency official designated on the CA-1 for uploading to the employee's ECOMP file.

***REFERENCE−***
*FAA Order 3900.19, Federal Aviation Administration (FAA) Occupational Safety and Health Policy.*

**c.** The Agency will submit an Injury and Illness Incident Report (OSHA Form 301) and if requested, Workers' Compensation claim (CA-1, CA-2, and CA-7 forms) for an employee who

is incapacitated. An incapacitated employee is an employee who is unable to access a computer and complete the online form because of medical/health related reasons. The language in this section does not remove the requirement that the injured worker meet their burden of proof, as provided by 20 CFR § 10.115.

***NOTE–***
*Once an employee or the facility enters information in ECOMP, headset tone incidents are automatically reported to the Environmental and Occupational Safety and Health (EOSH) Safety and Environmental Compliance Manager (SECM) through the Safety Management Information System (SMIS).*

## 3–3–12. USE OF CORDLESS HEADSETS IN OPERATIONAL AREAS

**a.** Plantronics cordless headsets, model CA12CD, may be used in operational areas by positions that require only monitoring of operations and/or to affect landline communications. These positions include: Operations Manager-in-Charge (OMIC), Operational Supervisor-in-Charge (OSIC), Operations Supervisor (OS), Controller-in-Charge (CIC), Traffic Management Coordinator (TMC), and Coordinators.

**b.** Cordless headsets are not authorized for use in two-way communications with aircraft or for any other function that includes over-the-air broadcasting.

**c.** Air Traffic Managers must ensure operational personnel who use cordless headsets are trained on the use, application, and limitations of the CA12CD prior to operational use.

**d.** ATC facilities must not use more than 30 cordless headsets. Co-located facilities (control rooms within 150 feet) must not use more than 30 cordless headsets, combined.

**1.** Under ideal conditions, the maximum useable range between the base station and cordlessheadset is 100 feet (Multiple users may reduce the effective range of the headsets).

**2.** Base stations must be separated by at least 3 feet from each other.

**e.** Use of cordless headsets during the conduct of a performance or certification skill check must be done in accordance with the provisions of direct monitoring.

***REFERENCE–***
*FAA Order JO 3120.4, Air Traffic Technical Training.*

**f.** Cordless headsets that cause or receive interference must be immediately removed from service. Where applicable, FAA Technical Operations must be informed of the actual or suspected interference.

# Section 4. Recorders

## 3−4−1. USE OF RECORDERS

**a.** Air traffic facilities must record operational communications to the maximum extent practicable.

**b.** Air traffic facilities must record emergency response notifications by telephone or communication lines to the maximum extent practicable.

**c.** Record at each operating position to include all data transmitted and/or received via radio, telephone, VSCS, or automated means such as Mode S, Data Link, and satellite. Facility management must advise operating positions when the recording equipment associated with these positions is not operating or otherwise unavailable for recording. Facility management must then ensure that a written record, or equivalent, to the extent possible, is made for all IFR clearances.

**d.** If combined positions are periodically split into individual positions, record them on separate channels when so used.

**e.** Supervisors must ensure that the proper FAA/telephone company (TELCO) “jacks” are used to obtain the required recording at facilities with dual capability.

**f.** Use a separate channel on each recorder to record time at facilities with time-announce systems. Where these systems have not been installed, a spare receiver tuned to a time transmitting station may be used. DALR and NVR systems automatically time stamp all recordings, which eliminates the need to record time on a separate channel.

**g.** Operational voice recorders must be provided a time source.

**h.** Except as noted in paragraph 3−4−2, Assignment of Recorder Channels, record with regard to the position in lieu of the function. All headset audio on a position must be recorded on a single channel. In facilities so equipped, all FAA-speaker audio must be recorded on the “radio only” jack channel. If a “radio only” jack is not available, another channel may be used.

**i.** Recording more than one time source on any recorder is prohibited.

**j.** Recorders may be used to monitor any position for evaluation, training, or quality control purposes.

**k.** Air traffic managers should develop procedures to ensure that frequencies are not recorded when facilities are officially closed.

## 3−4−2. ASSIGNMENT OF RECORDER CHANNELS

**a.** Assign position recording channels in the following order of priority:

**1.** ARTCCs:

**(a)** Radar controller.

**(b)** Sector controller.

**(c)** Radar handoff controller.

**(d)** Radio controller.

**(e)** Coordinator.

**(f)** Supervisor.

**(g)** Traffic Manager.

**(h)** Flight data.
**(i)** Data systems coordinator.
**(j)** Mission coordinator.
**(k)** AMIS controller.

**2.** Terminals:

**(a)** Arrival control.
**(b)** Departure control.
**(c)** Local control.
**(d)** Precision approach radar.
**(e)** Clearance delivery.
**(f)** Ground control.
**(g)** Inbound flight data.
**(h)** Outbound flight data.
**(i)** Direction-finding.
**(j)** Supervisory.
**(k)** Automatic terminal information services (ATIS) - air traffic managers must designate a channel to record ATIS when a separate channel is not available. Record the ATIS message once at the time of preparation on the designated channel. Make a written record of each ATIS and retain for 45 days if a recorded channel is not available.

**3.** FSSs:

**(a)** Inflight.
**(b)** Preflight.
**(c)** Flight data.
**(d)** Supervisory.

**4.** ATCSCC:

**(a)** National Operations Manager (NOM).
**(b)** National Traffic Management Officer (NTMO).
**(c)** National Traffic Management Specialist (NTMS) operating position.

**b.** You may use existing remaining spare recording channels to record the primary radio frequencies of positions using the same priority stated above.

## 3−4−3. CHECKING AND CHANGING RECORDING EQUIPMENT

**a.** At En Route facilities and the ATCSCC, Technical Operations personnel must be responsible for checking the DALR or NVR system for alarm conditions.

***REFERENCE−***
*FAA Order JO 6670.16B, Maintenance of Digital Audio Legal Recorder Types 1, 2, and N (DALR1/DALR2/DALR-N), or*
*(Digital) FAA Order JO 6670.17, Maintenance of NAS Voice Recorder (NVR).*

**b.** At terminal and flight service facilities:

**1.** Where recorders are not convenient to operating quarters, the facility air traffic manager and the Technical Operations local manager must develop an agreement assigning the responsibility for checking the DALR or NVR system for alarm conditions.

**2.** Where recorders are convenient to operating quarters, air traffic personnel must perform recorder checks for alarm conditions.

**3.** At Federal Contract Flight Service Stations, engineering staff will monitor the operational status of all audio recording equipment.

**c.** If air traffic personnel check and change tapes, DATs, or DALRs, the facility air traffic manager must ensure that personnel are trained in the proper methods to be used.

**d.** Recorder operational checks on voice recorder systems must be performed daily and must not exceed 26 hours between checks.

**1.** On a daily basis (not to exceed 26 hours), validate that the DALR or NVR system is not in alarm condition.

**2.** Indicate accomplishments of checks on FAA Form 7230-4, Facility Record of Operation.

**e.** Perform operational checks on DALR or NVR systems.

**1.** At facilities using DALR: On a daily basis (not to exceed 26 hours), validate the Castle Rock SNMPc window for the alarms, and verify normal operation of the DALR system.

***REFERENCE−***
*FAA Order JO 6670.16, Chapter 4, Section 1, Performance Check, 4-3, Daily.*

**2.** At facilities using NVR: On a daily basis (not to exceed 26 hours), validate the NICE Inform Health Manager (IHM) window for the alarms, and verify normal operation of the NVR system.

***REFERENCE−***
*FAA Order JO 6670.17, Chapter 4, Section 1, Performance Check, 4-3, Daily.*

**3.** Document the accomplishment of the check on FAA Form 7230-4, Facility Record of Operation.

## 3−4−4. AUDIO DATA RETENTION

**a.** Ensure that the DALR and NVR default audio retention period is set for 45 days.

**b.** When voice recordings are saved as an Organizer incident or to external media, the following retention requirements apply:

**1.** Accidents: Retain the voice recordings in accordance with FAA Order JO 8020.16, Air Traffic Organization Aircraft Accident and Incident Notification, Investigation, and Reporting.

**2.** Incidents: Retain the voice recordings in accordance with FAA Order JO 8020.16, Air Traffic Organization Aircraft Accident and Incident Notification, Investigation, and Reporting; and FAA Order 1350.14, Records Management.

**3.** Hijacking: Retain all relevant voice recordings of hijackings from the time communication commences with the aircraft until communication has terminated. After 3 years, contact System Safety and Procedures for the release of the DALR or NVR audio files. In every

case, a release from System Safety and Procedures is required to delete the hijack DALR or NVR audio files.

**4.** Tarmac Delay: When a facility is notified that an aircraft has or may have exceeded the "Three/Four-Hour Tarmac Rule," retain voice recordings relevant to the event for 1 year.

**c.** For facilities using a different voice recorder than the DALR or NVR, the procedures and media will vary but the recordings must follow the same retention period requirements.

# Section 5. Navigational Aids

## 3−5−1. NAVAID MONITORING

When a facility is assigned responsibility for monitoring NAVAIDs, the air traffic manager must issue monitoring instructions in a facility directive. Notification procedures must be coordinated with the appropriate sector manager.

***NOTE−***
*Monitoring assignments are made by air traffic offices in the Service Centers.*

**a.** VOR/VORTAC:

**1.** Aurally check the identification at the beginning of each watch.

***NOTE−***
*Upon commissioning of 2nd generation (FA-9996) VORs, aural monitoring is not required.*

**2.** Record the check in accordance with subparagraph 4−6−5g, Preparation of FAA Form 7230-4.

**3.** If a monitor Category 2 exists:

**(a)** Take appropriate action as indicated in FAA Order JO 7110.65, Air Traffic Control, paragraph 2−1−10, NAVAID Malfunctions.

**(b)** Notify the ARTCC.

***NOTE−***

***1.*** *VORs, VORTACs, and TACANs have an automatic course alignment and signal monitor (ACM). This monitor is usually connected to a remote alarm. An automatic transfer and shutdown unit (ATU) is installed as part of the ACM. When the ACM detects a malfunction, the ATU switches the range to a standby transmitter. If the standby transmitter does not work properly, the ATU will shut down the facility.*

***2.*** *Monitoring of VOR test signals (VOT) is accomplished by a light or a buzzer monitor and is of local concern only.*

***3.*** *VOR and VORTAC monitor categories:*

***a.*** *Category 1: Alarm feature and identification heard at the control point.*

***b.*** *Category 2: Monitor equipment failure and identification not heard at the control point, but aircraft reports indicate that the facility is operating normally.*

***c.*** *Not constantly monitored by other than ACM and ATU.*

**b.** TACAN (joint-use airports):

**1.** Aurally check the identification at the beginning of each watch.

**2.** Immediately notify the responsible military authority when an alarm is received.

3. Consider the aid inoperative when the alarm cannot be silenced and the identification cannot be heard on the aural monitor.

***NOTE−***
*The military authority will issue NOTAMs for TACANs.*

**c.** DME (to be monitored by the same facility that monitors the associated VOR, VORTAC, or ILS):

1. Press the VOR/DME control oscillator level to the "Facility On" position at the beginning of each watch.
2. Record the check in accordance with subparagraph 4−6−5h, Preparation of FAA Form 7230-4.

**d.** L/MF aids (to be monitored on a continuous basis):

1. Check the identification at the beginning of each watch.
2. Record the check in accordance with subparagraph 4−6−5h, Preparation of FAA Form 7230-4.

**e.** NDB (class MH, class H, and class HH):

1. Monitor continuously by automatic means the beacons used as IFR aids.
2. Check the operation at least once each hour if an automatic alarm is not available.

**f.** ILS

1. Check the ILS monitor panel at the beginning of each watch and record the system status in accordance with subparagraph 4−6−5h, Preparation of FAA Form 7230-4.
2. Apply the procedures described in paragraph 3−5−2, System Component Malfunctions, when there are indications that a component has failed.
3. If you suspect that the indication is caused by a control line or a control station monitor failure rather than a malfunction of the component itself, take appropriate action as indicated in FAA Order JO 7110.65, paragraph 2−1−10, NAVAID Malfunctions. If a malfunction is confirmed, discontinue use of the component involved.

***NOTE−***
*Not all ILS components are provided with remote monitor and control lines (on/off capability). If the failure indication is caused by a control line or a control station monitor failure, the Technical Operations technician must advise if that component will be restored to operation and the monitor status.*

**g.** Compass locators:

1. Monitor continuously by automatic means.
2. Check the operation at least once each hour if an automatic alarm is not available.
3. If the provisions of subparagraphs 1 or 2 above cannot be met, the compass locator may be considered monitored if it is equipped with an automatic monitor and shutdown feature at the site. In this case responsibility for monitoring must not be assigned to the air traffic facility.

## 3−5−2. SYSTEM COMPONENT MALFUNCTIONS

Take the following action when the alarm signal or a report indicates an air traffic system component malfunction:

**a.** Try to restore the aid to normal operation.

**b.** If unable to restore it, discontinue its use and:

**1.** Notify the appropriate IFR control facility/sector.

**2.** Notify the appropriate FSS as necessary.

**3.** Notify Technical Operations personnel in accordance with FAA Order JO 6030.31, National Airspace System Failure Response, and locally developed procedures.

**4.** Issue any necessary NOTAMs, and take other NOTAM related actions as appropriate.

***REFERENCE−***

*FAA Order JO 7210.3, Para 3−5−1, NAVAID Monitoring.*

*FAA Order 7930.2, Para 4−2−1, NOTAM Composition.*

***NOTE−***

*When Technical Operations personnel silence the monitoring system of any NAVAID, they will assume responsibility for the monitoring function.*

## 3−5−3. PROCESSING GPS ANOMALY REPORTS

As soon as practicable, facilities must forward all information gathered, as per FAA Order JO 7110.65, Air Traffic Control, paragraph 2−1−10, NAVAID Malfunctions, subparagraph b, to the primary intake team for mitigation via the GPS Anomaly Website: https://www.faa.gov/air_traffic/nas/gps_reports. Theinformation may also be forwarded to the Wide-Area Augmentation System (WAAS) Team (1-800-272-2989 or 9-ATO-WAAS-Operations-Team@faa.gov), or to the traffic management unit (TMU), or to the appropriate Service Operations Center (SOC) for assistance in entering the data into the website.

## 3−5−4. ORIGINATING NOTAMS CONCERNING NAVAIDS

Air traffic facilities having responsibility for monitoring NAVAIDs must originate NOTAMs regarding their status unless otherwise directed by the Service Area office.

# Section 6. Surveillance Source Use

## 3−6−1. COMMISSIONING RADAR FACILITIES

**a.** Electronic Commissioning:

**1.** Subsequent to the initial installation of an ARSR/ASR system, the provisions of FAA Order 8200.1, United States Standard Flight Inspection Manual, Chapter 14, must be satisfied prior to the electronic commissioning of the facility.

**2.** Major equipment modifications or major component changes to existing installations may necessitate a special flight check to reaffirm that the radar is continuing to meet the original commissioning criteria. When such a change is made, the new type equipment must be electronically commissioned in accordance with subparagraph 1 above.

**3.** If ASR equipment cannot meet the surveillance approach requirement during the flight check, consider this phase of the flight check as secondary and commission the equipment for its primary purpose of providing radar traffic control service.

**b.** Operational Implementation:

**1.** When a radar facility is to be commissioned, a 60-day period of use (without the application of radar separation standards) should elapse between the electronic commissioning date and the inauguration of radar air traffic control service. This period will permit controllers to gain experience in tracking, vectoring, and identification. It will better ensure a full understanding of the equipment, procedures, and services to be provided. However, this 60-day period is not mandatory and may be reduced or eliminated provided NOTAM requirements can be satisfied and the Service Area office is assured that the intended service can be carried out in a safe and efficient manner.

**2.** Only one phase of service should be implemented at a time. A period of 30 to 60 days should elapse between the implementation of subsequent phases. For example, ARTCCs may initiate en route service on specific routes or within specified areas; terminals may implement either arrival or departure service 30 to 60 days prior to expanding to other areas/services. Advertised services must be implemented on an all-aircraft basis and must be accomplished in accordance with FAA Order JO 7110.65, Air Traffic Control. If services are initially implemented on a “part-time” basis, the daily hours (preferably 8 hours or longer) must be specified in the aeronautical information message and the advertised services maintained during those hours. The extent and types of service will be dependent upon operational requirements, personnel, and equipment capabilities. The schedule of radar service implementation must be jointly determined by the facility air traffic manager and the Service Area office. Service Area office approval is required prior to the implementation of each phase of radar service.

**3.** A review of the existing LOA must be accomplished to ensure that necessary changes are made or that new agreements are consummated and approved prior to implementing any phase of radar traffic control. Airspace areas for which radar terminal facilities have responsibility should include sufficient vector areas for:

**(a)** Positioning and spacing of arriving aircraft en route to the airport from outer fixes or radar handoff points.

***NOTE–***
*Normally, no less than two nor more than four outer fixes are used to serve a single approach course. These fixes are normally located to permit simultaneous holding at the same altitude. When only one radar approach control position is used, two outer fixes are optimum. If two radar approach positions are available, four fixes are optimum.*

**(b)** Spacing and control of departing aircraft and aircraft executing missed approaches.

**(c)** Positioning and spacing transitioning aircraft.

**c.** Notification Procedures:

**1.** Issue an aeronautical information message for each location at least 30 days prior to and again immediately following implementation of radar ATC procedures containing the following:

**(a)** Nature of service; e.g., departure, arrival, en route.

**(b)** Proposed or effective date.

**(c)** Specific airspace affected.

**(d)** Hours of service if less than 24 hours per day.

***EXAMPLE–***
*BAKERSFIELD, CALIFORNIA, SURVEILLANCE RADAR EXPECTED TO BE COMMISSIONED ON OR ABOUT JUNE l5, 2004. RADAR AIR TRAFFIC CONTROL SERVICE USING RADAR SEPARATION STANDARDS WILL BE APPLIED AS APPROPRIATE. SERVICE WILL BE PROVIDED DAILY BETWEEN THE HOURS OF 1400-2300Z WITHIN 40-MILE RADIUS OF BAKERSFIELD.*

**2.** When an additional service is to be implemented or a change in programmed areas of application is made, issue an aeronautical information message delineating that new service. Advance notice is desirable. However, it is not mandatory, and the aeronautical information message may be issued concurrently with the inauguration of the extended radar service.

**3.** When a change in ARSR/ASR equipment is made, issue an aeronautical information message if a modification to existing service will result and/or if a break in service of more than 30 minutes will occur.

**4.** A copy of each memorandum/aeronautical information message for inclusion in the Domestic Notices website must be sent to Mission Readiness Services, Operational Policy, Publications and Administration (AJV-P12) via 9-ATOR-HQ-PubGrp@faa.gov, Manager, Flight Service Safety and Operations Policy Group (AJR-B100) via 9-AJR-FSSOG@faa.gov, Aeronautical Information Services (AJV-A) via https://nfdc.faa.gov/nfdcApps/controllers/PublicSecurity/nfdcLogin, and the appropriate Service Area Directors.

## 3−6−2. ATC SURVEILLANCE SOURCE USE

**a.** Surveillance sources that are approved for ATC use are Primary Radar, Secondary Radar, ADS-B and WAM. Approved ATC Surveillance Sources may be used for:

**1.** Surveillance of aircraft to assure the effective use of airspace.

**2.** Vectoring aircraft to provide separation and radar navigation.

3. Vectoring aircraft to final approach.
4. Vectoring IFR aircraft to the airport of intended landing.
5. Monitoring instrument approaches.
6. Providing radar traffic, weather, chaff, and bird activity information.
7. Providing assistance to pilots of aircraft in distress.

**b.** Approved terminal ATC Surveillance Sources may also be used for:

1. Conducting precision or surveillance approaches.
2. Formulation of clearances and control instructions based on runways and movement areas observable on the ASDE.

***NOTE−***
*In accordance with FAA Order JO 7110.65, Chapter 3, Airport Traffic Control - Terminal, Section 6, Airport Surface Detection Procedures.*

**c.** Targets derived from WAM may not be used to provide 3 mile separation in the En Route Automation System (EAS).

***NOTE−***
*3 NM targets are not derived from WAM within the EAS.*

**d.** Targets derived from ADS-B and WAM may be used for the provision of all terminal services when operating in STARS Fusion, STARS FMA, and STARS Multi-Mode, including those associated with any published instrument procedure annotated “radar required.”

## 3−6−3. MONITORING OF MODE 3/A RADAR BEACON CODES

**a.** Facility air traffic managers may assign Mode 3/A codes to be monitored in addition to those required by FAA Order JO 7110.65, Air Traffic Control, Chapter 5, Section 2, Beacon Systems.

**b.** A facility directive must be issued establishing facility standards for displaying required transponder replies in all available operational modes.

**c.** Where desirable, beacon targets may be displaced at a slightly greater range than their respective primary returns. When beacon displacement is elected, issue a facility directive specifying the standard relationship between primary returns and the beacon control slash of secondary returns. The maximum allowable beacon target displacement which may be specified by the facility air traffic manager is 1/4 mile for STARS and 1/2 mile applied in 1/4 mile increments for all other facilities.

## 3−6−4. RADAR TARGET SIZING

**a.** Minimum target size for terminal radar systems using terminal digital radar or full digital target symbols, except for MEARTS, must not be less than the minimum target size shown in Technical Operations' orders concerning the maintenance of terminal digital radar. The target symbol must be centered on the terminal digital radar/full digital system type target presentation.

***NOTE−***
*Target size is fixed in MEARTS regardless of range or data block character size.*

**b.** When operating in FUSION, the minimum target size for Precision Approach Monitor (PAM) operations and for the normal use of tower radar displays is 1,200 feet. The target symbol must be centered on the terminal digital radar/full digital system type target presentation.

***NOTE−***
*Increased separation required (ISR) will be required for aircraft outside the range for PAM or other normal use of certified tower radar displays.*

## 3−6−5. TERMINAL DIGITAL RADAR SYSTEM AND DISPLAY SETTINGS

**a.** The following system settings for the terminal digital radar/DVCP must be established in a facility directive.

**1.** Normal weather setting positions when 2-level weather is selected on the system control panel.

**2.** MEARTS normal weather setting positions when 3-level weather is selected on the system control panel.

**3.** Normal weather setting positions when 6-level weather is selected on the system control panel.

**4.** Name, range/azimuth, altitude, and coordinates of prominent obstructions.

**5.** Azimuth and range settings of moving target indicator (MTI) reflectors used for map alignment.

**6.** Position Adjustable Range Reference Orientation Transponders (PARROTs) used for map alignment location. Not applicable to a Digital Terminal Automation System (DTAS).

**b.** The following display settings must be established in a facility directive, except for MEARTS:

**1.** Weather/Radar Gate normal setting.

**2.** Position startup weather level settings.

**c.** Facilities that utilize a digital system that does not concurrently display all levels of precipitation (ASR-8/TDX2000) must establish a procedure via facility directive that ensures periodic monitoring of all precipitation level ranges during precipitation events.

**d.** The air traffic manager and Technical Operations System Support Center (SSC) manager must prepare a local order defining the procedures needed to protect the antenna, shutdown the antenna, transfer power between high and low voltage, and transfer from one channel to another channel.

## 3−6−6. PREARRANGED COORDINATION

**a.** Air traffic managers at radar facilities must determine whether or not a clear operational benefit will result by establishing prearranged coordination procedures (P-ACP). Such procedures would allow aircraft under one controller's jurisdiction to penetrate or transit another controller's airspace in a manner that assures approved separation without individual coordination for each aircraft. When reviewing existing P-ACPs, or contemplating the establishment of these procedures, consideration must be given to airspace realignment to preclude coordination/

penetration of another operational position's airspace. Prior to implementing a P-ACP, negotiations should be accomplished locally and all affected personnel must be thoroughly trained in the application of the procedures.

**b.** When P-ACPs are established, a facility directive must be published. The directive must include, as a minimum:

**1.** Requirement that the following are fully operational.

**(a)** Terminal- STARS

**(b)** En Route- SDP, FDP, and safety alert (CA, MCI, E-MSAW) processing.

**2.** Procedures to be applied in the event that prearranged coordination procedures are not practicable.

**3.** The position(s) authorized to penetrate the protected airspace of an adjacent position.

**4.** Detailed responsibilities relating to P-ACP for each position.

**5.** The requirement that two positions of operation cannot be authorized to penetrate each other's airspace simultaneously.

**6.** Controllers who penetrate another controller's airspace using P-ACP must display data block information of that controller's aircraft which must contain, at a minimum, the position symbol and altitude information.

**7.** Controllers who penetrate another controller's airspace using P-ACP must determine whether the lead aircraft requires wake turbulence separation behind it.

***REFERENCE−***

*FAA Order JO 7110.65, Para 5−5−4, Minima, Subpara f.*

**8.** Procedures to be applied for those modes of operation when the computer fails or is shut down, the beacon fails and only primary is available, and for nonbeacon aircraft or at automated facilities aircraft without an associated full data block.

***REFERENCE−***

*FAA Order JO 7110.65, Para 5−4−9, Prearranged Coordination.*

## 3−6−7. OPERATIONAL GUIDANCE FOR FUSION

**a.** During normal operations, Fusion must be the selected mode to the extent that it is operationally feasible. The terminal Air Traffic Manager, or their designee, must decide if the fusion tracker is usable.

**1.** If a decision is made to discontinue use of the fusion tracker at specific sectors or facility-wide, the Air Traffic Manager, or their designee, must notify Strategic Operations, AJT–1, through the appropriate service area Director of Air Traffic Operations.

**2.** The intent of this notification is to ensure the service area Director of Air Traffic Operations, Strategic Operations, AJT-1, and the program office are aware of the operational status and are providing all capable resources to return to Fusion operations at the affected position/facility.

**3.** Fusion outages due to a planned radar shutdown of short duration need not be reported.

**b.** During radar outages, operational alternatives, or contingency plans, must be developed and included in a facility directive that address requirements when there is degradation in the

Fusion environment due to sensor availability. The steps must be predetermined and may be implemented facility-wide or sector specific.

1. Facilities should switch to single sensor mode if there are impacts to the efficiency of facility operations due to degradation in the sensor environment while operating in Fusion mode.

***NOTE−***
*ADS-B and WAM are not selectable sources when in single sensor mode.*

2. Facilities should use single sensor mode in airspace that is restricted to the use of one long-range radar which can cause anomalies (for example, stitching or target jumping). Facilities should continue to operate in single sensor mode until adequate ADS-B equipage levels are reached, an additional sensor is available, or it is determined by management that an operational advantage is gained by remaining in Fusion.
3. Facilities may use multi-sensor mode when the sensor environment does not support the use of FUSION and use of single sensor does not provide sufficient surveillance coverage.

***NOTE−***

1. *Multi-sensor mode uses radar, ADS-B, and/or wide area multilateration (WAM) surveillance data, where available, and may provide expanded surveillance coverage compared to single sensor.*
2. *Multi-sensor mode does not support 3 NM separation.*

# Section 7. Video Maps

## 3−7−1. TOLERANCE FOR RADAR FIX ACCURACY

Careful attention must be given during commissioning flight checks of a radar to the accuracy of digital maps, video map plates, or overlays to ensure that the plate or overlay markings meet specified requirements relative to permanent targets. In actual practice an aircraft's displayed position can be slightly in error with respect to its geographic position and still meet the requirements of FAA Order 8200.1, United States Standard Flight Inspection Manual.

## 3−7−2. RADAR MAPPING STANDARDS

The minimum radar mapping capability required for commissioning radar services is one of the following:

**a.** Dual video mapper.
**b.** Adequate map overlay.
**c.** Single video mapper plus a map overlay.
**d.** AN/GPA-70 at USAF installations.
**e.** AN/GPA-91 at Navy installations.
**f.** Computer-generated displays.

***NOTE−***
*Grease pencil markings, plastic tape, compass rose grid lines, range marks, or other innovations must not be used in lieu of an adequate digital map, map overlay, or video map.*

## 3−7−3. DISPLAY MAP DATA

To reduce scope clutter and increase operational efficiency, limit data on display maps to the following (except for subparagraph o, facility air traffic managers may delete items not required):

**a.** Airports/heliports.

***NOTE−***
*Mission Readiness Services, Aeronautical Information Services, AJV-A2 will verify the accuracy of video maps they produce to ensure the video maps depict only operational airports as defined by the Office of Airport Safety and Standards, AAS-1. Facilities will be notified by AJV-A2 that new radar video maps (RVMs) will be sent when a depicted airport is no longer operational.*

**b.** Runway centerline extension and/or final approach course.

***REFERENCE−***
*FAA Order JO 7110.65, Para 5−9−1, Vectors to Final Approach Course.*

**c.** Hospital emergency landing areas.
**d.** NAVAIDs and fixes.
**e.** Reporting points.

**f.** Airway/route centerlines.

**g.** Boundaries (control, special use areas, terminal buffer areas, outer fix holding pattern airspace areas, no transgression zones, etc.).

**h.** Handoff points.

**i.** Special use tracks (scramble, recovery, Instrument Departures, etc.).

**j.** Obstructions.

**k.** Prominent geographic features (islands, mountains, etc.).

**l.** Map alignment indicators.

**m.** Range accuracy marks.

**n.** Minimum vectoring altitudes in hundreds of feet; e.g., 23-2,300 ft., 100-10,000 ft.

**o.** Airports immediately outside your area of jurisdiction that are:

**1.** Within airspace used to receive radar handoffs; and

**2.** Depicted by the facility having jurisdiction over that airspace.

**p.** Virtual intersection markings for non-intersecting converging runways if the flight paths intersect within 1NM beyond the departure end of both runways.

***NOTE−***
*The intent of subparagraph o is to assist controllers in making emergency airport recommendations when inflight emergencies occur near facility boundaries. There is no intent to establish criteria for airport depiction. However, insofar as facilities having jurisdiction depict airports, then those same airports must be depicted on the adjacent facility's video map.*

***REFERENCE−***
*FAA Order JO 7110.65, Para 10−2−15, Emergency Airport Recommendation.*

## 3−7−4. INTENSITY

Set the intensity of the video map and the range marks on the CTRD equipment at the minimum intensity that will provide the controller with the necessary information. Supervisory personnel must ensure that a usable intensity is maintained.

## 3−7−5. COMMON REFERENCE POINTS

Facility air traffic managers must ensure the adequacy of common reference points on radar maps where such points are used in providing air traffic control services; e.g., handoff points, etc., between adjacent facilities or between sectors within the facilities using different radar systems. Whenever possible, simultaneous flight checks should be conducted of these radar systems. FAA Order 8200.1, United States Standard Flight Inspection Manual, must be used in determining the appropriate tolerances.

# Section 8. Other Displays

## 3−8−1. MINIMUM VECTORING ALTITUDE CHARTS (MVAC) FOR FACILITIES PROVIDING TERMINAL APPROACH CONTROL SERVICES

Air traffic managers must ensure MVACs are included in the STARS or MEARTS site adaptation. Provide controllers with the minimum vectoring altitudes as follows:

**a.** Where the system is utilizing FUSION mode, develop an MVAC that provides:

**1.** 3-mile separation minima from obstacles, except when applying the provision in subparagraph 3−8−1a2. The MVAC must depict obstacle clearances, outward to the lateral limits of the associated approach control airspace and an appropriate buffer outside the lateral approach control airspace boundaries; and

**2.** 5-mile separation minima from obstacles for use whenever the FUSION system cannot provide 3-mile separation due to degraded status or system limitations, or when using Multi-Sensor Mode.

**b.** When set to single sensor display, use 3-mile obstacle buffers when less than 40 miles from the antenna, and 5-mile obstacle buffers when 40 miles or more from the antenna, at ASR locations without a monopulse secondary surveillance radar (MSSR).

***NOTE−***
*Mission Readiness Services, Aeronautical Information Services, Aeronautical Charting, Radar Video Mapping Team should be contacted if assistance is required. (See FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS), Chapter 11.)*

***REFERENCE−***
*FAA Order JO 7110.65, Para 5−5−4, Minima.*
*FAA Order JO 7110.65, Para 5−5−9, Separation from Obstructions.*

## 3−8−2. MINIMUM VECTORING ALTITUDE CHARTS (MVAC) PREPARATION (TERMINAL/MEARTS)

Prepare a vectoring chart in accordance with the criteria contained in FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS).

**a.** MVACs must be developed and maintained using the Web-based Sector Design and Analysis Tool (Web-SDAT). Facility Managers may request assistance in the development and maintenance of their MVAC or request SDAT user support by soliciting the Program Management Office, Aeronautical Services Group. MVACs developed in SDAT properly apply obstruction clearance criteria required by FAA Order 8260.3. SDAT completes FAA Form 7210-9 and automatically creates and sends the necessary data files to Mission Readiness Services, Radar Video Mapping Team upon certification for subsequent radar video map creation. Facility correspondence to the Radar Video Mapping Team regarding MVACs and video maps must be accomplished via email to 9-AJV-HQ-ATCPRODUCTS.

***NOTE−***
*MVAs are established without considering the flight-checked radar coverage in the sector concerned. They are based on obstruction clearance criteria and controlled airspace only. It is the responsibility of the controller to determine that a target return is adequate for radar control purposes.*

**b.** At a minimum, the airspace considered for providing obstacle clearance information on MVA charts must accommodate the facility's delegated area of control as well as adjacent airspace where control responsibility is assumed because of early handoff or track initiation.

**c.** MVACs may be subdivided into sectors to gain relief from obstacles that are clear of the area in which flight is to be conducted. There is no prescribed limit on the size, shape, or orientation of the sectors.

**d.** Depict the sectors in relationship to true north from the antenna site.

**e.** Facility requests for reduced required obstruction clearance (ROC) in an area designated as mountainous in accordance with 14 CFR, part 95, subpart B, must conform to the following procedures:

**1.** Designated mountainous terrain must be evaluated for precipitous terrain characteristics and the associated negative effects. Facility managers must use FAA Order 8260.3, paragraph 14−2−1, as a guide when considering ROC reductions in designated mountainous areas. ROC reductions are not authorized where negative effects of precipitous terrain are documented or known having followed the process contained in subparagraphs e2 and e3 below. ROC reductions within designated mountainous areas are only authorized by complying with at least one of the following criteria:

***REFERENCE−***
*FAA Order 8260.3, Appendix 1, Glossary Term, Precipitous Terrain.*

**(a)** Where lower altitudes are required to achieve compatibility with terminal routes.

**(b)** To permit vectoring within the airport radar traffic pattern area for either a departure procedure, an instrument approach procedure, or a visual approach to an airport. Air traffic managers must define each airport's radar traffic pattern area for which ROC reductions are sought. These areas must include sufficient maneuvering airspace necessary for ATC sequencing and spacing of traffic in the vicinity of an airport.

**2.** Where mountainous terrain has been deemed precipitous by the air traffic facility, each ROC reduction request must include a query to an independent data source, such as NASA's Aviation Safety Reporting System to determine if any ground proximity warnings have been reported in the subject area. After completing the query, consider the facility's history and experiences with turbulence at the minimum altitude requested. Avoid ROC reductions where reported ground proximity warnings relate to both existing MVA sector altitude ROC reductions and rapid terrain elevation changes. ROC reduction requests in these areas may require additional evaluation and review.

***REFERENCE−***
*FAA Order 8260.3, Appendix 1, Glossary Term, Precipitous Terrain.*

3. The facility MVAC package must include a detailed account of the steps taken by the facility to determine if the sector will qualify for taking a ROC reduction in the sector. This data will be reviewed by the Service Center Operations Support Group (OSG) and the Radar Video Mapping Team personnel for ROC reduction approval. Service Center Operations Support personnel must be the approving authority for ROC reduction criteria compliance with paragraph e1(a) and (b) above. Previously approved reductions in ROC justifications must be resubmitted for approval during a facility's recurring certification process.

***NOTE–***
*Should a ROC reduction request be denied by Service Center Operations Support personnel, the manager may appeal the decision to the appropriate Service Area Director of Air Traffic Operations.*

4. In the advent of the development of an automated precipitous terrain algorithm certified by AFS, the automated method will be used in lieu of the manual method described above.
5. Ensure MVA areas submitted for ROC reductions do not cover large geographical areas that include locations that would not, individually, meet ROC reduction standards. In such cases, the Radar Video Mapping Team may work with the Service Center and the facility to design a sector that will pass the approval process for a particular approach/departure route.
6. Whenever a ROC reduction is taken, the rationale/justification for taking the ROC reduction as defined in subparagraph e1 must be included in the MVAC package by facility managers.
7. ROC reductions should only be requested when there is a demonstrated operational need.

**f.** An assumed adverse obstacle (AAO) additive is required in areas not designated as mountainous (ROC 1,000 feet) and in designated mountainous terrain areas when any ROC reduction is requested.

**g.** Resultant MVAs may be rounded down to the nearest 100-foot increment (those that are xx49 feet or less), except in the following cases:

1. Any locations outside of the Contiguous United States.
2. Where any part of an MVA Sector is more than 65 NM from the issued altimeter source.
3. When all of the following conditions are applicable:

**(a)** the MVA Sector is within designated mountainous areas by 14 CFR part 95,

**(b)** the terrain is deemed precipitous by facility Air Traffic Management,

**(c)** the previous 5 year average low temperature at the primary airport is documented to be less than the temperature shown in TBL 3−8−1 for the amount of ROC reduction requested. Retain temperature documentation locally with approved 7210-9. Use TBL 3−8−1 to determine the extent of mountainous terrain reduction permitted if rounding down, based on the average low temperature. Comply with the following process to determine the average low temperature.

**(1)** Go to the National Center for Environmental Information website at www.ncei.noaa.gov.

**(2)** Mouse over the “Resources" link on the blue bar.

**(3)** Click on “Quick Links.”

**(4)** Click on “Global Historical Climatology Network” link.

**(5)** Click on “Global Summary of the Year.”

**(6)** Accept the default date, select “Stations” in the search for field, then enter the station representing the primary airport. Then click on search.

**(7)** Click on the airport name. When the page opens, scroll down to "View Station Data." Select the year interested in. Then view data.

**(8)** A report will appear, then go to the second page. Document the EMNT value. Select each relevant year and document the EMNT for that year. Then calculate the 5-year average.

*TBL 3−8−1*

**ROC Reduction/Temperature Table**

| Requested ROC Reduction | Minimum Average Low Temperature |
|---|---|
| 100' | -40°C/-40°F |
| 200' | -35°C/-31°F |
| 300' | -30°C/-22°F |
| 400' | -25°C/-13°F |
| 500' | -20°C/-4°F |
| 600' | -15°C/5°F |
| 700' | -10°C/14°F |
| 800' | -5°C/23°F |
| 900' | 0°C/32°F |
| 1000' | 7°C/45°F(2°C/36°F when MVA sector is within 35 NM of issued altimeter) |

**h.** Managers requesting to waive criteria contained in FAA Order 8260.3, must submit FAA Form 8260-1, Flight Procedures/Standards Waiver in conjunction with the MVA project. This waiver form will contain the criteria requested to be waived, with the operational need fully explained, and examples of how the facility will achieve an equivalent level of safety, if approved. The package will be sent to the Radar Video Mapping Team through the Service Center OSG. Upon completion of the Radar Video Mapping Team review, the package will be forwarded to the Flight Procedure Implementation and Oversight Branch. For the Flight Standards Waiver process, facility managers do not need to complete a Safety Management System evaluation. An electronic copy of the completed waiver package must be sent to Strategic Operations, AJT-1, at 9-AJT-HQ-Correspondence@faa.gov.

**i.** MVAs must not be below the floor of controlled airspace and should provide a 300-ft buffer above the floor of controlled airspace. In some cases, this application will result in an exceptionally high MVA (for example, in areas where the floor of controlled airspace is 14,500 MSL). When operationally required to vector aircraft in underlying Class G (uncontrolled) airspace, 2 MVAs may be established. The primary MVA must be based on obstruction clearance and the floor of controlled airspace. A second, lower MVA that provides obstruction clearance only may be established. The obstruction clearance MVA must be uniquely identified; for example, by an asterisk (*). Do not consider buffer areas for controlled airspace evaluations.

**j.** If new charts prepared using SDAT create a significant impact on a facility's operation, the impact must be coordinated with Strategic Operations, AJT-1, for joint coordination with System Operations.

***NOTE−***
*Significant impacts include changes to flight tracks for turbine-powered aircraft, multiple losses of cardinal altitudes, and/or reductions in airport arrival/departure rates.*

**k.** Air traffic managers may request to merge adjoining, like altitude MVA sectors that resulted from using differing design criteria provided the merged sectors are identified in the remarks on FAA Form 7210-9 and a statement is included with each affected sector that the merged sectors are for Radar Video Map (RVM) presentation only; for example, Sector B, B1, and B2 are to be merged in SDAT shape files for RVM presentation only.

**l.** Air traffic managers must submit the request for MVACs to the appropriate Service Center OSG for review. The Service Center OSG must then forward the requested MVAC to the Radar Video Mapping Team for processing.

**m.** Each request must indicate the MVAC was accomplished in Web-SDAT, stored in the Web-SDAT database and when necessary, include a statement regarding the issued altimeter settings being within 65 NM of a rounded down sector and/or provides the 5-year average cold temperature.

**n.** Each request must include the SDAT generated Form 7210-9 with the manager's signature and point of contact at the submitting facility. Form 7210-9 must also be an electronic copy with the manager's signature, and imported into the MVA project file. When applicable, each Form 7210-9 must include explanations/justifications for ROC reduction requests. The MVA request with the 7210-9 will be electronically forwarded to the OSG. When the capability of electronic signatures is developed within SDAT, Form 7210-9 may be transmitted electronically between the facility, Service Center, and Radar Video Mapping Team in lieu of the paper process. SDAT will automatically store the approved MVAC package in the National Airspace System Resource (NASR).

**o.** When more than one chart is used, prepare those charts with the oldest review/certification date(s) first to help avoid lapses in annual review/certification requirements.

**p.** New charts that result in significant operational impacts must not be implemented by air traffic managers until associated changes to facility directives, letters of agreement, and controller training are completed within a period not to exceed 6 months from new chart certification.

**q.** Once a chart without significant operational impacts has been approved, it must be implemented as soon as possible. MVAC installations projected to be more than 60 days from date of approval must be coordinated with and approved by, the Service Center OSG.

**r.** Air traffic managers must ensure that MVACs are periodically reviewed for chart currency and simplicity and forwarded for certification to the Radar Video Mapping Team at least once every 2 years. Charts must be revised immediately when changes affecting MVAs occur.

## 3−8−3. ALTITUDE ASSIGNMENTS TO S/VFR AND VFR AIRCRAFT

Where procedures require altitude assignments to S/VFR and VFR aircraft less than the established IFR altitude or MVA, facility air traffic managers must determine the need and the method for displaying the appropriate minimum altitude information.

***REFERENCE−***
*FAA Order JO 7110.65, Para 7−5−4, Altitude Assignment.*
*FAA Order JO 7110.65, Para 7−8−5, Altitude Assignments.*

## 3−8−4. EMERGENCY OBSTRUCTION VIDEO MAP (EOVM)

**a.** An EOVM must be established at all terminal radar facilities that have designated mountainous areas as defined in 14 CFR part 95, subpart B, within their delegated area of control. This map is intended to facilitate advisory service to an aircraft in an emergency situation in the event an appropriate terrain/obstacle clearance minimum altitude cannot be maintained.

***NOTE−***
*Appropriate terrain/obstacle clearance minimum altitudes may be defined as MIA, MEA, Minimum Obstruction Clearance Altitude (MOCA), or MVA.*

**b.** EOVM Use: The EOVM must be used and the advisory service provided only when a pilot has declared an emergency or a controller determines that an emergency condition exists or is imminent because of the inability of an aircraft to maintain the appropriate terrain/obstacle clearance minimum altitude/s.

**c.** EOVM Design:

**1.** The basic design of the EOVM must incorporate the following minimum features:

**(a)** Base contour lines of the mountains with the highest peak elevation of each depicted mountain plus 200 feet for natural low obstacle growth.

**(b)** Highest elevations of adjacent topography; e.g., valleys, canyons, plateaus, flatland, etc., plus 200 feet, or water.

**(c)** Prominent man-made obstacles; e.g., antennas, power plant chimneys, tall towers, etc., and their elevations.

**(d)** Operational airports which could serve in an emergency as follows:

**(1)** Primary Airport,

**(2)** Public-use satellite airports, and

**(3)** Private airports, only after declaration by the airport owner that the airport is suitable for emergency use. Facility validation of suitability for emergency use must be documented every two years during the EOVM coordination process with AJV-A and retained in facility files.

***NOTE−***

***1.*** *Mission Readiness Services, Aeronautical Information Services, AJV-A2 will verify the accuracy of video maps they produce to ensure the video maps depict only operational airports as defined by the Office of Airport Safety and Standards, AAS-1. Facilities will be notified by AJV-A2 that a new EOVM will be sent when a depicted airport is no longer operational.*

***2.*** *AJV-A2 has developed a local template that will be provided to the facility when the coordination process starts. In addition, those facilities depicting private airports will be expected to fill out the template and return to AJV-A2 during the EOVM review process.*

**(e)** Other information deemed essential by the facility.

***NOTE–***
*To avoid clutter and facilitate maintenance, information depicted on the EOVM should be restricted to only that which is absolutely essential.*

**2.** All elevations identified on the EOVM must be rounded up to the next 100-foot increment and expressed as MSL altitudes.

***NOTE–***
*To avoid unnecessary map clutter, the last two digits are not required.*

***EXAMPLE–***
*2=200, 57=5700, 90=9000, 132=13200*

**d.** EOVM Production: The initial preparation and procurement of the EOVM must be accomplished in accordance with FAA Order 7910.1, Aeronautical Video Map Program.

**e.** EOVM Verification: The initial and subsequent EOVM procurement package must be checked for adequacy and then coordinated with AJV-A2 to verify the accuracy of its information. At least once every 2 years, the EOVM must be reviewed for adequacy and coordinated with AJV-A2 for accuracy.

**f.** Facilities will receive a new EOVM from AJV-A2, regardless of whether changes were made or requested. ATMs must revise maps immediately when changes affecting the EOVM occur. Newly received EOVMs must be implemented by facility managers as soon as possible, but no later than 60 days after the map production date.

***NOTE–***
*AJV-A2's review cycle may not be the same as a facility's 2-year review cycle. In an effort to reduce duplication of work, ATMs should align their 2-year review dates with that of AJV-A2's review.*

**g.** Similar maps often titled VFR or EMERGENCY are EOVM-like maps. These video maps do not follow the EOVM validation process, except for the depiction of operational private airports. Facilities must follow the provisions of c1(d)(3) above concerning suitability for depiction. AJV-A2 will provide their local template during coordination of the video map for private airport depiction.

## 3–8–5. EMERGENCY ALTITUDE MAP (EAM)

**a.** An EAM may be established at en route facilities that have designated mountainous areas as defined in 14 CFR part 95, subpart B, within their delegated area of control. This map is intended to facilitate advisory service to an aircraft in an emergency situation in the event an appropriate terrain/obstacle clearance minimum altitude cannot be maintained.

***NOTE–***
*Appropriate terrain/obstacle clearance minimum altitudes may be defined as minimum IFR altitude (MIA), minimum en route altitude (MEA), minimum obstruction clearance altitude (MOCA), or minimum vectoring altitude (MVA).*

**b.** The EAM may be used, and the advisory service provided only when a pilot has declared an emergency, or a controller determines that an emergency condition exists or is imminent because of the inability of an aircraft to maintain the appropriate terrain/obstacle clearance minimum altitude(s).

**c.** EAM Design:

**1.** EAM lateral limits must be the same as the associated MIA lateral limits.

**2.** The posted EAM altitude must be the higher of the following:

**(a)** The highest terrain elevation value rounded up to the nearest 100 feet, plus an additional 200-foot buffer for any adverse assumption obstacle (AAO); or

**(b)** The highest obstacle elevation value rounded up to the nearest 100 feet, plus an additional 100-foot buffer.

**d.** All EAM values must be adapted within ERAM as follows:

**1.** Expressed as MSL altitudes in hundreds of feet.

**2.** Displayed within parentheses to differentiate them from MIA values.

**3.** Located as closely as possible to and directly below the MIA values on the associated video map.

***EXAMPLE−***

*An EAM value of 4,500 feet will be displayed as (045).*

**e.** EAM Verification:

**1.** Any ERAM EAM adaptation must be checked for adequacy and then coordinated with AJV-A to verify the accuracy of its information.

**2.** Subsequent verifications must be completed at least once every 2 years or whenever the lateral boundaries of any MIA area are changed, whichever is earlier.

**3.** Changes within the Digital Obstacle File (DOF) data that adversely affect EAM values must be incorporated into the operational ERAM adaptation as soon as possible and appropriate actions must be taken to ensure operational personnel are informed.

## 3−8−6. ESTABLISHING DIVERSE VECTOR AREA/S (DVA)

**a.** DVAs may be established at the request of the ATM at ATCT locations without published SIDs. DVA requests will be coordinated jointly with the appropriate Service Area respective OSG and Mission Readiness Services, Instrument Flight Procedures Group, for candidate airports within the facility's area of jurisdiction after considering and fulfilling the following steps:

**1.** DVAs should be considered when obstacles penetrate the airport's diverse departure obstacle clearance surface (OCS). The OCS is a 40:1 sloping surface and is intended to protect the minimum 200 feet/NM climb gradient. If there are no obstacle penetrations of this surface, then standard takeoff minimums apply, obstacle clearance requirements are satisfied, and vectoring of IFR aircraft is permitted below the MVA/MIA.

**2.** When the OCS is penetrated, the Instrument Flight Procedures Group procedural designer may develop an obstacle departure procedure (ODP). An ODP may consist of obstacle notes, nonstandard takeoff minimums consisting of nonstandard ceiling and visibility or climb gradient, a specified departure route, or any combination thereof. If an ODP is developed for a runway, it may be a candidate for a DVA. The ATM must determine that sufficient

surveillance coverage exists for any airport with a published instrument approach and an operating control tower.

3. Where established, reduced air traffic separation from obstacles, as provided for in TERPS diverse departure criteria, can be used to vector departing IFR aircraft below the MVA/MIA.
4. To assist in determining if obstacles penetrate the 40:1 surface, ATMs may request the Instrument Flight Procedures Group or the Service Center Flight Procedures Team (FPT) to provide a graphic depiction of any departure penetrations.
5. If the location is listed in the Terminal Procedure Publication (TPP) index, check the take-off minimums and (Obstacle) Departure Procedures in section C of the TPP for the DVA runway. If nothing is listed, or only low, close-in obstacle notes appear, then a DVA is not necessary. If a DP appears, development of a DVA becomes an option.
6. If the location is not listed, query the AIS website at http://www.faa.gov/air_traffic/flight_info/aeronav/Aero_Data/ and select the Special Procedures link to determine if a "special" instrument approach procedure exists at that airport/heliport. If there is a special procedure, the Regional Flight Standards All Weather Office (AWO) can supply FAA Form 8260-15A for ODP information when requested by the facility.

***NOTE−***
*If the TPP or AWO indicates IFR departures N/A for any given runway, then a DVA is not authorized.*

7. If the ATM elects to request a DVA, use the sample memorandum below as a guide (see FIG 3−8−1). Specify if the request is to establish, modify, or cancel a DVA. If modifying or canceling a DVA, attach the memorandum that authorizes the current DVA. The DVA request must include the following:
   **(a)** Airport identifier.
   **(b)** Desired DVA runway(s).
   **(c)** Requested DVA method. Specify a range of operational headings by starting from the extreme left heading proceeding clockwise (CW) to the extreme right heading as viewed from the departure runway in the direction of departure (for example, Runway 36, 290 CW 120), or isolate a penetrating obstacle(s) by identifying that obstacle(s) either by DOF number or range/bearing from airport.
   **(d)** Maximum Extent (Distance) from Departure Runway.
   **(e)** Radar Type/Beacon Type. Provide whether the facility has an ASR-8, 9, or 11, and its associated beacon system or monopulse secondary surveillance radar (MSSR), if applicable.

**(f)** Facility Hours of Operation.

*FIG 3−8−1*

**Sample DVA Memo**

**Federal Aviation Administration**

# Memorandum

Date: March 10, 2011

To: John Bickerstaff, Manager, Terminal Procedures and Charting Group, AJV-35
THRU: Mark Ward, Manager, Eastern Operations Support Group, AJV-E2

From: Steve Jones, Air Traffic Manager, XYZ TRACON

Prepared by: Joseph B. Specialist, Support Specialist

Subject: Diverse Vector Area (DVA) Request

XYZ TRACON requests the following DVA action as specified for the following airport(s) based on the information provided below:

| ACTION | AIRPORT | RWY | REQUESTED DVA METHOD | DIST FROM RWY |
|---|---|---|---|---|
| | | | **Range of Headings** | |
| ESTABLISH | KABC | 35R | 320 CW 020 | Within 18NM |
| | | | **Range of Headings** | |
| ESTABLISH | KABC | 17L | 140 CW 200 | Within 20NM |
| | | | **Isolate Penetrating Obstacle** | |
| MODIFY | KXYZ | 15 | DOF 05-00234 | |
| CANCEL | KDEF | 22 | | |

Radar Type/Beacon Type: ASR-8 with ATCBI-5

Hours of Operation: 0600-2300 local

POC is Joe Specialist, XYZ TRACON, 416-555-9988.

Attachments:
1. KXYZ DVA authorization memorandum dated October 28, 2008.
2. KDEF DVA authorization memorandum dated February, 16, 2009.

**b.** Forward DVA requests to the Instrument Flight Procedures Group through the appropriate Service Center OSG Manager.

**c.** When a DVA is established, it will be documented and provided to the facility by the Instrument Flight Procedures Group on FAA Form 8260-15D, Diverse Vector Area (DVA). The ATM must then prepare a facility directive describing procedures for vectoring IFR departures below the MVA/MIA including:

**1.** Textual or graphical description of the limits of each airport's DVA for each runway end.

**2.** Where required, specific radar routes, depicted on the radar display, where vectors are provided to aircraft below the MVA/MIA.

**3.** Not utilizing a DVA when a SID or ODP has been assigned or when following missed approaches or go-around instructions.

**d.** IFR aircraft climbing within a DVA must not be assigned an altitude restriction below the MVA/MIA, and must reach the MVA/MIA before leaving the confines of the DVA.

**e.** Headings must not be assigned beyond those authorized by the DVA prior to reaching the MVA/MIA.

**f.** Ensure all controllers are familiar with the provisions of the facility directive before vectoring aircraft in accordance with DVA procedures.

***REFERENCE−***

*FAA Order JO 7110.65, Para 5−6−3, Vectors Below Minimum Altitude.*

# Section 9. Color Displays-Terminal

## 3−9−1. COLOR USE ON ATC DISPLAYS

Color use on terminal systems was developed jointly with the appropriate Service Area Director of Air Traffic Operations and the Terminal Automation Human Factors Team. This section provides guidelines on the use of color on ATC displays through a national standard for terminal air traffic displays. These guidelines are intended to standardize the use of colors across the terminal systems. Any use outside these guidelines or outside the STARS Site Rules Document (SRD) must be developed jointly with the appropriate Service Area Director of Air Traffic Operations and the Terminal Automation Human Factors Team. All use of color on ATC displays must fall within these guidelines, except for MEARTS:

**a.** Whenever color capabilities exist, the following National Color Standard for Terminal Systems must be installed:

**1.** Background must be black.

**2.** Point out identifier blinking or steady must be yellow.

**3.** Compass Rose and range rings must be dim gray. Maps A and B must be dim gray or yellow.

**4.** The default color of the geographic restriction border, fill, and text must be yellow.

**5.** Data blocks owned must be white.

**6.** Limited or partial data blocks unowned must be green.

**7.** Search/Fusion target symbols must be blue.

**8.** Beacon target extent must be green.

**9.** History trails must be blue.

**10.** Predicted track line must be white.

**11.** Minimum separation line must be white.

**b.** Whenever color is used to identify critical information it must be used with another method of notification such as blinking.

**c.** Cultural color conventions which cannot be violated include red for warning and yellow for caution/highlight.

**d.** The color pure blue should not be used for text, small symbols, other fine details, or as a background color.

**e.** Ensure all colors that are used including text and symbols are presented in sufficient contrast.

**f.** Use of color in general should be kept to a minimum.

**g.** The specific colors that are selected for a display must take into account the ambient environment and the capabilities of the specific monitor.

**h.** Any implementation of color is to be tested in the context and environment to which it was designed.

**i.** Color use needs to be consistent across all of the displays that a single controller will use.

# Chapter 4. Correspondence, Conferences, Records, and Reports

## Section 1. General

### 4−1−1. CORRESPONDENCE STANDARDS

Prepare and issue facility correspondence in accordance with:

**a.** FAA Order 1360.16, FAA Correspondence Policy, which prescribes basic correspondence standards.

**b.** FAA Order 1320.1, FAA Directives System, which prescribes the procedures for issuing direction and work information.

### 4−1−2. SIGNATURE

Correspondence addressed to organizations, businesses, or individuals outside FAA must be signed "Air Traffic Manager, Kenai Flight Service Station," "Air Traffic Manager, Washington Center," or "Air Traffic Manager, Denver Tower." The authorized contractions for the facility names may be used on correspondence addressed to any component of FAA; e.g., "Air Traffic Manager, Fort Worth FCFSS."

### 4−1−3. SERVICE AREA REVIEW

Forward copies of facility correspondence concerning facility operating procedures to the Service Area office; e.g., letter to airmen normally sent to pilots, airline companies, military commands or bases, and fixed-base operators. This correspondence must be reviewed and approved at the discretion of the Service Area office prior to distribution. When information sent to users includes a change in operating procedures, facilities must establish an effective date for implementing these operating procedures at least 30 days after the date of distribution unless otherwise authorized by the Service Area office.

### 4−1−4. CORRESPONDENCE REGARDING POLICY/PROCEDURES

Air traffic managers may handle correspondence dealing with matters involving operating policy or procedures directly with other agencies or services. If the matter is not within the jurisdiction of the air traffic manager, acknowledge the correspondence and state that the answer will be prepared and forwarded by the Service Area office. Forward all pertinent background material to the Service Area office with recommendations for further handling.

### 4−1−5. IRREGULAR OPERATION

If information or correspondence is received from an aviation agency indicating an irregular operation (exclusive of policy items) by a facility, the air traffic manager must investigate and reply to the agency within 3 administrative work days of receipt. If the air traffic manager cannot investigate and prepare a reply within 3 days, or if the matter deals with policy items outside his/her purview, he/she must forward a letter of acknowledgment. Send copies of all correspondence, instructions issued to prevent recurrence, and any information on any disciplinary action taken to the service area office.

## 4−1−6. PRELIMINARY ENVIRONMENTAL REVIEW

In coordination with the relevant air traffic facility, and in accordance with airspace planning requirements, the Service Center's Air Traffic Environmental Protection Specialist (EPS) must conduct and document an environmental review of new or revised ATC procedures, or other air traffic actions subject to National Environmental Policy Act (NEPA) review. Environmental review should be conducted in accordance with FAA Order 1050.1, Environmental Impacts: Policies and Procedures, and FAA Order JO 7400.2, Procedures for Handling Airspace Matters, Chapter 32, Environmental Matters.

**a.** The Service Center EPS will determine whether the subject of the correspondence concerns air traffic procedures, either new or modified, or other air traffic actions that could potentially result in environmental impacts, as defined in FAA Order 1050.1, Environmental Impacts: Policies and Procedures.

**b.** For correspondence documents (including Letters of Agreement [LOAs] as described in Section 3) regarding establishment of, or modifications to, air traffic actions, the proponent of the air traffic action may apply initial air traffic screening and modeling tools in accordance with FAA Order JO 7400.2, paragraphs 32−2−2, Environmental Review of Flight Procedures and Other Air Traffic Actions, and 32−3−3, Environmental Screening and Modeling Tools, to determine what level of environmental review is required for the air traffic action.

# Section 2. User Coordination/Conferences/Publicity

## 4−2−1. LOCAL COORDINATION/CONFERENCES

**a.** The Air Traffic Manager (ATM) must coordinate with local airport operators (e.g., soaring clubs, UAS operators, skydiving clubs) and local Flight Standards District Offices to increase awareness and understanding of local operations (especially non-transponder) and safety challenges.

**b.** The ATM must also convene conferences, as often as important local problems warrant, for discussing and clarifying facility operational matters. Use discretion before making any policy commitments.

**1.** Following these conferences, take appropriate action within your jurisdiction.

**2.** Send two copies of the minutes, or a summary, of each local conference to the Service Area Director of Air Traffic Operations and one to each conference member.

**c.** If a general conference is needed to discuss problems and subjects of a broader nature than those suitable for a local conference, forward such recommendation to the appropriate General Manager.

## 4−2−2. PILOT/CONTROLLER OUTREACH: OPERATION RAIN CHECK

The need to expand pilot and controller operational perspectives is very important; therefore, air traffic facilities should maintain effective pilot/controller outreach efforts, such as Operation Rain Check. Conducting seminars, briefings and familiarization experiences remain a great way to enhance pilot awareness of National Airspace System (NAS) functions, safety, and airspace procedures. Emphasis should be placed on operations within Class B, Class C, Class D and Terminal Radar Service Area (TRSA) airspace and, where applicable, on runway safety.

**a.** Operation Rain Check must.

**1.** Be performed as an additional duty and must not adversely impact facility resources.

**2.** Be conducted in an atmosphere that fosters mutual understanding, cooperation and a free exchange of information.

**3.** Demonstrate a desire to help pilots make use of FAA services, and reflect a spirit of service to NAS operators, while also benefitting controllers.

**b.** Important success factors to consider for Operation Rain Check:

**1.** Facility access and security. Use good judgment and proper security measures while planning, setting up and conducting local programs.

***REFERENCE−***
*http://www.faasafety.gov/.*
*FAA Advisory AC 61-91, WINGS—Pilot Proficiency Program.*
*FAA Order 8900.1. Flight Standards Information Management System.*
*FAA Order JO 7200.21, Partnership for Safety Program.*

**2.** Continuous and extensive publicity may be vital to a successful program. FAA Public Affairs may provide guidance on local media relations activities. Also, consider collaborating program agendas and events with the FAA WINGS program representatives.

3. Distribute program announcements and/or information to airport authorities, flight schools, fixed base operators, military airfield managers, and neighboring facilities, including Flight Standards District Offices (FSDO) and Airport District Offices (ADOs).
4. Consider presenting Letters of Appreciation to key program participants.
5. Facility Managers should:

**(a)** Determine what program materials, resources and other safety organizations would add value to implementing local Operation Rain Check programs.

***NOTE−***
*At locations where more than one air traffic facility exists, consider cooperative efforts.*

**(b)** Ensure locally adopted indoctrination materials comply with Privacy Act stipulations.
**(c)** Offer participation to Runway Safety Action Teams, FSDOs, and Airport Authorities.
**(d)** Be emphatic aboutRunway Safety and should include the following on the agenda:

**(1)** Runway incursion/excursion prevention.
**(2)** Airport signage and markings.
**(3)** Local runway safety related issues.
**(4)** Pilot/controller communications and readbacks.

***NOTE−***
1. *Runway Safety Action Team meetings are required at all towered airports (FAA Order 7050.1, Chapter 4) and may be included to provide a positive venue for controllers, pilots and airport personnel to address surface safety.*
2. *Additional runway safety information is available through FAA National and Service Area Runway Safety Offices and Runway Safety Program Managers.*

**c.** Facility sponsored pilot/controller forums.

## 4−2−3. PUBLISHED ITEMS

Items of publicity, either commendable or critical of FAA facilities, should be forwarded to the Service Area office. This includes newspaper clippings, magazine articles, photographs, or copies of letters.

## 4−2−4. COORDINATION OF ATC PROCEDURES

**a.** Coordination must be carried out with the appropriate users prior to implementing or changing procedures which may have a significant effect on them or flight information publications. *Users* means the operators of aircraft; organizations representing aircraft owners, operators, or pilots; individuals; the DoD; aviation authorities; or other government agencies concerned with the safe, efficient operation of aircraft in the NAS.

**b.** Procedures which will have a significant effect on the users will be coordinated with them by means of correspondence, individual contacts, or a presentation at a meeting for the purpose of soliciting individual comments. When deemed appropriate, the advice and viewpoint of individual users will be obtained prior to the development of a proposed change. When safety is not a factor, a minimum of 45 days should be afforded those responding to a request for comments.

**c.** No joint user meeting will be conducted for the purpose of seeking user consensus or agreement on an issue. Coordination does not mean or imply that unanimity of opinion must be reached nor does it mean that user concurrence is required.

**d.** Interfacility coordination must be carried out, as appropriate, prior to coordination with the users. In addition, all other concerned FAA facilities and offices must be informed prior to implementing these changes.

**e.** The final decision on whether a change is adopted as proposed, changed in light of the individual replies received, or not adopted rests with the initiating office and will be based on an evaluation of all pertinent factors. If significant objections to a change are received, advise the Service Area office which will inform the Manager of Airspace and Rules, if deemed appropriate.

**f.** When a change is adopted, users will be afforded sufficient time to prepare for the change prior to its implementation. If a proposed change is not adopted, an explanation of the decision will be forwarded to the users.

# Section 3. Letters of Agreement (LOA)

## 4−3−1. LETTERS OF AGREEMENT

An LOA should be negotiated if the air traffic manager deems it necessary to clarify responsibilities of other persons/facilities/organizations when specific operational/procedural needs require their cooperation and concurrence. For Class A airspace authorizations, do not negotiate an LOA intended to support recurring operations, before reviewing the guidance contained in Chapter 19 of this order regarding waivers, authorizations, or exemptions to the Code of Federal Regulations (CFR). An LOA should be prepared when it is necessary to:

**a.** Supplement established operational/procedural instructions.

**b.** Define responsibilities and coordination requirements.

**c.** Establish or standardize operating methods.

**d.** Specify special operating conditions or specific air traffic control procedures.

**1.** LOAs for recurring VFR glider and balloon operations in Class A airspace must contain the following provision:
"This Letter of Agreement (LOA) does not grant nor imply the waiver of, or an authorization to deviate from, any part or subpart of the Code of Federal Regulations (CFR). All applicant(s) and/or operator(s) will coordinate with the responsible Flight Standards District Office in advance of planned or recurring VFR flight in Class A airspace."

**2.** The Flight Standards Service (FS) is responsible for ensuring the qualification of civil pilots, airworthiness of civil aircraft, and the safety of persons and property on the ground as part of a waiver for which air traffic does not have issuing authority. Chapter 19 of this order references CFRs that require coordination with FS for these operations to occur.

***NOTE−***
*Planned or recurring operations constitute those operations over a long period of time necessitating an LOA. Short-term periods, for example, a single day event, weekend, or similar short periods are accomplished through special provisions included with an FS approved Certificate of Waiver.*

***REFERENCE−***
*FAA Order 8900.1, Flight Standards Information Management System (FSIMS).*

**e.** Delegate responsibility for ATC service; e.g., approach control service, control boundary jurisdiction, and procedures for coordinating and controlling aircraft where two or more airports have conflicting traffic patterns or overlapping conflicting traffic patterns.

**f.** Establish responsibilities for:

**1.** Operating airport equipment.

**2.** Providing emergency services.

**3.** Provide airport management with braking action reports. At a minimum, procedures must provide for the prompt notification which indicate runway braking conditions have deteriorated to "good to medium," "medium," "medium to poor," "poor," or "nil" or have improved to "good."

**4.** Reporting operating limitations and hazards.

5. Interfacility use of trajectory-based operations (TBO) capabilities (e.g., TBFM, TFDM.)

**g.** Describe procedures that supplement those contained in FAA Order JO 7110.65, Air Traffic Control, or FAA Order JO 7110.10, Flight Services, to satisfy a requirement of a military service.

***REFERENCE−***
*FAA Order JO 7110.65, Para 1−1−11, Waivers to This Order.*

**h.** Define stereotyped flight plans used for special operations, such as training flights or flight test activities.

**i.** Describe airspace areas required to segregate special operations.

**j.** Establish aircraft radiotelephony call signs to be used by the tower and the local operators.

**k.** Define the responsibilities of the tower and the airport management or other authority for movement and nonmovement areas by precisely delineating the loading ramps and parking areas under the jurisdiction of the airport management or other appropriate authority. Facility air traffic managers may, at their discretion, exclude from the movement area those portions of the airport surface normally designated movement areas that are not visible from the tower. Consideration must be given to the impact this may have on the movement of ground traffic. The agreement may include the following:

1. Airport management or other appropriate authority must require, by agreement or regulation, all ground vehicles and equipment operators and personnel to obtain tower approval prior to entry onto the airport movement area and comply with control instructions issued to them while on that area. This includes those vehicles used to conduct pushback operations and must require approval prior to moving aircraft/vehicles out of the loading ramps or parking areas onto the movement area.
2. Airport management or other appropriate authority may also require those aircraft which will not infringe upon the movement area but will impede ingress and egress to the parking area to contact the tower for advisories prior to conducting pushback operations. State that information related to aircraft movement on the loading ramps or parking areas is advisory in nature and does not imply control responsibility.
3. At those airports where vehicles not equipped with two-way radio are permitted by the airport management or other appropriate authority to enter or cross the defined movement area at specific locations without approval from the tower, enter into an LOA with the airport management, or other appropriate authority, specifying the conditions for such operations and include the clause as follows: “The airport owner/operator covenants and expressly agrees that with regard to any liability which may arise from the operation within (area/areas), that party must be solely and exclusively liable for the negligence of its own agents, servants, and/or employees, in accordance with applicable law, and that neither party looks to the other to save or hold it harmless for the consequences of any negligence on the part of one of its own agents, servants, and/or employees.”

**l.** Document-specific activities permitted by the airport operator in the runway safety area (RSA), particularly during aircraft operations, which includes when aircraft are arriving, departing, or taxiing along the runway. Signatories must include the airport operator, the ATCT, and the FAA Technical Operations office supporting the airport.

1. An RSA LOA must be developed in collaboration with all parties to the agreement, referencing Advisory Circular (AC) 150/5210-20, Ground Vehicle Operations to include

Taxiing or Towing an Aircraft on Airports, and including site-specific procedures for all RSA activities.

2. An RSA LOA must be established even when the airport operator will not permit activity in the RSA during aircraft operations.
3. An RSA LOA must be a stand-alone agreement (not combined with any other LOA).

***NOTE−***
*The LOA may include additional parties such as airport tenants; fixed-base operators; or local, state, and federal agencies.*

***REFERENCE−***
*Advisory Circular AC 150/5210-20, Ground Vehicle Operations to include Taxiing or Towing an Aircraft on Airports.*

## 4−3−2. APPROPRIATE SUBJECTS

Examples of subjects of LOAs are:

**a.** Between ARTCCs:
1. Radar handoff procedures.
2. Interfacility coordination procedures.
3. Delegation of responsibility for IFR control jurisdiction.

**b.** Between ATCTs:
1. Tower en route control service.
2. Interfacility coordination procedures.

**c.** Between Flight Service Stations: Procedures for maintaining master flight plan files.

**d.** Between an ARTCC and an ATCT:
1. Approach control service.
2. Interfacility coordination procedures.
3. Tower/center en route control service.

**e.** Between an ARTCC and an FSS: Procedures for the assignment of DVFR and VFR beacon codes.

**f.** Between an ATCT and an FSS: Operation of airport lighting.

**g.** Between an ARTCC or an approach control facility and a nonapproach control tower, an FSS, an airport manager, or a local operator: Special VFR Operations. (See FIG 4−3−1.)

**h.** Between an ARTCC or an approach control facility and a nonapproach control tower:
1. Authorization for separation services.
2. Interfacility coordination procedures.
3. Opposite direction operations procedures.

***REFERENCE−***
*FAA Order 7210.3, Para 2−1−38, Opposite Direction Operations.*

**i.** Between an ARTCC and another government agency:
1. Interfacility coordination for control of ADC aircraft.

**2.** Delegation of responsibility for approach control services.
**3.** MTR procedures.

**j.** Between a tower and another government agency:
**1.** Simulated flameout procedures.
**2.** Control of helicopter SVFR flights.
**3.** Operation of aircraft-arresting barriers.
**4.** MTR procedures.

**k.** Between a tower and/or FSS and an airport manager/aircraft operator at airports upon which the tower and/or FSS is located:
**1.** Airport emergency service.
**2.** Operation of airport lighting.
**3.** Reporting airport conditions, to include how all PIREP braking action reports of “good to medium," “medium," “medium to poor," “poor," or “nil" are to be immediately transmitted to airport management, and an agreement on actions by air traffic personnel for the immediate cessation of operations on runways subject to “nil" braking action reports.

***REFERENCE−***
*Advisory Circular AC 150/5200-30D, Airport Winter Safety and Operations.*

**4.** Control of vehicular traffic on airport movement areas.
**5.** Specific activities allowed in the RSA during aircraft operations.

***REFERENCE−***
*FAA Order JO 7210.3, Para 2−1−23, Obstacle Identification Surfaces, Obstacle Free Zones, Runway Safety Areas, Approach/Departure Hold Areas, and Clearways.*
*AC-150/5210-20A, Appendix C.*

**6.** Operations under an exemption from part 91, appendix D, section 3, the surface area of Class B, Class C, Class D, or Class E airspace within which Special VFR weather minimums are not authorized.

***REFERENCE−***
*Advisory Circular AC 150/5210-7C, Airport Rescue and Fire Fighting Communications.*

**l.** Between a tower and/or FSS and an airport manager/aircraft operator at airports upon which the tower is located but the FSS is not: Reporting airport runway conditions.
**m.** Between an air traffic control facility and a fixed site operating under Section 44809. For all operations occurring on-airport, follow procedures in FAA Order JO 7200.23, Processing of Unmanned Aircraft Systems Requests, Chapter 2, Processing of Section 44809 Authorization Requests.

## 4−3−3. DEVELOPING LOA

Air traffic managers must take the following action when developing an LOA: (See examples FIG 4-3-1 and FIG 4-3-2. For space example LOAs, see Appendix 6.)

**a.** Determine, through coordination, which FAA facility is principally responsible for processing the LOA.

**b.** Confine the material in each agreement to a single subject or purpose.

**c.** Describe the responsibilities and procedures applicable to each facility and organization involved. Review pertinent national procedures or local instrument flight procedures and incorporate into the new LOA(s) as necessary.

***NOTE-***
*Information related to subscribing for alerts regarding upcoming changes to instrument flight procedures is available at the Instrument Flight Procedures Information Gateway: https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/.*

***REFERENCE-***
*FAA Order JO 7210.3, Para 2-1-2, Facility Standard Operating Procedures (SOP).*
*FAA Order JO 7210.3, Para 2-1-6, Checking Accuracy of Published Data.*
*FAA Order JO 7210.3, Para 4-3-9, Annual Review/Revisions.*

**d.** Delegate responsibility for control of IFR aircraft, where necessary, by taking the following action:

**1.** Describe the area within which responsibility is delegated. The area may be depicted in chart form.

**2.** Define the conditions governing use of the area. These include altitudes, routing configuration, and limitations or exceptions to the use of the applicable airspace.

**3.** Specify the details of control procedures to be used. These include clearance limits, reporting points, handoff points, and release points.

**4.** Identify clearance limits designated as Instrument Approach Fixes when they are to be used for holding aircraft.

**5.** Specify communications and coordination procedures.

**e.** Coordinate with other FAA facilities and military or civil organizations as appropriate.

**f.** Attach charts or other visual presentations, when appropriate, to depict the conditions of the LOA.

**g.** Coordinate with the Regional Flight Standards Division, All Weather Operations Program Manager if aircraft operations or pilot procedures will be affected.

**h.** Prepare a single supplement, if necessary, to augment the letter at a facility and attach it to the basic LOA. Do not repeat material from the basic LOA.

**i.** After coordination, send two copies of the proposed LOA, including supplements, to the service area office for approval if required.

## 4−3−4. REVIEW BY SERVICE AREA OFFICE

**a.** The Service Area office must review the proposed LOA, ensure coordination with other interested offices and affected user groups, as necessary, and approve the LOA if satisfactory. Coordination includes mandatory review of the LOA by a Service Center Environmental Protection Specialist (EPS) in accordance with paragraph 4-1-6.

**b.** The Service Area office may, in writing, delegate to air traffic managers, air traffic managers designees, ATREPs, or Region Air Defense Liaison Officer (RADLOs) the authority to develop, coordinate, approve, and implement LOAs except for:

**1.** Those which prescribe procedures or minima contrary to those contained in FAA Order JO 7110.65, Air Traffic Control, unless appropriate military authority has authorized application of reduced separation between military aircraft; or

***REFERENCE-***
*FAA Order JO 7110.65, Para 1-1-10, Procedural Letters of Agreement (LOAs).*

**2.** Those between an IFR facility and a tower to authorize the separation services prescribed in paragraph 2-1-16, Authorization for Separation Services by Towers, and paragraph 10-5-3, Functional Use of Certified Tower Radar Displays.

**3.** Those between an FAA facility and a helicopter/powered-lift operator that establish helicopter/powered-lift routes.

## 4−3−5. APPROVAL

Upon receipt of Service Area office approval, the air traffic manager must:

**a.** Prepare the LOA in final form incorporating the Service Area office guidance. Development of the LOA includes an environmental impact review by the appropriate Service Center EPS in accordance with paragraph 4−1−6 of this order.

**b.** Establish an effective date, acceptable to all parties involved, that permits sufficient time for distribution and for participating facilities and user groups to familiarize personnel, revise directives, flight charts, etc., and complete other actions.

**c.** Sign the LOA and obtain signatures of other authorities as required.

**d.** Distribute copies of the signed LOA to each participating facility or organization, the Service Area office, and other interested offices. Distribution of supplements outside the facility is not required.

**e.** Ensure that current, new, or revised LOA, Standard Operating Procedures (SOP), and FAA Facility Orders (FO) are posted in the Facility Directives Repository (FDR) before the effective date of the document.

*EXCEPTION.* LOAs containing contingency plan information must not be posted to the FDR. LOAs with such information must be posted to the National OCP database.

***REFERENCE−***
*FAA Order JO 7210.3, Para 2−2−14, Facility Directives Repository (FDR).*

## 4−3−6. SPACE LOAS

LOAs exist between ATC facilities and Federal Ranges; space launch/reentry sites; and launch and/or reentry service providers (LSPs). FAA Order JO 7400.2, Procedures for Handling Airspace Matters, contains responsibilities and procedures for Commercial Space operations. The following lists the roles and responsibilities of organizations and individuals involved in the space LOA process:

***NOTE−***
*This paragraph does not apply to on-orbit activities or operations.*

**a.** The respective ATO Service Center OSG will serve as facilitator of the LOA development.

**b.** ATO Service Center OSG will coordinate with the appropriate Service Area, ATO Space Operations, the Office of Commercial Space Transportation (AST), the Office of Airports, and other offices having responsibilities in accordance with the operation.

**c.** Each LOA must include, but is not limited to:

**1.** Names and contact information for all parties involved.

**2.** Operating procedures to include communications, real-time coordination, Notice to Airmen (NOTAM) content issuance, contingency, and emergency procedures and notifications.

**3.** For Federal Range LOAs: a brief description of the launch/reentry site and any limitations on operations. If no limitations or restrictions are needed, notate this in the LOA as "No Restrictions."

***NOTE−***
*Possible restrictions may include but are not limited to restrictions on operating hours, restrictions on vehicle size, and restrictions on number of operations.*

**4.** For launch/reentry operation LOAs: description of operation to include but not limited to vehicle type and characteristics; anticipated frequency of operations; requested airspace and altitude, and notional Aircraft Hazard Area (AHA) information. When possible, this should include vehicle telemetry data transmittal.

**5.** For launch/reentry site LOAs: brief description of the launch/reentry site, types of anticipated operations, and anticipated frequency of proposed operations.

**6.** For launch/reentry sites controlled and used by a single LSP, a single LOA for launch/reentry site and operation may be utilized. Contents of the LOA must comply with c1 through c5.

## 4−3−7. HOT AIR BALLOON LOAS FOR CLASS C AIRSPACE

Air traffic managers at facilities that conduct hot air balloon operations within Class C airspace must enter into an LOA with balloon operators or festival representatives specifying procedures and conditions for operations. The LOA must be developed using a hot air balloon LOA template obtained from the Service Center Operations Support Group.

## 4−3−8. HELICOPTER/POWERED-LIFT LOAS

ATMs should develop helicopter/powered-lift LOAs with helicopter/powered-lift operators that define VFR routes and altitudes to reinforce positive control and increase airspace efficiency.

**a.** The LOA must contain detailed route descriptions and/or graphic depictions of the routes.

**b.** The LOA must include the following statement: "Helicopter/powered-lift altitude assignments in this LOA may not necessarily provide obstacle clearance protection. Pilots are responsible for seeing and avoiding terrain and obstacles."

***NOTE-***
*Pilots may deviate from the route as necessary to avoid hazards and then rejoin the route.*

**c.** LOAs must not contain blanket approval to enter Class B airspace. Clearance to enter Class B Airspace must be verbally issued by ATC.

**d.** Routes within Class B, Class C, or TRSA airspace must provide the required lateral minima or target resolution from IFR arrival and departure corridors. Where helicopter/powered-lift routes cross an arrival or departure corridor, the LOA must specify altitudes or checkpoints that assist with providing required separation minima.

***NOTE-***
*VFR helicopter/powered-lift aircraft may be assigned an altitude below the minimum vectoring altitude when complying with routes or altitudes specifically prescribed for helicopters/powered-lift aircraft.*

***REFERENCE-***
*14 CFR Section 91.119, Minimum Safe Altitudes: General.*
*14 CFR Section 135.203, VFR: Minimum Altitudes.*

**e.** Routes within Class D airspace must be designed to avoid conflict with arrival and departure corridors.

**f.** In terminal areas with high helicopter/powered-lift traffic volume, consideration should be given to develop a Helicopter/Powered-Lift Route Chart as specified in Chapter 12, Section 4, of this order.

**g.** All letters of agreement addressing helicopter/powered-lift operations in Class B, Class C, TRSA, or Class D airspace must be approved by the Service Area Director of Air Traffic Operations.

## 4−3−9. ANNUAL REVIEW/REVISIONS

**a.** Review LOAs at least annually and update as necessary. Examine current LOAs for practices and/or procedures that are no longer required. Reviewing includes both content and relevance that achieve full operational efficiency and customer flexibility. Review and, if necessary, update LOAs when new/revised instrument flight procedures are published or national procedures are implemented or changed.

***NOTE-***
*Information related to subscribing for alerts regarding upcoming changes to instrument flight procedures is available at the Instrument Flight Procedures Information Gateway: https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/.*

***REFERENCE-***
*FAA Order JO 7210.3, Para 2-1-2, Facility Standard Operating Procedures (SOP).*
*FAA Order JO 7210.3, Para 2-1-6, Checking Accuracy of Published Data.*
*FAA Order JO 7210.3, Para 4-3-3, Developing LOA.*

**b.** Process revisions to LOAs and attachments or supplements thereto as page replacements. Mark the revisions as follows:

**1.** Place an asterisk or vertical line to the left of each new or revised paragraph or section to signify new material.

**2.** Identify page revisions by the "REV" number, e.g., "REV 1," and the effective date in the lower right hand corner of each revised page.

**c.** Coordinate revisions to a LOA in the same manner and degree as for the original LOA.

## 4−3−10. CANCELLATION

After appropriate coordination with LOA signatories and the Service Area, cancel any agreement which is no longer applicable. Ensure that the FDR is updated.

*TBL 4−3−1*

| | | | |
|---|---|---|---|
| (Name) Center/Approach Control and (Name) FSS | | | |
| | **LETTER OF AGREEMENT** | | |
| | | EFFECTIVE: _____ | |
| SUBJECT: Special VFR Operations within (Name) Airport Surface Area | | | |
| **1. PURPOSE:** To provide operating procedures for Special VFR flight handling in the (name) surface area without individual coordination. | | | |
| **2. SCOPE:** The procedures outlined herein are for use in the conduct of Special VFR operations within the (name) Airport surface area at or below _____ feet. These procedures are applicable only to aircraft equipped with functioning 2-way radio in order to effect a recall when required by traffic or weather conditions. | | | |
| **3. RESPONSIBILITIES:** Upon request by the (name) FSS, the Center/Approach Control Facility may authorize Special VFR operations in the (name) Airport surface area for specific periods of time. The Center/Approach Control Facility must retain the authority to withdraw the provisions of this agreement at any time. | | | |
| **4. PROCEDURES:** | | | |
| | a. Local Special VFR operations. The (name) FSS must not authorize more than one aircraft to operate simultaneously in the surface area unless pilots agree that they will maintain visual separation with other aircraft operating in the surface area. | | |
| | b. IFR Arrivals and Departures. Special VFR operations must be controlled by the (name) Center/Approach Control during the following periods: | | |
| | | (1) From 10 minutes prior to the estimated time of arrival of an IFR aircraft over the approach fix until it is on the ground (IFR arrivals must not be cleared for an approach until the FSS confirms that there are no Special VFR operations in progress.) | |

| | | |
|---|---|---|
| | | (2) From 10 minutes prior to the estimated time of departure of an IFR aircraft until it departs the surface area. |
| | c. Special VFR Arrivals and Departures: | |
| | | (1) The (name) FSS may authorize aircraft to enter, depart, or fly through the surface area when no Special VFR operations are in progress. Authorization must be granted as outlined in 4a. |
| | | (2) Aircraft desiring to enter the surface area during times Special VFR operations are in progress must be instructed to maintain VFR conditions outside the surface area pending recall and landing of aircraft operating in the surface area. |
| | d. Predesigned clearance phraseologies. To authorize Special VFR operations or to issue instructions or other messages pertinent thereto, the (name) FSS must use the following phraseology: | |
| | | (1) To authorize operations:<br>A-T-C CLEARS (identification) TO ENTER/OUT OF/THROUGH (name) SURFACE AREA. MAINTAIN SPECIAL VFR CONDITIONS AT OR BELOW (altitude). REPORT LANDING COMPLETED/LEAVING SURFACE AREA,<br>or<br>A-T-C CLEARS (identification) TO OPERATE WITHIN (name) SURFACE AREA. MAINTAIN SPECIAL VFR CONDITIONS AT OR BELOW (altitude). |
| | | (2) To deny operations when visibility is less than one mile:<br>VISIBILITY (value). A-T-C UNABLE TO ISSUE DEPARTURE/ENTRY CLEARANCE. |
| | | (3) To suspend operations:<br>SPECIAL VFR AUTHORIZATION DISCONTINUED. RETURN TO AIRPORT OR DEPART SURFACE AREA. ADVISE INTENTIONS ..... (after response), REPORT LANDING COMPLETED/LEAVING SURFACE AREA. |
| | | (4) To advise an aircraft to remain outside the surface area:<br>A-T-C ADVISES (identification) TO MAINTAIN VFR OUTSIDE THE (name) SURFACE AREA PENDING ARRIVAL/RECALL/DEPARTURE OF SPECIAL VFR AIRCRAFT. |

| | |
|---|---|
| Air Traffic Manager, (Name) FSS | |
| Air Traffic Manager, (Name) ARTCC/ Approach Control | |

***TBL 4−3−2***

| |
|---|
| (Name) Air Route Traffic Control Center and (Name) Air Division |

| | | |
|---|---|---|
| | **LETTER OF AGREEMENT** | |
| | | EFFECTIVE:_____ |
| SUBJECT: Interfacility Coordination for the Control of Aerospace Defense Command Interceptor Aircraft | | |
| **1. PURPOSE:** (List responsibility and describe necessary coordination.) | | |
| **2. CANCELLATION:** (As required.) | | |
| **3. SCOPE:** (Specify area, names, and types of facilities involved.) | | |
| **4. RESPONSIBILITIES:** (Specify.) | | |
| **5. PROCEDURES:** | | |
| | a. ATC-Assigned Airspace. (List procedures to be followed for requesting and authorizing airspace, handling aircraft to and from the airspace, and notifying when no longer required.) | |
| | b. Transfer of Control. (Specify transfer procedures.) | |
| | c. Departure. (Specify required advanced time for filing flight plans. Outline additional items required in the flight plan; e.g., type of departure, CONAD control facility, and IND position number.) | |
| | d. En Route. (including information that ATC is responsible for effecting separation in assigned airspace whenever nonparticipating aircraft are cleared to operate within such airspace.) | |
| | e. Arrivals. (Outline handoff procedures and special instructions.) | |
| | f. General. (Self-explanatory.) | |
| **6. ATTACHMENTS** (List, as required, items such as chart of ATC-assigned airspace areas, common reference/handoff points, etc.) | | |
| | | |
| Air Traffic Manager, (Name) ARTCC | | |
| | | |
| Commander, (Name) Air Division | | |
| | | |
| (Title of other appropriate authority) | | |

## 4−3−11. AUTOMATED INFORMATION TRANSFER (AIT)

**a.** Radar identification, altitude, and en route fourth line control information approval may be transferred via full data blocks without using point-out procedures or verbal coordination. Air traffic managers wishing to authorize the use of the AIT process must establish AIT procedures adapted to local traffic situations and use the process only within the context of

those specific procedures. These precoordinated procedures and the controller responsibilities must be specifically defined in facility directives.

***REFERENCE-***
*FAA Order JO 7110.65, Para 5-4-10, En Route Fourth Line Data Block Usage.*

**b.** The controller who first transfers radar identification will also transfer aircraft communications. Either the transferring or the receiving controller, whoever is specified in a facility AIT directive, may issue the altitude change, if any. Additionally, facility AIT directives must require that any deviation from the specified procedure invalidates the procedure for that situation and requires that verbal coordination be completed as per FAA Order JO 7110.65, Air Traffic Control, paragraph 2-1-14, Coordinate Use of Airspace, paragraph 2-1-15, Control Transfer, paragraph 5-4-5, Transferring Controller Handoff, paragraph 5-4-6, Receiving Controller Handoff, or paragraph 5-4-7, Point Out. The following are general examples of the AIT process.

**1.** Transfer of radar identification only:

***EXAMPLE-***
*Controller A initiates a transfer of radar identification to controller B before the aircraft enters controller B's airspace. Controller B accepts the transfer of radar identification before the aircraft enters his/her airspace. Controller B, traffic permitting, then initiates a transfer of radar identification to controller C before the aircraft enters controller C's airspace. Controller A transfers aircraft communications to controller C before the aircraft enters controller C's airspace and after observing that controller C has accepted the transfer of radar identification.*

**2.** Transfer of radar identification and altitude control:

***EXAMPLE-***

1. *Controller A initiates a transfer of radar identification to controller B; controller B accepts the transfer. Controller B amends either the interim or assigned altitude in the data block to an altitude within his/her altitude stratum as prescribed in a facility directive. Controller B initiates a transfer of radar identification to controller C before the aircraft enters controller C's airspace. Controller A, after observing controller B initiate a transfer of radar identification to controller C, clears the aircraft to the altitude displayed in the data block by controller B. Controller A, after observing that controller C has accepted the transfer of radar identification, transfers aircraft communication to controller C before the aircraft enters controller C's airspace.*
2. *Controller C may clear the aircraft to the altitude displayed by controller B if so established in a facility AIT directive.*

**3.** The following is an example of a precoordinated AIT procedure which might be written in a facility directive:

***EXAMPLE-***

*The following procedure is established for implementation under the (AIT) process and is agreed to by the South and East areas. Aircraft departing ELP via J26 to ROW requesting FL 280 or above must be handled as follows:*

***(a)*** *Sector 20 must clear the aircraft to FL 270 within its airspace and then initiate a transfer of radar identification to sector 63.*

***(b)*** *Sector 63 must accept the transfer of radar identification then display either an assigned or interim altitude in the data block.*

***(c)*** *Sector 63 must then initiate a transfer of radar identification to sector 23 before the aircraft enters sector 23's airspace.*

***(d)*** *Sector 20, after observing the assigned/interim altitude displayed in the data block and that a transfer of radar identification has been initiated to sector 23, must then clear the aircraft to the appropriate altitude.*

***(e)*** *Sector 20 must transfer communications of the aircraft to sector 23 before the aircraft enters sector 23's airspace and after observing sector 23's acceptance of the transfer or radar identification.*

# Section 4. Application

## 4−4−1. OPERATIONS UNDER EXEMPTIONS FROM SECTION 3 OF APPENDIX D TO PART 91 SURFACE AREAS OF CLASS B AND CLASS C AIRSPACE WITHIN WHICH SPECIAL VFR WEATHER MINIMUMS ARE NOT AUTHORIZED FOR FIXED-WING AIRCRAFT

Implement LOAs with operators whose operations are conducted under an exemption to 14 CFR part 91, appendix D, section 3. Letters of Agreement should contain:

**a.** The surface area within which exempted operations may be conducted;

**b.** The weather minimums required for the operations;

**c.** That visual reference to the surface is required;

**d.** Sufficient details as to routes, altitudes, communications, reporting points, etc. to facilitate control of these operations;

**e.** Code names, if practical, for use in signifying to the pilot the details of each arrival and departure procedure; and

**f.** Any additional data which the ATC facility believes necessary to accommodate operations.

***NOTE−***
*14 CFR part 91, appendix D, section 3 lists specific surface area locations in which FW/SVFR flight is prohibited. However, operators may petition for exemptions from these prohibitions. An exemption may only be granted by an FAA Headquarter's office (i.e., Vice President for Terminal Services, or the Administrator).*

## 4−4−2. USE OF AIRCRAFT CALL SIGNS

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

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

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

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

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

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

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

***REFERENCE−***
*FAA Order JO 7610.12, Assignment and Authorization of Call Sign Designators and Associated Telephonies.*
*AC 120-26, Assignment of Aircraft Call Signs and Associated Telephonies.*

## 4−4−3. RUNWAY SUPERVISORY UNITS (RSU)

Facility air traffic managers must ensure that the following items are included in a LOA with the local military authority when the operation of a military RSU has been directed by the military commander.

**a.** Qualification requirements of personnel operating the RSU.

**b.** A continuous monitor of the appropriate tower frequency is maintained.

**c.** Coordination with the tower is accomplished prior to changing to an alternate frequency.

**d.** The primary function of the RSU is to monitor arrivals and departures of designated military aircraft.

**e.** The RSU must not be used for ATC service except:

**1.** In an emergency situation; or

**2.** At undergraduate pilot training/pilot instructor training (UPT/PIT) locations to UPT/PIT aircraft for preventive control purposes.

**f.** Radio silence must be maintained at all times unless actual safety of flight is involved or as outlined in subparagraph e above.

# Section 5. Other Correspondence

## 4−5−1. LETTERS OF PROCEDURES

**a.** Facility air traffic managers must prepare letters of procedure for stating specific terms regarding the release by the using agency of restricted areas as defined in 14 CFR part 73.

**b.** Prepare and handle letters of procedure as follows:

**1.** Coordinate with the using agency procedures for the joint-use of a restricted area. (See 14 CFR section 73.15.)

**2.** After coordination, send two copies of the proposed document to the Service Area office.

**3.** The Service Area office must review and approve or delegate the authority for approval to the facility air traffic manager. Forward to Service Area office for approval any joint-use letter that proposes procedures considered a substantial departure from the recommended format.

**4.** Upon receipt of approval from the Service Area office, the facility air traffic manager must prepare the final letter, incorporating Service Area office guidance, sign (along with the appropriate using agency authority), and establish an effective date allowing at least 30 days for any rulemaking actions necessitated by subparagraph 5 below, and the cartography and the distribution requirements.

**5.** An FAA facility must be designated in 14 CFR part 73 as the controlling agency of any joint-use restricted area. When an ATC requirement exists in a joint-use restricted area, rulemaking action is also necessary to designate restricted areas as controlled airspace below 14,500 MSL.

**6.** The document must contain an effective date.

**7.** Send two copies to each of the participating facilities or agencies; one copy directly to the Service Area office.

## 4−5−2. LETTERS TO AIRMEN

**a.** Facility air traffic managers may approve letters to airmen to publicize new or revised services, anticipated interruptions of service, procedural changes, and other items of interest to users.

**b.** The Letter to Airmen must adhere to the following:

**1.** The Letter to Airmen must be originated and disseminated through the NOTAM Service.

**2.** The Letter to Airmen is informational in nature and must not contain words which imply mandatory instructions. The words “must” and “shall” are not to be used in a Letter to Airmen.

**3.** Chart attachments must be used in lieu of narrative descriptions to the extent possible.

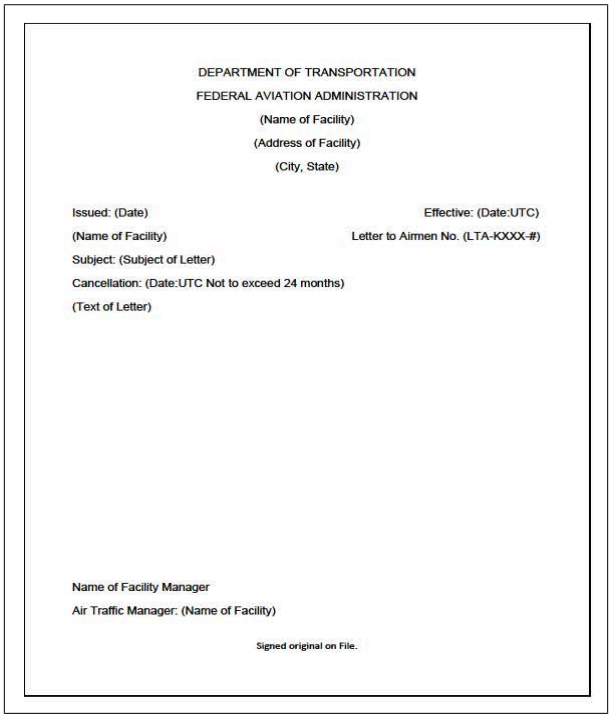
**4.** The signed original Letter to Airmen must be maintained by the originating facility.

**5.** Each Letter to Airmen must contain an effective date (UTC) and a cancellation date (UTC) and must not remain in effect beyond the date the information contained in the letter becomes obsolete or more than 24 months, whichever occurs first.

**6.** Issue a new Letter to Airmen for the same subject prior to the end of the 24-month period only if the information contained requires continued publication. (See FIG 4−5−1.)

*FIG 4−5−1*

**Letter to Airmen**



DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
(Name of Facility)
(Address of Facility)
(City, State)

Issued: (Date) Effective: (Date:UTC)
(Name of Facility) Letter to Airmen No. (LTA-KXXX-#)
Subject: (Subject of Letter)
Cancellation: (Date:UTC Not to exceed 24 months)
(Text of Letter)

Name of Facility Manager
Air Traffic Manager: (Name of Facility)

Signed original on File.

**c.** Service Center Operations Support Groups (OSGs) must provide the following support using the NOTAM Service to electronically manage LTAs:

**1.** Air traffic facility account management.

**2.** Publish or reject letters to airmen.

## 4−5−3. DISPOSITION OF VOLCANIC ACTIVITY REPORTING (VAR) FORMS

Should a controller receive a completed volcanic activity report (VAR) form during a pilot briefing, the controller is directed to forward the form to the supervisor/CIC on duty. The supervisor/CIC must mail or fax the completed form to the Smithsonian Institute as specified at the bottom of the form within 24 hours of receipt.

# Section 6. Records

## 4−6−1. FACILITY RECORDS MANAGEMENT

Manage facility records in accordance with FAA Order 1350.14, Records Management.

## 4−6−2. COLLECTION OF OPERATIONAL DATA

**a.** Air traffic managers are responsible only for the routine collection and reporting of basic operational information as authorized in this order or by the appropriate service unit. Collection of any data must be considered a secondary function and must not interfere with the accomplishment of operational duties.

**b.** Air traffic managers must not permit their facilities to participate in special studies and surveys nor agree to the use of facility personnel to tabulate, prepare, or forward to outside organizations or parties any special summaries, abstracts, reports, or aeronautical data unless approved in advance by the Service Area office.

## 4−6−3. FORMS PREPARATION

**a.** Exercise care when preparing forms to ensure neatness and accuracy. The forms are a part of the facility's permanent records and subject to review by authorized personnel or agencies.

**b.** Except as in subparagraph c, do not erase, strikeover, or make superfluous marks or notations. When it is necessary to correct an entry, type or draw a single horizontal line through the incorrect data, initial that part of the entry, and then enter the correct data.

**c.** When using an automated Form 7230-4, grammatical and spelling errors may be corrected by use of delete or type-over functions. Substantive changes in contents of remarks should be accomplished by a subsequent or delayed entry. If the computer software used contains a strikeout feature, this feature may be used.

**d.** Authorized FAA abbreviations and phrase contractions should be used.

**e.** New daily forms must be put into use at the start of each day's business.

## 4−6−4. FAA FORM 7230-4, DAILY RECORD OF FACILITY OPERATION

**a.** Completion of FAA Form 7230-4, Daily Record of Operation. Using agency-approved automation methods to complete FAA Form 7230-4 is preferred to using manual methods.

**1.** Each air traffic facility, where FAA telecommunications network capability exists (excluding flight service stations), must use the Comprehensive Electronic Data Analysis and Reporting (CEDAR) program to complete an automated version of FAA Form 7230-4. Any Mandatory Occurrence Report (MOR), documented in CEDAR will automatically generate an FAA Form 7230-4 entry; however, some Form 7230-4 entries do not require an MOR as addressed in paragraph 4−6−5h.

**2.** Where currently in use, facilities and/or TMUs may continue to use the NTML to complete an automated version of the FAA Form 7230-4.

**3.** If an automated method is not available to complete FAA form 7230-4, the facility and or traffic management unit must manually complete the form. An example of the Daily Record of Facility Operation follows this section. (See FIG 4−6−1.)

**b.** The use of FAA Form 7230-4 for individual position assignments is authorized only for the STMCIC, OSIC, OMIC, TMC, TMCIC, and CIC positions, and positions at the ATCSCC.

## 4−6−5. PREPARATION OF FAA FORM 7230-4

Personnel responsible for preparation of the Daily Record of Facility Operation, FAA Form 7230-4, must ensure that entries are concise, yet adequately describe the operation of the facility, including any abnormal occurrences. Prepare FAA Form 7230-4 as follows:

**a.** Except as provided in paragraph 4−6−4, use of a computer printout or ink is mandatory. Signatures or handwritten initials must be in either blue or black ink. Handwritten entries must be printed, rather than in script. Remarks section entries must be single-spaced.

**b.** Make all time entries in UTC, except that in the section titled "Personnel Log," local time must be used for time and attendance purposes.

**c.** Complete the information required at the top of each form.

**d.** Make an appropriate notation under "Operating Position" to indicate the extent of the operation described on each form; e.g., "AM," "All," "Sector D3," etc.

**e.** The first entry in the REMARKS section of each day's form must indicate the employee responsible for the watch and must be used to show carry-over items. Items to be carried over from the preceding "Daily Record of Facility Operation" are those which will affect the current day's Daily Record (e.g., equipment outages, runway or airspace status, or coordinated routes/procedures). The last entry on each day's form must indicate the close of business (COB), consider midnight local time or facility closing time, if earlier, as the close of the day's business.

**f.** Employees must sign on/off as follows:

**1.** When a typed or handwritten FAA Form 7230-4 is used, the employee assuming responsibility for the watch must sign on using their operating initials and must sign the certification statement at the bottom of the form.

**2.** When an automated FAA Form 7230-4 is used, in lieu of actually signing the form, the employee assuming responsibility for the watch must sign on using their name, for example, "1430 J. SMITH ON." Entering the name of the employee assuming responsibility for the watch, in lieu of entering operating initials, serves the same purpose as signing the certification statement at the bottom of the actual form. Additionally, the employee responsible for the watch at the time that the form is printed out must sign the certification statement at the bottom of the form, as when the actual FAA Form 7230-4 is used.

**3.** When FAA Form 7230-4 is used to indicate position responsibility, record employees initials and exact minute on/off the position.

**g.** Establish and post a list of equipment checks required during each watch; e.g., recorder checks, siren check, etc. Make an entry ("WCLC") on FAA Form 7230-4 when the watch checklist has been completed. Notify the organization responsible for corrective action on equipment malfunctions. Record equipment malfunctions, equipment released for service, notification information and/or course of action taken to correct problem, and return of equipment to service. Facilities may establish local forms and procedures for recording and disseminating equipment malfunction and restoration information. Local forms used for recording this information are considered to be supplements to FAA Form 7230-4 and must be filed with it.

***NOTE−***
*At facilities which are closed prior to the beginning of the new business day, changes in status can occur during nonoperational hours. If the status of equipment or other facility operations has changed from status reported on previous days' FAA Form 7230-4, changes must be noted in Watch Checklist entry, as well as time of status change, if known (e.g., WCLC - ABC VOR RTS 0700). If necessary, place an "E" in the left margin as prescribed in paragraph 4−6−5, Preparation of FAA Form 7230-4.*

**h.** FAA Order 7210.632, Air Traffic Organization Occurrence Reporting, defines situations requiring a MOR. When a MOR is required, include enough detail in the MOR to provide an understanding of the circumstances that initiated the occurrence. Events such as tarmac delays, no-notice ground stops/holding, and accidents are documented on FAA Form 7230-4; no MOR is required for these items. Other reporting and notification requirements related to tarmac delays, no-notice ground stops/holding, and accidents may apply.

**1.** En route, terminal and oceanic facilities must use the CEDAR tool to record and disseminate MORs and to document the resolutions of MORs.

**2.** Flight service stations may use an automated version of FAA Form 7230-4 or establish local forms and procedures for recording, disseminating, and documenting the resolution of MORs. Local forms used for recording this information are considered supplements to FAA Form 7230-4 and must be filed with it.

**i.** Place a large letter "E" in the left hand margin beside entries on equipment malfunctions. The "E" must also be used when equipment is restored to service. The "E" is not required for facilities using local forms if procedures are established in accordance with subparagraph g.

***NOTE−***
*The "E" is to be used on entries related to equipment problems which require Technical Operations involvement. The "E" is not required for routine maintenance items or for carryover entries on previously entered equipment malfunctions.*

**j.** Employees other than the person responsible for the watch who make an entry must initial or enter initials for each of their own entries.

**k.** Use additional forms as necessary to complete the reporting of the day's activity.

**l.** Make an entry closing out FAA Form 7230-4 at the close of business.

**m.** The air traffic manager, or his/her designee, must initial the form after reviewing the entries to ensure that the facility operation is adequately and accurately described.

## 4−6−6. FAA FORM 7230-10, POSITION LOG

**a.** Air traffic managers must ensure that FAA Form 7230-10, Position Log, or an automated sign on/off procedure is used for position sign on/off. FAA Form 7230-10 must be prepared daily. All logs, including automated ones, must reflect 24 hours or the facility's official operating hours, if less than 24 hours daily.

**b.** Position logs must be used as the sole-source record for on the job training instructor (OJTI) and evaluator time and premium pay. As a supporting document for time and attendance (T&A) purposes, position logs which document on the job training (OJT) time must be retained for one year prior to destruction.

**c.** Prepare FAA Form 7230-10 as follows:

**1.** Field 1 must contain the facility three-letter identification code.

**2.** Field 2 must contain the facility position/sector identifier that is a maximum of five letters and/or numbers, starting in the first space on the left side of the field. Unused spaces must be left blank.

**3.** Field 3 must contain a maximum of two letters to show the position type, as follows:

**(a)** *ARTCCs:* Starting on the left side of the field, use position codes as follows:

***TBL 4−6−1***

**Field 3 - ARTCC**

| *Designator* | *Position* |
|---|---|
| A | Assistant Controller |
| D | Nonradar Control |
| F | Flight Data |
| H or RA | Handoff, Tracker or Radar Associate |
| R | Radar Control |
| TM | Traffic Management |
| O | Other Positions |

**(b)** *Terminals:* Use two-letter position codes as follows:

***TBL 4−6−2***

**Field 3 - Terminal**

| *Designator* | *Position* |
|---|---|
| **Tower** | |
| AC | Approach Control Cab |
| CC | Coordinator Cab |
| CD | Clearance Delivery |
| FD | Flight Data |
| GA | Ground Control Assistant |
| GC | Ground Control |
| GH | Gate Hold |
| LA | Local Control Assistant |

| *Designator* | *Position* |
|---|---|
| LC | Local Control |
| SC | Supervision Cab |
| **TRACON** | |
| AP | Approach Control TRACON |
| AR | Arrival Radar |
| CI | Coordinator TRACON |
| DI | Data TRACON |
| DR | Departure Radar |
| FM | Final Monitor Radar |
| FR | Final Radar |
| HO | Handoff TRACON |
| NR | Nonradar Approach Control |
| PR | Precision Approach Radar |
| SI | Supervision TRACON |
| SR | Satellite Radar |
| **Tower/TRACON** | |
| TM | Traffic Management |

**(c)** *FSSs:* Use two-letter codes, as follows:

***TBL 4−6−3***

**Field 3 - FSS**

| *Designator* | *Position* |
|---|---|
| BC | Broadcast |
| FD | Flight Data |
| IF | Inflight |
| NO | NOTAM |
| OT | Other |
| PF | Preflight |
| WO | Weather Observer |

**4.** Field 4 must contain the date in digit format. All spaces must be used.

**5.** Field 5 must contain the UTC time that the employee assumes responsibility for the position or the UTC time that the position is combined with another. For employees receiving OJT instruction or evaluation, field 5 must contain the UTC time that the OJT instruction or evaluation begins.

**6.** Field 6 must contain the operating initials of the employee working the position.

**7.** Field 7 must contain the UTC time that the employee is relieved of responsibility for the position or the UTC time that the position is decombined. For employees receiving OJT instruction or evaluation, field 7 must contain the UTC time that the OJT instruction or evaluation ends.

**8.** Field 8 must contain the appropriate code identified at the bottom of page 1 of the form.

**9.** Field 9 must contain the identifier of the position being combined with (per field 2). Field 9 may be left blank if the same entry is appropriate and entered in field 10.

**10.** Field 10 must contain the type of position being combined with (per field 3).

**11.** If the second page (back-side) of FAA Form 7230-10 is used, then fields 1, 2, 3 and 4 on that page must also be completed.

**12.** When a mistake is made in filling out fields 5, 6, 7, 8, 9, or 10 - if the portion of the line that is incorrect can be legibly corrected, then line out that portion only and write the correct information. If the incorrect portion cannot be legibly corrected, then line out the entire line and write the correct information on the next line.

## 4−6−7. AUTOMATED POSITION SIGN ON/OFF

**a.** *FLIGHT SERVICE STATION*. Use of automated position sign on/off procedures is approved for FSS facilities. Facility managers are responsible for ensuring the accuracy of sign on/off data. Facilities must ensure sign on/off data is forwarded to concerned facilities along with other data required for accident packages. Sign on/off data must be retained for six months, in accordance with FAA Order 1350.14, Records Management. Data can be retained either electronically or

on paper. FAA Form 7230-10, Position Log, is only required to be used during those times that the automated procedure is not available.

**b.** *TERMINAL/EN ROUTE*. Use of automated position sign on/off procedures is approved for terminal and en route facilities. The information requirements described in paragraph 4−6−6, FAA Form 7230-10, Position Log, for FAA Form 7230-10 also apply to the automated procedure, except that times on/off the position may be displayed to the second rather than to the minute. Before implementation, facilities must receive Service Area Director of Air Traffic Operations approval and must verify the accuracy of the automated sign on/off procedure by conducting a 30-day trial period. After verifying the automated procedure's accuracy, an actual FAA Form 7230-10 is only required to be used during those times that the automated procedure is not available.

## 4−6−8. TIME AND ATTENDANCE (T&A) RECORDING

Record the actual times an employee works and is absent on a daily basis. Facilities may use any of the following methods for documenting time and attendance reported to the servicing payroll office.

**a.** The supervisor's or timekeeper's observation and subsequent recording of employees' hours worked. When this method is used, leave usage must be documented via OPM (Formerly Standard Form 71), Request for Leave or Approved Absence,or a locally produced form/ electronic format documented by facility directive.

**b.** Personnel log. A locally produced sign in/out form documented by facility directive, or FAA Form 7230-4.

**1.** When employees arrive, they must sign their name and record their time of arrival. When employees leave, they must record their time of departure and initial the form.

**2.** The personnel log must contain a statement or certification signed by each shift supervisor affirming the form's accuracy and approving the entries made by personnel while under their supervision. This statement must include the specific period of time for which each supervisor is providing certification.

**3.** The personnel log may also be used to document leave usage provided:

**(a)** The employee records the amount and type of leave used on the day the leave is used.

**(b)** Since leave use is covered by the Privacy Act, local management must inform all employees that they may use OPM (Formerly Standard Form 71), Request for Leave or Approved Absence instead of indicating their leave use on the log (or any other group format employed). This notification must be in writing, signed by the employee and retained in facility files, or the notification may be included in a facility directive which authorizes the group form.

**c.** Facilities may develop forms other than the personnel log to facilitate the documentation of leave and absence, provided:

**1.** The form includes, as a minimum, the employee request for leave, and the supervisor's approval/disapproval.

**2.** Each form and its use must be contained in a facility directive.

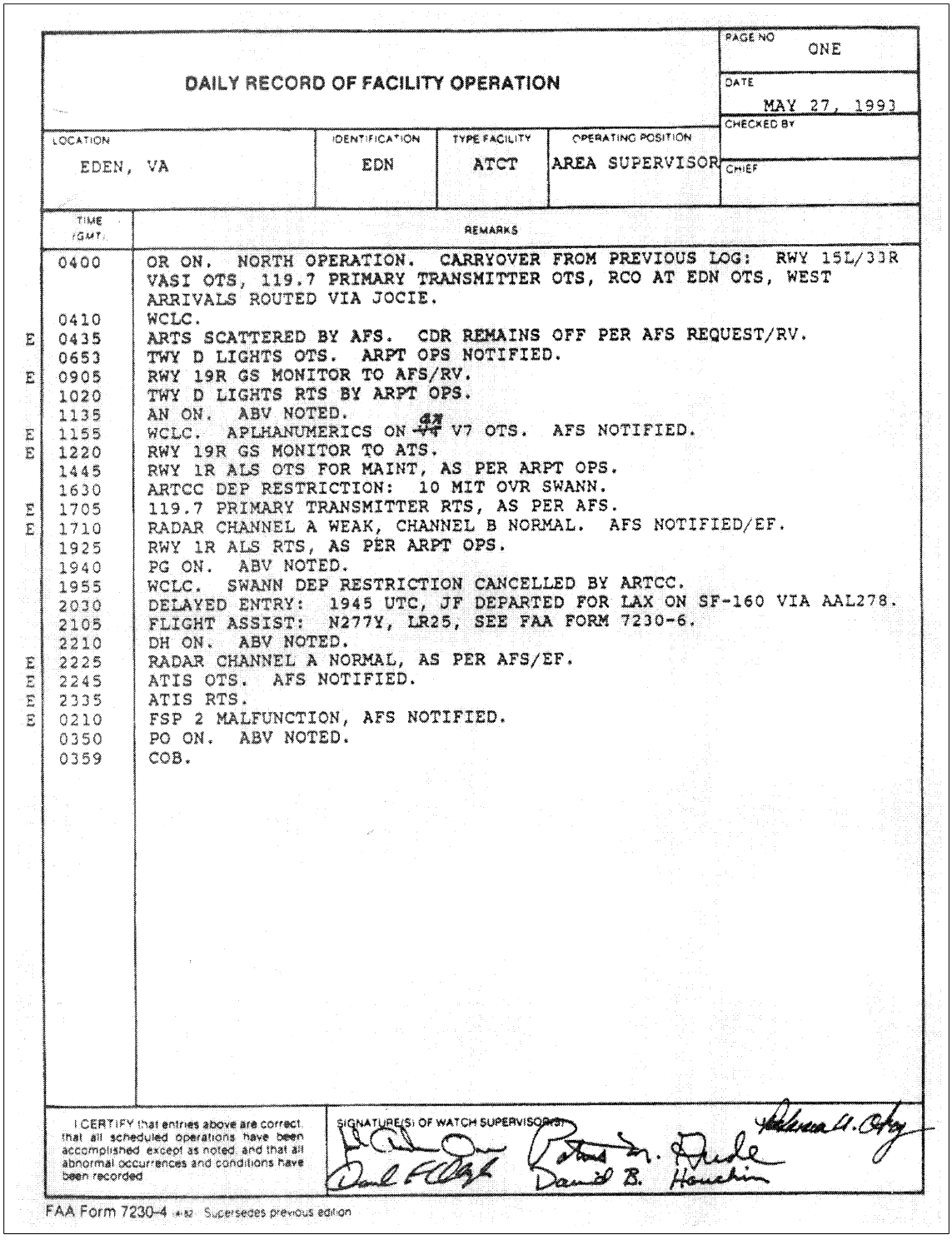
**3.** Group forms must allow for the Privacy Act alternative addressed above.

**d.** Initialing time and attendance reports may be used to document leave usage where this capability still exists.

**e.** Time clocks or other automated timekeeping devices. These devices may be linked to a supporting computer system for purposes of recording.

*FIG 4−6−1*

**Daily Record of Facility Operation [FAA Form 7230-4]**



DAILY RECORD OF FACILITY OPERATION

PAGE NO: ONE
DATE: MAY 27, 1993
CHECKED BY:
CHIEF:

| LOCATION | IDENTIFICATION | TYPE FACILITY | OPERATING POSITION |
|---|---|---|---|
| EDEN, VA | EDN | ATCT | AREA SUPERVISOR |

| | TIME (GMT) | REMARKS |
|---|---|---|
| | 0400 | OR ON. NORTH OPERATION. CARRYOVER FROM PREVIOUS LOG: RWY 15L/33R VASI OTS, 119.7 PRIMARY TRANSMITTER OTS, RCO AT EDN OTS, WEST ARRIVALS ROUTED VIA JOCIE. |
| | 0410 | WCLC. |
| E | 0435 | ARTS SCATTERED BY AFS. CDR REMAINS OFF PER AFS REQUEST/RV. |
| | 0653 | TWY D LIGHTS OTS. ARPT OPS NOTIFIED. |
| E | 0905 | RWY 19R GS MONITOR TO AFS/RV. |
| | 1020 | TWY D LIGHTS RTS BY ARPT OPS. |
| | 1135 | AN ON. ABV NOTED. |
| E | 1155 | WCLC. APLHANUMERICS ON ~~74~~ 43 V7 OTS. AFS NOTIFIED. |
| E | 1220 | RWY 19R GS MONITOR TO ATS. |
| | 1445 | RWY 1R ALS OTS FOR MAINT, AS PER ARPT OPS. |
| | 1630 | ARTCC DEP RESTRICTION: 10 MIT OVR SWANN. |
| E | 1705 | 119.7 PRIMARY TRANSMITTER RTS, AS PER AFS. |
| E | 1710 | RADAR CHANNEL A WEAK, CHANNEL B NORMAL. AFS NOTIFIED/EF. |
| | 1925 | RWY 1R ALS RTS, AS PER ARPT OPS. |
| | 1940 | PG ON. ABV NOTED. |
| | 1955 | WCLC. SWANN DEP RESTRICTION CANCELLED BY ARTCC. |
| | 2030 | DELAYED ENTRY: 1945 UTC, JF DEPARTED FOR LAX ON SF-160 VIA AAL278. |
| | 2105 | FLIGHT ASSIST: N277Y, LR25, SEE FAA FORM 7230-6. |
| | 2210 | DH ON. ABV NOTED. |
| E | 2225 | RADAR CHANNEL A NORMAL, AS PER AFS/EF. |
| E | 2245 | ATIS OTS. AFS NOTIFIED. |
| E | 2335 | ATIS RTS. |
| E | 0210 | FSP 2 MALFUNCTION, AFS NOTIFIED. |
| | 0350 | PO ON. ABV NOTED. |
| | 0359 | COB. |

I CERTIFY that entries above are correct, that all scheduled operations have been accomplished except as noted, and that all abnormal occurrences and conditions have been recorded.

SIGNATURE(S) OF WATCH SUPERVISOR(S): David A. Clay, Robert M. Rule, David B. Houchin, Rebecca A. Clay

FAA Form 7230-4 (4-82) Supersedes previous edition

*FIG 4−6−2*

**Position Log [FAA Form 7230-10]**

# POSITION LOG

| (1) FACILITY ID | (2) POSITION IDENTIFER | (3) Pos Type | (4) DATE |
|---|---|---|---|
| | | | |

| (5) TIME ON | (6) INITIALS | (7) TIME OFF | (8) Code | Where Combined | |
|---|---|---|---|---|---|
| | | | | (9) POSITION IDENTIFIER | (10) Position Type |
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CODE:

C = ATCS/ATA

S = Supervisor/Staff Spec.

T = Trainee/Developmental

M = Trainee/Developmental Monitoring

R = Trainee/Developmental Certification/ Evaluation

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# Section 7. Reports

## 4−7−1. MONTHLY REPORTS

Facilities must submit monthly reports to the appropriate Service Area office by the 5th day of the following month. Distribution must be made in accordance with appropriate instructions.

## 4−7−2. DELAY REPORTING

Air traffic personnel are responsible for reporting delays of 15 minutes or more that occur in facilities or airspace under their control. The cause of the delay, as well as the type aircraft involved (commercial, air taxi, general aviation, or military), and the duration of the delay must be included in the daily reporting system. The air traffic operations network (OPSNET) is utilized for the purpose of submitting these reports electronically. For more detailed information on OPSNET reporting, policies, and procedures refer to FAA Order JO 7210.55, Operational Data Reporting Requirements.

## 4−7−3. SYSTEM IMPACT REPORTS

The ATCSCC is the focal point for collecting information relating to operational system impacts; for example, NAVAID/radar shutdowns, runway closures, landline/frequency outages, or any system event that has the potential to create an operational impact in the NAS.

**a.** Therefore, all air traffic facilities must follow procedures and responsibilities in paragraph 18−5−13, Electronic System Impact Reports. This process streamlines reporting and disseminating information that has an impact within the NAS.

**b.** This does not eliminate, or in any way alter, current operational error/deviation or accident/incident reporting procedures with Safety Investigations, regional operations centers, and FAA Operations Center as set forth in this order, FAA Order JO 8020.16, Air Traffic Organization Aircraft Accident and Incident Notification, Investigation, and Reporting, and other appropriate directives.

## 4−7−4. UNIDENTIFIED ANOMALOUS PHENOMENA (UAP) REPORTS

**a.** Pilot reports and/or air traffic personnel observations of unidentified anomalous phenomena (UAP) activity must be reported to the National Tactical Security Operations (NTSO) Air Traffic Security Coordinator (ATSC) team on the Domestic Events Network (DEN). Report the following items if available:

***REFERENCE−***
*FAA Order JO 7110.65, Para 9−8−1, General.*

**1.** Call sign of aircraft that reported the UAP or, otherwise, if an air traffic personnel observation;

**2.** Location, altitude, and flight direction of the reporting aircraft or location of the reporting air traffic personnel;

**3.** UAP location in relation to aircraft position or air traffic personnel;

**4.** General description of the UAP, including any known pertinent information (i.e., altitude, direction of flight, speed); and

**5.** If UAP depicted on ATC radar displays.

**b.** Other persons wanting to report UAP activity may be referred to the All-Domain Anomaly Resolution Office (AARO) website at https://www.aaro.mil/.

**c.** If concern is expressed that life or property might be endangered by UAP activity, report the activity to the local law enforcement department

# Section 8. Freedom of Information Act (FOIA)

## 4−8−1. ACCIDENT/INCIDENT RECORDINGS

**a.** FAA Order JO 8020.16, Air Traffic Organization Aircraft Accident and Aircraft Incident Notification, Investigation, and Reporting, contains information on Formal Accident File/ Package Data Collection, to include certification requirements. FOIA requests for ATC voice recordings will be answered by the applicable Service Center FOIA office. Accordingly, air traffic control facilities will, when notified by the Service Center FOIA office, gather and forward the requested records to that office as instructed.

**b.** Facility ATMs must ensure a copy is made of all portions of the ATC voice recording provided to the requesting party. This copy must be retained in the facility in accordance with the appropriate records retention criteria; e.g., accidents or incidents. Prior to destroying any record, contact the Service Center FOIA Office to determine how long the record must be retained for FOIA purposes.

## 4−8−2. RADAR AND/OR COMPUTER DATA

**a.** FOIA requests for radar and/or computer data will be answered by the applicable Service Center FOIA office. Accordingly, air traffic control facilities will, when notified by the Service Center FOIA office, gather and forward the requested records to that office as instructed. The facilities will provide data in its native format in an electronic file copied onto CD/DVD or USB flash drive.

**b.** If the FOIA request seeks a video replay or plot of that radar data, the facility is not obligated by FOIA to create such records. However, if a video replay or radar plot existed before the FOIA request was received by the agency, then it would be responsive to the request and must be forwarded to the Service Center FOIA office. If needed, attach a disclaimer/statement in keeping with policy guidance provided in FAA Order JO 8020.16, paragraph 73, Radar and Computer Data.

## 4−8−3. FEES

**a.** 49 U.S.C. § 552, as amended, and 49 CFR § 7.42 part 7, allow FAA to charge certain fees when processing FOIA requests. FAA can charge for:

1. Time spent searching, either manually or electronically, for responsive records;
2. Time spent reviewing those records for possible redactions; and
3. Cost of duplication on paper, CD/DVD or USB flash drive.

**b.** For FOIA requests which seek audio and radar/computer files:

1. Search time consists of the time, in quarter hour increments, it takes to locate, retrieve, and save the file(s);
2. Review time consists of the time, in quarter hour increments, it takes to review the responsive records for possible redactions and apply them accordingly; and
3. Search, review, and duplication fees will be calculated by the Service Center FOIA Office in accordance with DOT regulations.

# Chapter 5. Special Flight Handling

## Section 1. Presidential Aircraft

### 5−1−1. ADVANCE COORDINATION

***NOTE−***
*Presidential aircraft and entourage, referred to herein, include aircraft and entourage of the President, the Vice President, or other public figures designated by the White House. These parties may also be referred to as very important persons (VIP).*

**a.** An advance survey group comprised of representatives of the Office of the Military Assistant to the President, the U.S. Secret Service (USSS), the White House Staff, and a Presidential Advance Agent may visit each ATC facility the Presidential aircraft will transit. The visit is normally made several days in advance of the trip to determine security aspects and the availability of supporting services. On this visit the group may meet with the airport operator, the air traffic manager (ATM), and other interested parties. Based on the evaluation by this group, a decision is made on the use of the airport, and further coordination is planned for the advance group as described in subparagraph b.

**b.** The advance group, comprised of representatives of the same organizations stated in subparagraph a, will meet with the same airport elements to complete security measures and supporting services and determine the necessary restrictions to air traffic operations before the arrival and the departure of the Presidential aircraft and while the Presidential entourage is on the airport. The security provisions may include stationing a guard in the tower cab or at the tower entrance and maintaining two-way communications between the control tower and agents on the ground. This meeting will be held several days in advance of the planned arrival of the Presidential aircraft. The advance group has been requested to have all elements of the group coordinate with the FAA simultaneously.

**c.** In addition to the responsibilities described in this paragraph, additional advance coordination requirements and information are located in JO 7610.4. Responsibilities include the following:

***REFERENCE−***
*FAA Order JO 7610.4, Para 10−2−1, Advance Coordination.*

**1.** The ATM must appoint an air traffic supervisor to serve as coordinator who will be responsible for attending all meetings and briefing all affected personnel. Additionally, the coordinator must brief the ATCSCC, the appropriate ARTCC, and other affected ATC facilities within their jurisdiction of any traffic delays or restrictions.

**2.** All advance coordination must be documented, with special attention given to routes, radio frequencies, and assigned transponder codes. This documentation must be made available to the personnel on duty who will be handling the Presidential movement.

**3.** The meeting must be attended by the ATM, the coordinator, and, if available, the supervisory specialist(s) who will be on duty and directly involved in the control of airport traffic during the arrival and departure, and while the Presidential entourage is on the airport.

**4.** The ATM must take whatever steps are necessary to ensure that the Presidential flight, Presidential support aircraft, and entourage are given priority. Restrictions will be placed upon normal air traffic operations to provide priority unless directed otherwise by the Domestic Events Network (DEN) Air Traffic Security Coordinator (ATSC). Air traffic personnel must be guided by the determinations of the advance group and must cooperate to the maximum extent possible.

**5.** The ATM must also consider the following measures:

**(a)** Employing air traffic control techniques to temporarily adjust (e.g., change runway configurations) or suspend the movement of traffic to accommodate the arrival and departure of the Presidential aircraft, and while the Presidential entourage is on the airport.

**(b)** Requesting traffic, by NOTAM (separate from the TFR NOTAM), to voluntarily conform to restrictions in the vicinity of an airport. The NOTAM must give the approximate time of the restrictions and should be cleared by the advance group. It must avoid any reference to presidential activities and must be issued at least 8 hours in advance.

***EXAMPLE−***
*ALL TRAFFIC CAN EXPECT DELAYS FROM (date/time) TO (date/time) AND FROM (date/time) TO (date/time).*

**(c)** The time will normally be 15 minutes before to 15 minutes after the arrival and the departure time.

**(d)** Advising airport management to ask aircraft operators to consider pre-positioning to other airports outside of the TFR area while the TFR is in effect in order to reduce the economic or other adverse impacts to those operators.

**d.** If the advance group determines that mandatory airspace restrictions are required, the Washington headquarters office of the U.S. Government agency responsible for the protection of the personage concerned will contact FAA Headquarters in accordance with established procedures and request the necessary regulatory action. The air traffic manager must advise the Service Area office of the regulatory proposal. (See 14 CFR section 91.141 and FAA Order JO 7610.4, Sensitive Procedures and Requirements for Special Operations.)

***NOTE−***
*The actions established herein do not affect the provisions of 14 CFR section 91.113(b); i.e., an aircraft in distress has the right-of-way over all other air traffic.*

***REFERENCE−***
*FAA Order 7930.2, Para 7−1−1, FDC NOTAM Categories.*

**e.** To ensure radio communications and radar service, the following should be coordinated with the advance group:

**1.** All aircraft in the flight should be assigned a discrete transponder code. As a minimum, the lead aircraft and the aircraft containing the President should turn their transponders on when flying in formation. In the event of a formation breakup, all aircraft should squawk their assigned code to facilitate auto-acquire.

2. Normal frequencies are preferred over discrete frequencies.

*NOTE−*
*Secret Service personnel will transmit progress reports on the Presidential entourage to the affected tower as soon as possible.*

**f.** Prior to the actual operation, action must be taken to ensure that all air traffic specialists who will be on duty during the arrival and departure of the Presidential aircraft are thoroughly briefed concerning the arrangements pertaining to the operation, including movements of the Presidential entourage while on the airport.

**g.** At military airports, the base commander will determine the restriction or delay of flight operations into that airport and the need to issue a NOTAM. He/she should coordinate his/her actions with the appropriate FAA facilities if air traffic will be affected.

## 5−1−2. THE PRESIDENT, VICE PRESIDENT, AND EXEC1F AIRCRAFT MONITORING

**a.** Advance scheduled movement information of the President, Vice President, and Executive One Foxtrot (EXEC1F) aircraft received from the White House must be distributed to the air traffic manager of each facility through which these aircraft will transit.

**b.** The ATM will be notified of the scheduled movement of the President, Vice President, or EXEC1F aircraft by the appropriate service center office or, when time critical, by national headquarters through the ATCSCC or the DEN.

**c.** The President, Vice President, and EXEC1F aircraft must be aurally and visually monitored by a supervisory specialist/controller-in-charge (CIC) from departure to arrival as follows:

1. The ATM of each facility through which the President transits must ensure that a supervisory specialist/CIC aurally and visually monitors the aircraft while in the facility's airspace.
2. The ATM of each facility through which the Vice President and EXEC1F aircraft transits must ensure that a supervisory specialist/CIC aurally and visually monitors the aircraft while in the facility's airspace where sufficient on-duty staffing allows.

**d.** The supervisory specialist/CIC must:

1. Be present at each sector/position providing ATC service to the President, Vice President, and EXEC1F aircraft from the flight's entry in the facility's airspace until the flight exits the facility's airspace.
2. Aurally and visually monitor these flights to ensure that separation, control, and coordination are accomplished.

*NOTE−*
*Supervisors and managers at FAA Contract Towers (FCT) are qualified to perform the duties required in paragraph 5−1−2.*

## 5−1−3. USE OF FAA COMMUNICATIONS CIRCUITS

Operations personnel must expedite the movement of Presidential aircraft and related control messages when traffic conditions and communications facilities permit. Honor any request of the pilot concerning movement of the aircraft if the request can be fulfilled in accordance with existing control procedures. Also, honor any request of the pilot, Office of the Vice President, Secret Service, or White

House Staff for the relay, via FAA communications circuits, of information regarding the movement or proposed movement of the aircraft.

## 5−1−4. SECURITY OF INFORMATION

FAA personnel must not release any information concerning Presidential flights to anyone outside the FAA except properly identified White House staff members, Secret Service personnel, or appropriate military authorities. Any inquiries from the press or others for information regarding the movement of these aircraft must be referred to the White House, the Secret Service, the Air Force, or their representatives at either the point of departure or arrival. These security measures also apply to information regarding the movement of Presidential or Vice Presidential family aircraft.

## 5−1−5. MOVEMENT INFORMATION

Honor any request of the pilot concerning movement of the Presidential aircraft if it can be fulfilled in accordance with existing control procedures. Also, honor any request of the pilot, Secret Service, White House Staff, or Office of the Vice President for the relay, via FAA communications circuits or Defense Switching Network (DSN), of information regarding the movement or the proposed movement of these aircraft.

## 5−1−6. COORDINATION

ARTCCs must call CARF direct for ALTRV approval on any Presidential aircraft international flight plan received less than 4 hours before departure.

## 5−1−7. RESCUE SUPPORT AIRCRAFT

When rescue support aircraft are used, the aircraft will depart from various bases and will file flight plans which will place the aircraft on tracks in proximity of the Presidential aircraft for contingency purposes. Orbits may also be used by the rescue support aircraft. These aircraft will be identified in the remarks section of the flight plan as “Rescue” for purposes of radio and interphone communications.

***REFERENCE−***
*FAA Order JO 7110.65, Para 2−4−20, Aircraft Identification.*

# Section 2. FAA Aircraft

## 5−2−1. IDENTIFYING DEPARTMENT OF TRANSPORTATION (DOT) AND FAA FLIGHTS

The following alphanumeric identifiers and radio/interphone call-signs are established for use in air/ground communications when the Secretary of Transportation, Deputy Secretary of Transportation, FAA Administrator, or FAA Deputy Administrator have a requirement to identify themselves:

**a.** DOT.

**1.** Secretary:

**(a)** Identifier: DOT-1

**(b)** Call-Sign: Transport-1

**2.** Deputy Secretary:

**(a)** Identifier: DOT-2

**(b)** Call-Sign: Transport-2

**b.** FAA.

**1.** Administrator:

**(a)** Identifier: FAA-1

**(b)** Call-Sign: Safeair-1

**2.** Deputy Administrator:

**(a)** Identifier: FAA-2

**(b)** Call-Sign: Safeair-2

## 5−2−2. FLIGHT INSPECTION AIRCRAFT

**a.** FAA aircraft engaged in flight inspection of navigation aids must be provided priority handling by ATC facilities in accordance with FAA Order JO 7110.65, paragraph 2–1–4, Operational Priority. Flight Program Operations (AJF)/flight inspectors are expected to coordinate with the facility prior to conducting flight inspections. Occasionally, due to unplanned/special flight inspection requirements, flight inspectors may attempt to conserve flight hours and accomplish additional opportune flight checks with minimal advance coordination.

***NOTE−***

*Many flight inspection missions can be conducted without being afforded priority handling. Do not cancel flight inspection missions solely based on not being able to provide priority handling.*

***REFERENCE−***

*FAA Order JO 7110.65, Para 2–1–4, Operational Priority, Subpara l Note.*

**b.** Unless otherwise agreed to, direct contact must be maintained between the flight inspection pilot and the ATC facility to provide for an exchange of information regarding the intention of the pilot and the known traffic in the facility's area of responsibility.

**c.** Many flight inspection missions are accomplished using automatic recording equipment, and an uninterrupted flight is necessary for the successful accomplishment of the flight. Maximum cooperation will help AJF accomplish its mission within their limited aircraft resources. Facilities must immediately notify the pilot-in-command (PIC), or the AJF Operations Control Center (OCC) located at the Joint Air Traffic Operations Command (JATOC) if they are unable to accommodate flight inspection missions.

***NOTE–***

1. *Flight Check (FLC) aircraft stating "recorded run" indicates automated flight inspections are in progress. Such inspections necessitate the full length of the runway (including protection of any critical areas) and require the entire procedure to be flown, up to and including the missed approach as needed. Any interruption of a recorded run will require the entire procedure to be reinitiated.*
2. *Not every flight inspection mission requires prior coordination. The PIC may contact the facility for final coordination, but due to unforeseen variables, subtle differences may occur. It is also possible that flight checks that are not listed will transit your airspace. Additionally, weather, aircraft maintenance, and other unplanned issues may alter the schedule.*

***REFERENCE–***

*FAA Order JO 7110.65, Chapter 9, Special Flights.*

**d.** Air Traffic Districts must distribute information regarding flight inspection mission operations to affected facilities in a timely manner.

**e.** Facilities must review published schedules and maneuvers to be performed utilizing the Flight Inspection Activity Map (https://fiog.faa.gov/foms/itinerary/scheduledWorkMap), when available.

1. The ATM must ensure the Operations Supervisor (OS), or Controller-in-Charge (CIC) reviews the requested FLC operation. Airport flight inspection/certification of navigational aids and flight procedures are the only category required to be briefed.
2. The OS/CIC must brief controllers prior to assuming a control position affected by the flight inspection aircraft. The briefing must include the associated flight procedures/maneuvers depicted on the Flight Inspection Activity Map, when available.
3. Completed briefings of airport flight inspection/certification of navigational aids and flight procedures must be documented on FAA Form 7230-4, Daily Record of Facility Operation.
4. The ATM must make it a priority to monitor and be periodically present for any FLC operations during their duty hours.

**f.** FLC aircraft that request to perform an unplanned procedure should be approved to proceed if:

1. The requested operation would not adversely affect air traffic operations.
2. The FLC aircraft would not/does not request priority handling.

***NOTE–***

*The utilization of the Flight Inspection Activity Map and monitoring requirements for unplanned FLC operations should be performed to the extent possible.*

## 5−2−3. HIGH ALTITUDE INSPECTIONS

**a.** High altitude flight inspection operations are generally conducted on IFR flight plans; "VFR-on-top" will not be requested except when weather conditions are ideal and excessive delays would result from operating at an assigned flight level.

**b.** The pilot must contact the STMCIC of the appropriate facility for coordination prior to flight when special handling is required for the successful completion of the flight check.

***NOTE−***
*Flight inspection operations requiring the participation of ground personnel or the establishment of specific communications or radar operation capabilities are considered to require special handling. Such flights must be coordinated with the appropriate facilities before departure.*

## 5−2−4. RESEARCH AND DEVELOPMENT FLIGHTS

**a.** Aircraft participating in FAA research and development test activities are sometimes required to deviate from standard procedures to accomplish the mission. These aircraft should be provided maximum assistance by control facilities subject to other traffic. Direct radio contact should be maintained between the aircraft and the control facility to provide for an exchange of information regarding the pilot's intention and known traffic.

**b.** Upon request by the pilot, the air traffic manager of the controlling facility may authorize the use of special flight procedures to be used by aircraft participating in FAA research and development activities. Control personnel must be thoroughly briefed on the procedure prior to the flight.

***NOTE−***
*The actions established herein do not affect the pilot's responsibility to obtain any necessary waivers to the CFRs.*

# Section 3. DOE and Other Aircraft

## 5−3−1. DEPARTMENT OF ENERGY (DOE) FLIGHTS

DOE contracts for civil pilots to operate public aircraft to transport radioactive and/or high explosive materials within the conterminous United States. They will operate principally during daylight hours and, although they will be made in VFR conditions insofar as possible, an instrument flight plan will be filed and IFR procedures followed.

## 5−3−2. AERIAL SAMPLING/SURVEYING FOR AIRBORNE CONTAMINATION

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

**b.** The sponsoring agency will notify ATC facilities of the "SAMP" aerial sampling/surveying mission prior to departure.

**c.** ATC facilities must report any issues associated with "SAMP" aerial sampling/surveying flights to the Domestic Events Network (DEN) Air Traffic Security Coordinator (ATSC).

**d.** The Air Traffic Control System Command Center (ATCSCC) must issue a nuclear debris report as an ATCSCC numbered advisory if such report is received from AFTAC, DOE, or other U.S. government agencies.

***REFERENCE−***
*FAA Order JO 7110.65, Para 2−1−4, Operational Priority.*
*FAA Order JO 7110.65, Para 2−4−20, Aircraft Identification.*
*FAA Order JO 7110.65, Para 9−2−17, SAMP Flights.*

## 5−3−3. DUE REGARD OPERATIONS

**a.** Article 3 of the International Civil Aviation Organization (ICAO) Chicago Convention of 1944 includes the following:

**1.** This Convention must be applicable to civil aircraft and must not be applicable to state aircraft.

**2.** Aircraft used in military, customs and police services must be deemed to be state aircraft.

**3.** The contracting States undertake, when issuing regulations for their state aircraft, that they will have due regard for the safety of navigation of civil aircraft.

**b.** Department of Defense and U.S. Customs Service have specified that one of the following conditions must be met for flight operations outside U.S. Domestic airspace which are conducted under the "due regard" or "operational" prerogative of state aircraft and not in

accordance with standard ICAO flight procedures. Under these conditions the PIC assumes the responsibility for separating his/her aircraft from all other air traffic.

1. Aircraft must be operated in visual meteorological conditions (VMC); or
2. Aircraft must be operated within radar surveillance and radio communications of a surface radar facility; or
3. Aircraft must be equipped with airborne radar that is sufficient to provide separation from other aircraft; or
4. Aircraft must be operated within Class G airspace.

**c.** Search and rescue actions for flights conducted under due regard provision are the responsibility of the parent organization.

## 5−3−4. WEATHER RECONNAISSANCE FLIGHTS

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

**a.** WINTER SEASON MISSIONS.

1. Winter season missions are flown in support of the National Winter Season Operations Plan (NWSOP). The Chief, Aerial Reconnaissance Coordination, All Hurricanes (CARCAH) will publish the Winter Season Plan of the Day (WSPOD) by 1830 UTC. The WSPOD provides mission information and includes aircraft type and call sign, departure airfield, route of flight, and dropsonde release points.

***NOTE−***

1. *The 53WRS and NOAA AOC are responsible for coordinating airspace access directly with DoD for missions on the U.S. east coast.*
2. *The current season NWSOP is available at https://www.icams-portal.gov/resources.htm.*

2. TEAL or NOAA flights may request CARCAH to relay an en route clearance request to the ARTCC if the flight is unable to contact ATC.

***NOTE−***

*ATC responsibilities pertaining to clearance requests via CARCAH are described in FAA Order JO 7110.65, paragraph 9−2−19, Weather Reconnaissance Flights*

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

**b.** HURRICANE AND TROPICAL CYCLONE MISSIONS.

**1.** These reconnaissance/research missions are flown in support of the National Hurricane Operations Plan (NHOP) and in accordance with:

**(a)** The Memorandum of Agreement between the National Oceanic and Atmospheric Administration (NOAA) Aircraft Operations Center (AOC), U.S. Air Force Reserve Command 53rd Weather Reconnaissance Squadron (WRS), and the Federal Aviation Administration (FAA) Air Traffic Organization (ATO) in Support of the National Hurricane Operations Plan; and

**(b)** Associated letters of agreement.

**2.** Prior to an NHOP reconnaissance/ research mission, the 53rd WRS or NOAA AOC will:

**(a)** Provide the Mission Coordination Sheet to the appropriate ARTCC and the ATCSCC at least one hour prior to the mission.

***NOTE−***
*The Mission Coordination Sheet describes the reconnaissance/research mission and includes, for example, the aircraft call sign, departure airfield, and route of flight.*

**(b)** Submit a request to the appropriate ARTCC for a Weather Reconnaissance Area (WRA) NOTAM at least one hour prior to the mission.

**(c)** File a flight plan as soon as practicable before departure time.

***NOTE−***
*Providing the Mission Coordination Sheet does not pre-empt the mission commander's responsibility to file a flight plan, nor does it constitute an ATC clearance.*

**3.** The ATCSCC must:

**(a)** Review the Tropical Cyclone Plan of the Day (TCPOD) by 1830 UTC.

**(b)** Activate the Hurricane Desk, if required.

**(c)** Review the Mission Coordination Sheet.

**(d)** Designate the primary ARTCC when the reconnaissance/research flights are expected to operate through airspace managed by multiple ATC facilities.

**(e)** Assist ATC facilities with traffic flow priorities if the hurricane reconnaissance/ research flight will impact terminal traffic.

**4.** The ARTCC(s) must:

**(a)** Review the Mission Coordination Sheet.

**(b)** Coordinate with all impacted ATC facilities within their area(s) of responsibility;

**(c)** Coordinate with SUA Using Agencies in accordance with WRA Letters of Agreement (LOA),unless other coordination procedures are established by an agreement.

***NOTE−***
*An example of an agreement containing other coordination procedures for SUA is the LOA between Washington Center, New York Center, Boston Center, Jacksonville Center, Air Traffic Control System Command Center and Fleet Area Control and Surveillance Facility, Virginia Capes that defines coordination and control procedures governing the use of SUA operated by FACSFAC VACAPES.*

**(d)** Issue the WRA NOTAM, as applicable.

***NOTE−***
*Any questions about the WRA NOTAM should be directed to the ARTCC that originated the NOTAM, not CARF.*

**(e)** Relay any operational concerns to the ATCSCC for further evaluation and coordination.

**(f)** When designated by the ATCSCC as the Primary ATC Facility, or when the reconnaissance/research flights are expected to operate only through airspace managed by your facility, ARTCC responsibilities include:

**(1)** When necessary, coordinate with CARCAH and aircrew(s) on flight plan specifics.

**(2)** If the mission profile changes, coordinate with the ATCSCC and ensure other affected ATC facilities are aware of the change.

**(3)** Advise the ATCSCC and other affected ATC facilities of any mission cancellation or delay information received from the flying unit.

**(g)** Should it become necessary for ATC to contact a TEAL or NOAA flight and all other methods of communication are not possible (e.g., direct radio, New York Radio, San Francisco Radio, aircraft relay), CARCAH may be requested to relay messages to/from the aircraft. CARCAH may phone the appropriate ATC facility to authenticate the request.

**5.** Requests to change any portion of the NHOP or MOA must be coordinated with ATO System Operations Security.

## 5−3−5. FOREIGN STATE DIPLOMATIC FLIGHTS

Diplomatic clearances that authorize foreign state aircraft (military or non-military) to operate in U.S. territorial airspace for a specific time and purpose are approved by the U.S. State Department. Foreign state diplomatic flights are non-priority. Contact the FAA System Operations Support Center (SOSC) (202-267-8276 or email 9-ATOR-HQ-RT-REQ@faa.gov) with questions or issues concerning foreign state diplomatic flights.

# Section 4. Other Flight Requests

## 5−4−1. REQUESTS FOR DEVIATION FROM TRANSPONDER REQUIREMENTS

**a.** Operations at and above 10,000 feet MSL and below the floor of Class A airspace.

**1.** Facility air traffic managers or their designated representative may approve or disapprove preflight requests for ATC authorization to deviate from transponder requirements. When coordination requirements are beyond the interphone capability of a terminal facility, the appropriate ARTCC must assume the interfacility coordination task.

**2.** Pilots/operators may be required to comply with reasonable conditions as necessary to maintain an acceptable level of safety. Such conditions may include:

**(a)** Filing a flight plan.

**(b)** Maintaining radio contact with ATC.

**(c)** Notifying ATC prior to entering the affected airspace.

**3.** Information regarding approved VFR operations in noncompliance with Mode C transponder requirements must be forwarded to all affected facilities. Facilities must ensure that the information is available at the proper control positions.

**4.** LOA between facilities and operators or individuals may be established pending the installation of appropriate transponder equipment. Deviations should not be approved for more than 6 months but additional 6-month agreements may be established when required by unusual operational circumstances.

**5.** Facility air traffic managers must ensure that the local FSDO is provided with sufficient information to permit follow-up on operators who create an unnecessary burden on the ATC system by continually attempting such operations without reasonable effort to install the appropriate equipment.

**b.** Operations within a Mode C veil and within and above Class C airspace up to 10,000 feet MSL.

***NOTE−***
*A Mode C veil is that airspace within a 30 NM radius of a Class B airspace primary airport from the surface to 10,000 feet MSL excluding the Class B airspace itself.*

**1.** Approvals to deviate from the Mode C requirement by operators of aircraft without transponders must be issued by the facility air traffic manager or his/her designee.

**2.** Authorizations may be issued for a single event or on a continuing basis.

**(a)** Single-event authorizations may be issued verbally or in a letter to the proponent.

**(b)** Long term authorizations must be issued in writing by the appropriate facility air traffic manager or his/her designee. In cases involving another facility's airspace or fringe airports, the authorization should be incorporated into a LOA. Multi-signature LOAs should be used in situations involving two or more individual operators.

**3.** The following are examples of operations for which authorizations may be issued:

**(a)** Aircraft with insufficient panel space or electrical system capacity to accommodate a Mode C transponder (e.g., antique aircraft; agricultural aircraft).

**(b)** Ferrying aircraft.

**(c)** Operations for the purposes of installing or repairing an aircraft's transponder, or other maintenance/service.

**(d)** Operations conducted in facility defined areas of nonradar coverage.

**(e)** Operations conducted by aircraft based at a fringe airport must be limited to those that:

***NOTE−***
*A fringe airport is an airport that is approximately 25 NM or farther from Class B airspace primary airport and is not served by a scheduled air carrier; or an airport outside the Mode C veil at which aircraft operations in the traffic pattern routinely enter the Mode C veil.*

**(1)** Will not adversely impact other operations receiving radar service in the area.

**(2)** Are restricted to altitudes below 2,500 feet AGL.

**(3)** Are not coincidental with controlled traffic flows within the terminal area.

**(4)** Are conducted in the airport traffic pattern and via the most direct routing out of the Mode C veil, consistent with existing traffic and noise abatement procedures.

**(f)** National defense operations or other operations in the public interest which can be accommodated safely and would not adversely impact the efficient movement of traffic.

**4.** Written authorizations must specify an effective and expiration date/time, a description of any area(s) and altitude(s) to which the authorization is limited, and any advance call up or other communications requirements deemed appropriate.

**5.** Facilities must limit each authorization to the airspace for which it is responsible by having the aircraft enter/exit the affected airspace through its delegated airspace. However, to provide expeditious responses to requests, facility managers may consider other methods for processing authorization requests and incorporate such methods in letters of agreement with those ATC facilities that control traffic within the affected airspace.

## 5−4−2. REQUESTS FOR DEVIATION FROM ADS-B OUT REQUIREMENTS

This provision is designed to accommodate those civil, non-governmental operators who may have a legitimate reason for not equipping their aircraft with ADS-B Out in accordance with the requirements of 14 CFR § 91.225, and who seek an ATC authorization to operate in ADS-B airspace under the provisions of § 91.225(g). Any U.S. governmental operators seeking relief from any ADS-B requirements must contact FAA System Operations Security via email at 9-ATOR-HQ-IFOS@faa.govfor authorization.

***NOTE−***
*As used in this section, "U.S. government" is defined as special U.S. Federal, State, and local government flight operations, inclusive of special flights contracted by U.S. Federal, State, or local governments.*

***REFERENCE−***
*FAA Order JO 7210.3, Para 5−4−9, ADS-B Out OFF Operations.*

**a.** Aircraft requesting ATC authorization to deviate from the ADS-B Out equipage requirements must be transponder equipped to utilize this provision. For non-transponder equipped aircraft, operators and facilities must follow the existing procedures contained in paragraph 5−4−1, Requests For Deviation From Transponder Requirements.

**b.** Any authorization granted under this provision that satisfies an operator's regulatory requirements under 14 CFR § 91.225(g) does not guarantee that the aircraft will receive an ATC clearance. Controllers are not responsible for approving or tracking such authorizations, and may issue or deny clearances to such aircraft as they normally would on the basis of workload, surveillance availability, other traffic, and any other factors, as appropriate.

**c.** Operators requesting preflight ATC authorization to deviate from ADS-B Out equipage requirements for single or infrequent events should be referred to the FAA's automated authorization request web portal at https://sapt.faa.gov.

**d.** A facility ATM or their designee may approve or disapprove long-term requests for ATC authorization to deviate from ADS-B Out requirements.

***NOTE–***
*A long-term request would be one of a frequent, repeated nature, such as agricultural or fringe airport operations.*

**e.** Facilities must limit authorizations to the airspace for which it is responsible by having the aircraft enter/exit the affected airspace through its delegated airspace.

***NOTE–***
*Facility managers may consider other methods for processing authorization requests that may involve another ATC facility; e.g., the affected facility could delegate their approval authority for a given fringe airport to the originating facility, and this could be incorporated into a facility letter of agreement.*

**f.** Pilots/operators may be required to comply with reasonable conditions as necessary to maintain an acceptable level of safety. Such conditions may include:

**1.** Filing a flight plan.

**2.** Maintaining radio contact with ATC.

**3.** Notifying ATC prior to entering the affected airspace.

**g.** The following are examples of operations for which long-term authorizations may be issued:

**1.** Antique aircraft not otherwise excepted by the regulation.

**2.** Agricultural aircraft whose proposed areas of operations will not adversely impact other traffic in the airspace.

**3.** Operations conducted in facility-defined areas with no surveillance coverage.

**4.** Operations conducted by aircraft based at a fringe airport, provided that they:

**(a)** Will not adversely impact other operations receiving ATC services in the area,

**(b)** Are restricted to altitudes below 2,500 feet AGL,

**(c)** Are not coincidental with controlled traffic flows within the terminal area, such as SIDs and STARs, and

**(d)** Are conducted in the airport traffic pattern and via the most direct routing out of the Mode C veil, consistent with existing traffic and noise abatement procedures.

***NOTE–***
*A fringe airport is an airport that is approximately 25 NM or farther from a Class B airspace primary airport and is not served by a scheduled air carrier, or is an airport outside the Mode C veil at which aircraft operations in the traffic pattern routinely enter the Mode C veil.*

**h.** All long-term authorizations must be incorporated into an LOA, which must be reviewed annually. Multi-signature LOAs should be used in situations involving two or more individual operators or multiple facilities. New, revised, or canceled LOAs must be emailed to AFS-400 at 9-awa-equip.2020@faa.gov with "ADS-B LOA" in the subject line for aircraft compliance purposes, and must include the following information:

**1.** PIC or other requesting person's contact information:

**(a)** First and last name;

**(b)** Phone number;

**(c)** Email address;

**2.** Aircraft Make(s) and Model(s);

**3.** Aircraft registration number(s);

**4.** Aircraft base airport or destination airport;

**5.** Reason for deviation request (e.g., agricultural aircraft, exhibition aircraft, fringe airport operations, etc.);

**6.** Any necessary restrictions on operations (e.g., time of day or geographical area limitations, altitude limits, notification or recall requirements, flight plan and communication requirements); and

**7.** Authorizing ATC facility & person.

***NOTE−***

***1.*** *Annual evaluations will allow facilities to determine if the operations authorized under the LOA are creating an undue burden on the NAS and should be discontinued.*

***2.*** *Flight Standards has the automated capability to correlate NAS flights to aircraft ADS-B transmissions (or "squits"). Aircraft registration numbers will be entered into this tool from the forwarded LOAs to prevent any unnecessary compliance actions being taken against an aircraft operator acting in good faith.*

## 5−4−3. CROP DUSTER/ANTIQUE AIRCRAFT

Handle requests by pilots of these aircraft to operate into airports having U.S. Government operated control towers as follows:

**a.** If the pilot is unable to contact the tower where the authorization is needed via local telephone, he/she may relay the request through the nearest FSS or the tower if there is no collocated FSS. The request must include:

**1.** The aircraft identification.

**2.** The aircraft type.

**3.** The pilot's name.

**4.** The departure point.

**5.** The destination airport.

**6.** The proposed date and the time of arrival.

**b.** The facility relaying the request must:

**1.** Inform the pilot that approval will be invalid if the aircraft does not arrive within 30 minutes before or after the proposed arrival time.

2. Inform the destination airport tower via Service B or Service F circuit. On Service B, the text must begin "NORDO CROP DUSTER LNDG AUZN REQ."

**c.** The destination tower must transmit an approval or a disapproval to the originating facility for delivery to the pilot. This approval/disapproval must include consideration of local airport management rules, anticipated traffic, and other influencing factors. As appropriate, it must include special instructions, reason for disapproval, or a suggested alternative arrival time.

## 5−4−4. FLIGHT TEST OPERATIONS

14 CFR part 91 requires that flight test operations be conducted only over open water or sparsely populated areas having a light volume of air traffic. FAA personnel are sometimes asked to assist aircraft operators in selecting areas where it is likely that only a few aircraft will be operating. When such requests are received, FAA personnel must cooperate in every reasonable way. In Class A airspace, aircraft may be cleared on an individual basis to areas having a light volume of air traffic, or they may be required to operate within special operating areas established for flight test activity.

## 5−4−5. SANCTIONED SPEED RECORDS

The National Aeronautic Association (NAA) sanctions all speed record attempts before they are made and certifies them on completion. The FAA has agreed to participate in this program by obtaining the certifying start and finish time. Remunerations must not be accepted for services rendered in support of this program.

## 5−4−6. CERTIFYING RECORD ATTEMPTS

FAA tower specialists must act as NAA officials for certifying record attempts by commercial aircraft provided that the following conditions are met:

**a.** Departure Point: Before takeoff, a representative of the airline must submit the NAA Certificate of Start form to the tower specialist and make arrangements with him/her to give and time the signal to the pilot to start the takeoff roll.

**b.** Arrival Point: A representative of the airline must notify the tower controller at the terminating airport as far in advance as possible that a record attempt is to be made so that he/she will be alerted to time the moment of touchdown. The airline representative must also submit the Certificate of Finish form to the tower controller for certification of the time of touchdown. The participating airline is responsible for collecting and forwarding all NAA forms certified by FAA tower specialists.

## 5−4−7. PHOTOGRAMMETRIC FLIGHTS

**a.** Except for rare instances, photogrammetric missions must be conducted on "clear days," in VFR flight conditions, and usually when the sun angle is high. Accordingly, infrequent IFR flight plan filing can be anticipated.

**b.** Most missions will involve a series of overlapping photographic exposures, although some missions may involve only a single exposure. In any case, the aircraft must necessarily move precisely along a predetermined course/s at a predetermined altitude. This part of the mission is called the *flight line.*

**c.** Facility management personnel must be guided by the following when handling photogrammetric flights.

**1.** Facilities are expected to make every reasonable effort to accommodate photogrammetric missions, but judgment must be exercised to minimize overall system impact.

**2.** When contacted by the pilot in advance, the controlling facility is required to secure a complete understanding of the operation to be conducted. In this regard, it must be anticipated that the operation may be delayed due to weather (this possibility should be covered in the preflight planning). Since the flight could be delayed not only for hours but in some cases for days, facility personnel must be adequately briefed to cope with such situations on a spontaneous basis.

**3.** When the pilot commences a flight line (the actual photographic run), every reasonable effort should be made to permit the flight to continue uninterrupted; i.e., without change in course or altitude. Should it become necessary to break the aircraft off the flight line, it should be vectored or cleared back into position for another run as soon as possible.

***NOTE−***
*The Management Association for Private Photogrammetric Surveyors (MAPPS) speaks for the photogrammetric flight industry (www.mapps.org). FAA officials have emphasized the following points to MAPPS:*

1. *The pilot is expected to make every effort to contact the appropriate ATC facility prior to the mission to explain flight requirements and to avoid "no notice" air/ground telephone requests whenever possible.*
2. *That firm "hard and fast" approvals cannot be guaranteed due to the rapid changes which can occur in the ATC operational situation, but every reasonable effort will be made by ATC to accommodate pilot requests.*
3. *The pilot is expected to say "This is a photo survey mission" when contacting the ATC facility via air/ground communications and subsequently to inform the controller when the flight line is commenced.*

## 5−4−8. AEROBATIC PRACTICE AREAS

Air traffic managers may approve requests to conduct aerobatic practice activity within Class B, C, D, or E airspace, provided the following requirements have been satisfied:

**a.** The operations are conducted in accordance with a waiver issued by the appropriate FSDO to the aircraft operator for all applicable Code of Federal Regulations (CFR).

**b.** The operation must not adversely affect the safety of the air traffic operation or result in a reduction of service to other users.

**c.** The facility manager must evaluate the impact on air traffic controller workload and the service requirements of the airspace where the operation will be conducted before authorizing these operations.

**d.** A facility directive must be prepared describing the procedures for managing these operations. The directive must contain, as a minimum, the controller and aircraft operator responsibilities, and a diagram that depicts the geographical area in which the activity will take place.

***NOTE−***

1. *The air traffic manager's approval to conduct these operations is not a waiver to the CFR. The issuance of waivers to applicable part/section of the CFR is the responsibility of the FSDO.*
2. *The Class of airspace the operation is conducted in determines what air traffic approval, if any, is required.*

***REFERENCE–***
*14 CFR Section 91.303, Aerobatic flight.*

## 5–4–9. ADS-B OUT OFF OPERATIONS

Operators of aircraft with functional ADS-B Out avionics installed and requesting an exception from the requirement to transmit at all times must obtain authorization from FAA System Operations Security (AJR-22). ATC facilities must not approve any such pilot or operator request to operate ADS-B Out OFF. Authorized operators must inform ATC facilities impacted by these operations as directed in FAA Order JO 7110.67.

***NOTE–***
*14 CFR section 91.225 requires, in part, that "each person operating an aircraft equipped with ADS–B Out must operate this equipment in the transmit mode at all times unless otherwise authorized by the FAA when that aircraft is performing a sensitive government mission for national defense, homeland security, intelligence or law enforcement purposes, and transmitting would compromise the operations security of the mission or pose a safety risk to the aircraft, crew, or people and property in the air or on the ground."*

**a.** ATMs should notify any controllers whose area of jurisdiction may be impacted by known authorized ADS-B Out OFF operations.

**b.** Direct any U.S. government requestors to contact FAA System Operations Security via email (9-ATOR-HQ-IFOS@faa.gov) for ADS-B Out OFF authorization. Inform non-U.S. government requestors that they do not qualify for ADS-B Out OFF authorization.

***NOTE–***
*As used in this section, "U.S. government" is defined as special U.S. Federal, State, and local government flight operations, inclusive of special flights contracted by U.S. Federal, State, or local governments.*

**c.** Inform operators checking on the status of sensitive U.S. government ADS-B Out OFF authorizations tied to a national security event to review the content of the 14 CFR 99.7 Special Security Instructions NOTAM associated with that national security event.

## 5–4–10. AIRCRAFT CALL SIGNS USED FOR SENSITIVE GOVERNMENT FLIGHTS

**a.** ATO System Operations Security assigns and authorizes U.S. special call signs and beacon codes for flights used by federal (non-DoD), state, local, tribal, and territorial government agencies for the specific purpose of conducting sensitive operations in the NAS, such as law enforcement and surveillance missions. These call signs and beacon codes are not published for security reasons.

***NOTE–***
*This paragraph is not applicable to military call signs, which are a responsibility of the DoD.*

**b.** ATC may contact the Domestic Events Network (DEN) Air Traffic Security Coordinator (ATSC) for immediate issues regarding a particular U.S. special call sign or beacon code used by an aircraft for a sensitive mission.

***NOTE–***
*The DEN ATSC may not possess knowledge of a specific mission.*

**c.** Non-urgent issues regarding the use of U.S. special call signs can be addressed to ATO System Operations Security via email at 9-ATOR-HQ-IFOS@faa.gov.

***REFERENCE–***
*FAA Order JO 7110.67, Air Traffic Management Security Services for Special Operations.*

# Section 5. 14 CFR Part 91, UAS Operations

## 5−5−1. TYPES AND AUTHORITY

**a.** Public aircraft operating under part 91.

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

**2.** For UAS operating (including tethered/moored UAS) as public aircraft, the authority is the Certificates of Waiver or Authorization (COA) or as specified in a Memorandum of Agreement (MOA), or Memorandum of Understanding (MOU) between the using agency and FAA Headquarters. These types include:

**(a)** Standard COA.

**(b)** Blanket COA.

**b.** UAS (including tethered/ moored UAS) operating as civil aircraft operating under part 91.

**1.** Any operation that does not meet the statutory criteria for a public aircraft operation is considered a civil aircraft operation and must be conducted in accordance with all FAA regulations applicable to the operation.

**2.** For UAS operating as civil aircraft the authority is a special airworthiness certificate, restricted category aircraft (21.25), Type Certificate, or a Section 44807 exemption with COAs.

**3.** When the Section 44807 exemption is granted, the petitioner will be issued a Blanket COA. If the operation cannot be conducted under the provisions of the Blanket COA, the proponent must apply for a Standard COA. A waiver request to a Blanket COA will not be approved.

## 5−5−2. OPERATIONS

**a.** UAS operating under part 91 COA can be VFR or IFR.

**b.** The UAS Pilot-in-Command (PIC) is to give way to all manned aircraft, except when operating under IFR.

**c.** UAS operations should not impede, delay, or divert manned aircraft operations, except as directed by ATC for operational necessity.

**d.** If a part 91 operation is conducted entirely at or below 400 ft. AGL then any ATC services will be contained in a Letter of Agreement or ATC Memorandum.

**e.** Flights below Flight Level (FL) 180 must have a dedicated observer or a waiver to 14 CFR 91.113. These duties will be performed by a ground-based observer or chase plane. UAS pilots and observers must be responsible for only one UA at a time unless authorized in the COA.

**1.** Daisy chaining of observers or observers on a moving platform may be approved on a case-by-case basis and as authorized in the COA.

**2.** When a ground-based/chase plane observer is required, a pilot may not perform concurrent duties as the pilot and an observer.

**f.** Procedures for non-joint-use Department of Defense (DoD) airfield operations will be specified by the DoD.

**g.** For all operations occurring on-airport, follow procedures in FAA Order JO 7200.23, Processing of Unmanned Aircraft Systems Requests, Chapter 6, 14 CFR Part 91 Certificate of Waiver or Authorization (COA) Processing.

## 5−5−3. RESPONSIBILITIES

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

**b.** Lost Link Procedures will vary based upon the type of UAS and must be included in the COA. ATC specialists must have access to all coordinated information available in its simplest form, to determine the actions a UAS will take in these scenarios. The Operations Supervisor/Controller-in-Charge (OS/CIC) should ensure that coordinated information is available, and if known, that the controller has a method of contacting the appropriate UAS PIC. In the event of a UAS lost link, procedures outlined in FAA Order JO 7110.65, paragraph 5−2−6, Unmanned Aircraft Systems (UAS) Lost Link, will be followed.

**c.** The following operations are not authorized for UAS:

**1.** Instructions to visually follow another aircraft.

**2.** Opposite Direction Operations (ODO).

**3.** Special VFR operations.

**4.** Operations requiring UAS to maintain visual separation.

**d.** The use of sequencing as indicated in FAA Order JO 7110.65, Chapter 3, Section 8, is authorized with the exception of issuing instruction to follow another aircraft or to maintain visual separation.

**e.** In the event of a UAS emergency, procedures outlined in FAA Order JO 7110.65, Air Traffic Control, Chapter 10, will be followed.

**f.** Air traffic facility management at facilities where UAS operations are being conducted are required to ensure air traffic controllers are familiar with the contents of each COA and any applicable LOAs impacting their area of specialization.

**g.** Operational communication with any UAS PIC must be on a recorded line, when available.

## 5−5−4. OPERATIONS IN CLASS A AIRSPACE

**a.** UAS must operate on an IFR flight plan and a standard COA.

**b.** UAS must comply with the provision of § 91.135.

**c.** ATC must provide separation and ATC services per FAA Order JO 7110.65 with consideration given to UAS performance characteristics and potential latency issues.

## 5−5−5. OPERATIONS IN TERMINAL RADAR SERVICE AREA (TRSA)

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

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

## 5−5−6. OPERATIONS IN CLASS B AIRSPACE

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

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

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

## 5−5−7. OPERATIONS IN CLASS C AIRSPACE

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

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

## 5−5−8. OPERATIONS IN CLASS D AIRSPACE

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

## 5−5−9. OPERATIONS IN CLASS E AIRSPACE

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

## 5−5−10. OPERATIONS IN CLASS G AIRSPACE

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

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

## 5−5−11. LETTERS OF AGREEMENT (LOA)/MEMORANDUMS

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

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

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

**2.** Flyaway.

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

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

**5.** Weather requirements for operations.

**6.** ATC facilities responsibilities.

**7.** UAS proponent responsibilities.

***NOTE−***
*LOAs may be used in conjunction with COAs when the ATM deems it necessary; they cannot be used in lieu of COAs.*

# Part 2. AIR ROUTE TRAFFIC CONTROL CENTERS

# Chapter 6. En Route Operations and Services

## Section 1. General

### 6−1−1. AREAS OF OPERATION

The control room is divided into easily managed segments or areas of operation. An area of operation consists of a group of sectors requiring the service of ATCSs. The number of areas authorized is based on the ARTCC's requirements and staffing needs. Approval from the Vice President of Air Traffic Services must be obtained prior to changing the number of areas of operation.

### 6−1−2. SECTORS

The basic unit in each area of operation is the sector. Sectors are classified as one Radar and one Radar Associate, or one ATOP Position.

### 6−1−3. SECTOR CONFIGURATION

**a.** The size and configuration of sectors are determined by:

**1.** Traffic volume.
**2.** Traffic flow.
**3.** Types of aircraft.
**4.** Location and activity of terminals.
**5.** Special operations/procedures.
**6.** Coordination requirements.
**7.** Consolidation capability.
**8.** Radar/radio coverage.
**9.** Equipment limitations.
**10.** Airway alignments.

**b.** Accordingly:

**1.** Align sector boundaries so as to contain the longest possible segments of airways.
**2.** Align sector consoles to conform with the primary traffic flow.
**3.** Distribute the workload equitably among the sectors.
**4.** Provide for a sector consolidation capability.

**c.** The lateral boundaries of sectors in different altitude strata need not coincide.

**d.** A LOA must be prepared when adjacent sectors of two facilities are stratified at different levels.

### 6−1−4. AREAS OF SPECIALIZATION

ARTCC air traffic managers must divide their control rooms into areas of specialization as sector complexity dictates. ATCSs must be assigned to one or more areas of specialization commensurate with individual qualifications. An area of specialization is a group of interrelated sectors on which an ATCS is required to maintain currency. ARTCC air traffic managers should strive to make areas of

specialization coincident with areas of operation. There may be more than one area of specialization in an area of operation. Avoid, if possible, establishing an area of specialization encompassing portions of two areas of operation. The Service Area Director of Air Traffic Operations should be notified of changes affecting the number and type of areas of specialization.

## 6−1−5. OPERATING POSITION DESIGNATORS

**a.** The following designators may be used to identify operating positions in an ARTCC: (See TBL 6−1−1).

*TBL 6−1−1*

**Operating Position Designators**

| | *Designator* | *Position* |
|---|---|---|
| 1. | A | Developmental Controller |
| 2. | C | Coordinator |
| 3. | D | Sector Controller |
| 4. | DR | Radio Controller |
| 5. | DSC | Data Systems Coordinator |
| 6. | ERM | ERM Route Metering |
| 7. | FDCS | Flight Data Communications Specialist |
| 8. | M | AMIS Controller |
| 9. | MC | Mission Coordinator |
| 10. | OM | Operations Manager |
| 11. | OS | Operations Supervisor |
| 12. | R | Radar Controller |
| 13. | RH | Radar Handoff |
| 14. | SDCS | Supervisory Data Communications Specialist |
| 15. | STMCIC | Supervisory Traffic Management Coordinator-in-Charge |
| 16. | TMC | Traffic Management Coordinator |
| 17. | WC | Weather Coordinator |

**b.** Facility air traffic managers may use designators other than those listed to accommodate local situations.

## 6−1−6. FLIGHT PROGRESS STRIP USAGE

Air traffic managers may authorize optional strip marking at specific sectors provided all of the following are met:

**a.** The sector/position is using an automated system with System Analysis Recording (SAR) capabilities;

**b.** Computer generated flight progress strips are being posted;

**c.** Radio and interphone transmissions are being recorded;

**d.** Control instructions or coordination not recorded on a voice recorder must be documented on the flight progress strip;

**e.** Standard strip marking procedures are used until the aircraft is in radar contact, the hand-off has been accepted and direct radio communications has been established, except where automated, electronic strips or equivalent are in use (e.g., ATOP);

**f.** The members of the radar team concur and ensure no misunderstanding or duplication of workload will exist;

***NOTE−***
*Posting control information onto the flight progress strip serves as an important nonverbal communications tool between members of the control team.*

**g.** Authorized sectors and local optional strip marking procedures are documented in a facility directive;

**h.** Standard strip marking procedures must be used for aircraft requiring special handling, such as, emergency, holding, etc.; and

**i.** When training is being conducted at the sector, standard strip marking procedures must be used.

## 6−1−7. DISPLAY OF TIME-BASED FLOW MANAGEMENT (TBFM) INFORMATION

Configure the situation display to display TBFM schedule information when metering is active.

# Section 2. Sector Information Binders

## 6−2−1. EN ROUTE OR OCEANIC CONTROLLER TEAM CONCEPT

There are no absolute divisions of responsibilities regarding position operations. The tasks to be completed remain the same whether one, two, or three people are working positions within a facility/sector. The team, as a whole, has the responsibility for the safe and efficient operation of that facility/sector.

## 6−2−2. EN ROUTE SECTOR INFORMATION BINDER

The en route sector information outline is to be used for guidance in developing facility sector binders for each sector of operation. The pertinent items in subparagraph a through subparagraph e below must be incorporated into each sector binder. The format of the binder must be determined by the air traffic manager and must contain all information necessary for the safe and efficient operation of each sector. A sector specific binder is required for each operational sector and is to be in a location easily accessible by each position/sector.

**a.** Sector Narrative: General description of normal traffic flows and adjacent sector/facility coordination and potential trouble spots.

**b.** Assignment of airspace:

**1.** Delegation of Approach Control airspace.

**2.** Sectors normally combined.

*EXAMPLE−*

*Which sector assumes responsibility when combined or which sector assumes responsibility for approach control airspace.*

**3.** Military airspace delegation.

**c.** Sector Information.

**1.** Frequency Information.

**(a)** Primary frequency.

**(b)** Back-up frequency.

**(c)** Primary and back-up frequency remote center air/ground facility (RCAG).

**(d)** Back-up emergency communication (BUEC) operation priorities.

**(e)** Position location.

**(f)** Location of emergency frequencies and RCAG.

**(g)** Special Use frequencies and RCAG.

**2.** Indirect access (IA) dial codes.

**3.** Sector Description (map, video map, and/or narrative).

**(a)** Lateral limits.

**(b)** Vertical limits.

**4.** Specify unique sector equipment configurations.

**d.** Sector Procedures.

**1.** Sector specific directives.
**2.** LOAs or LOA procedures applicable to that sector.
**3.** Areas of limited radio/radar coverage.
**4.** Mandatory speed restrictions.
**5.** Mandatory heading requirements.
**6.** Mandatory altitude requirements.
**7.** Sector handoff/point out procedures if different from requirements of FAA Order JO 7110.65, Air Traffic Control, Chapter 5, Section 4, Transfer of Radar Identification.
**8.** Transfer of control points other than airspace boundaries.
**9.** Radar arrival routes and restrictions for airports within facility/sector jurisdiction.
**10.** Normally used sector holding fixes to include published/unpublished hold, allowable altitudes, maximum speed, maximum length, direction of turn, direction from fix, and if applicable, published procedures involved.
**11.** Special strip or flight data requirements of sector.
**12.** Authorized jump areas in Class A airspace within area of jurisdiction.
**13.** Special routes for dangerous cargo or inert devices flights in area of jurisdiction.
**14.** Sensitive/classified activities to be avoided by special interest flights.
**15.** IFR Military Training Routes (IR) in area of jurisdiction.
**16.** Aerial refueling routes, including air refueling initial point (ARIP), air refueling control point (ARCP), and egress fix(es).
**17.** Special use and ATC-assigned airspace within area of jurisdiction.

**e.** Flight Data Requirements.

**1.** Primary and back-up printers.
**2.** Alternative methods for relaying/requesting information.
**3.** Data that requires expeditious handling including, flight plan data, weather information, traffic management messages, and miscellaneous data.
**4.** Specify flight progress strips to be posted and the location to place them.
**5.** Sources to obtain weather information.
**6.** Sources and data required for display in SIAs.

# Section 3. Operations

## 6−3−1. HANDLING OF SIGMETS, CWAS, AND PIREPS

**a.** SIGMETs and CWAs:

**1.** The CWSU meteorologist is the focal point for the review of SIGMETs to determine application to the ARTCC area of responsibility and may issue a CWA to modify or redefine the SIGMET information.

**2.** The CWSU meteorologist may also issue a CWA in advance of a SIGMET when the observed or the expected weather conditions meet SIGMET criteria or when conditions do not meet SIGMET criteria but are considered significant.

**3.** The weather coordinator (WC) has the primary responsibility for the inter/intrafacility dissemination of AIRMETs (except over CONUS),SIGMETs, urgent PIREPs (UUA), routine PIREPs (UA), and CWAs, and must ensure that sufficient information is disseminated to facilitate the required alert broadcasts.

***NOTE-***
*In recognition that there are several uses/definitions for the acronym CONUS, references herein to CONUS are specific to the contiguous United States (i.e., "lower 48").*

***REFERENCE-***
*FAA Order JO 7210.3, Chapter 18, Section 26, Weather Management.*
*FAA Order JO 7110.65, Para 2-6-6, Hazardous Inflight Weather Advisory.*

**4.** Terminal ATC facilities must relay the SIGMET and the CWA information to towers under their jurisdiction.

***NOTE-***
*When available, disseminate through E-IDS.*

**b.** PIREPs:

**1.** The WC is the focal point for handling PIREP requests and for the dissemination of urgent and routine PIREPs within the ARTCC and to terminal ATC facilities.

**2.** The CWSU meteorologist solicits PIREPs through the weather coordinator or directly from the controllers when required.

**(a)** Both solicited and unsolicited PIREPs that meet the urgent PIREP criteria must be distributed immediately via AISR, or other distribution systems such as the Aviation Weather Center's webpage.

**(b)** Solicited and unsolicited routine PIREPs must be distributed in a timely manner.

**c.** Classify PIREPs as follows:

**1.** URGENT: Weather phenomena reported by a pilot which represents a hazard or a potential hazard to flight operations. Disseminate reports of the following conditions as URGENT PIREPs:

**(a)** Tornadoes, funnel clouds, or waterspouts.

**(b)** Severe or extreme turbulence (including clear air turbulence).

**(c)** Severe icing.

**(d)** Hail.

**(e)** Low level wind shear (LLWS). For the safety of light aircraft, classify low level wind shear PIREPs as UUA if the pilot reports airspeed fluctuations of 10 knots or more. Classify reports of low level wind shear with airspeed fluctuations less than 10 knots as routine. If airspeed fluctuation is not reported, classify the PIREP as UUA.

***NOTE-***
*LLWS is defined as wind shear within 2,000 feet of the surface.*

**(f)** Volcanic eruptions, ash clouds, and/or the detection of sulfur gases ($H_2S$ or $SO_2$) in the cabin should be reported; however, if a pilot only reported the smell of $H_2S$ or $SO_2$ in the cabin and confirmed no volcanic ash clouds were present, classify the report as a ROUTINE PIREP.

***NOTE-***
*The smell of sulfur gases in the cockpit may indicate volcanic activity that has not yet been detected or reported and/or possible entry into an ash-bearing cloud. $SO_2$ is identifiable as the sharp, acrid odor of a freshly struck match. $H_2S$ has the odor of rotten eggs.*

**(g)** Any other weather phenomena reported which are considered by the specialist as being hazardous or potentially hazardous to flight operations.

**2.** ROUTINE: Classify all other PIREPs as routine.

**3.** Expanded information on the categorization of PIREPs and reporting format is located in FAA Order JO 7110.10, Chapter 8, Section 1, Pilot Weather Reports.

## 6−3−2. RECEIPT OF NOTAM DATA

ARTCC air traffic managers must coordinate with other air traffic facilities in their area to ensure that adequate procedures are established for the receipt and distribution of NOTAMs. NOTAM distribution may be accomplished via the Enterprise Information Display System (E-IDS), Aeronautical Information System Replacement (AISR), or accessed at https://nms.aim.faa.gov/ as a source for NOTAM information.

## 6−3−3. REVIEW AIRSPACE STRUCTURE

Although magnetic radials are used in planning airways/routes, conversion to true radials is required for designation. The final magnetic radials are not determined until the airspace action is charted. As a result, differences from planned magnetic radials may occur in the conversion of true to magnetic radials. Differences may also occur later due to changes in the magnetic variation, which is recomputed every 5 years. These differences could contribute to the misapplication of the VFR altitude hemispheric rule. Therefore, ARTCC air traffic managers must conduct a continuing review of the airway and jet route structures and proposed new airspace cases and bring any differences to the attention of the Service Area Director of Air Traffic Operations.

## 6−3−4. FLIGHT DATA UNIT

**a.** The Flight Data Unit (FDU) is responsible for processing and disseminating operational information necessary for NAS operations.

**b.** The FDU must provide system support during outage(s) of critical systems and/or software. These responsibilities include data recovery, manual processing, and disseminating information or data products as necessary for safe and efficient operations.

**c.** The Air Traffic Manager (ATM) must:

**1.** Ensure all FDU responsibilities and procedures listed below are established in local orders or directives.

**2.** Assign additional duties of a recurring nature based on unique facility requirements.

**3.** Provide FDU specialists a copy of, or access to, the following;

**(a)** FAA Order JO 7110.10, Flight Services.

**(b)** FAA Order JO 7110.65, Air Traffic Control.

**(c)** FAA Order JO 7900.5, Surface Weather Observing-METAR.

**(d)** FAA Order 7930.2, Notice to Airmen (NOTAM).

**(e)** Position binder, which includes:

**(1)** Procedures for accomplishing assigned position related duties and responsibilities.

**(2)** Examples and formats for seldom used procedures.

**(3)** Cross references to documents and lists contained in other publications which may be used where applicable.

**d.** Unless otherwise specified in a facility directive or a letter of agreement, the Flight Data Communications Specialist (FDCS) performs the following:

**1.** Flight Plan Data.

**(a)** Process domestic flight plan(s) proposals, corrections, amendments, and remove strip requests.

**(b)** Process international flight plan(s) proposals, corrections, amendments, remove strip requests, and departure messages.

**(c)** Process military flight plans.

**(d)** Provide data search assistance for Search and Rescue (SAR) information requests.

**2.** Weather Products:

**(a)** Support the TMU weather coordinator with inter/intrafacility dissemination of the weather data products described in the Weather Management section of this order. This should include both urgent PIREPs (UUA) and routine PIREPs (UA).

***REFERENCE-***
*FAA Order JO 7210.3, Para 18-26-4, Weather Management, Subpara b1.*

**(b)** Provide inter/ intrafacility dissemination of international weather products as needed.

**(c)** Perform altimeter and weather data checks and system updates as required.

**(d)** Provide backup services for facility PIREP and METAR entries.

***REFERENCE-***

*FAA Order JO 7110.65, Para 2-6-3, Weather Information, Subpara c.*

*FAA Order JO 7210.638, Enterprise Information Display System, Para 5, Subpara e.*

**3.** NOTAMs:

**(a)** Process and disseminate FDC, Special Use Airspace (SUA), and Temporary Flight Restriction (TFR) NOTAMs.

**(b)** Provide assistance with formatting and inputting Special Activity Airspace (SAA) NOTAMs.

**(c)** Process and disseminate NOTAM D information as necessary, to include ERIDS backup services.

**(d)** Provide backup services for facility NOTAM entries.

***REFERENCE-***

*FAA Order JO 7210.638, Enterprise Information Display System, Para 5, Policy.*

**4.** System/Administrative Messages: Process and disseminate the following messages:

**(a)** GENOTs,

**(b)** CIRNOTs,

**(c)** Oceanic track,

**(d)** ALTRV movement/change.

**5.** Classified National Security Information (CNSI) and Communications Security (COMSEC): Handle, safeguard, and protect CNSI and COMSECmaterial in accordance with national policies, FAA orders, and local SOPs.

**6.** Clearance Relay:

**(a)** Responds to telephone requests for ATC clearances received from pilots by contacting the appropriate sector within the ARTCC or approach control facility and relays clearance issued to the pilot verbatim.

**(b)** Advises appropriate ARTCC sector or approach control facility of IFR Flight Plan cancellations received over the telephone.

## 6−3−5. CHANGES TO MTR AND MOA PUBLISHED ACTIVITY SCHEDULES

ARTCCs must use the procedures as outlined in FAA Order 7930.2, Notice to Airmen (NOTAM), paragraph 6−1−2, Special Activity Airspace (SAA), when MTR or MOA activity is scheduled to occur at other than published or charted times.

# Section 4. Services

## 6−4−1. ADVANCE APPROACH INFORMATION

Assign responsibility for issuing advance approach information to a specific position when more than one position could issue the data. Responsibility must be delegated in a directive in accordance with FAA Order 1320.1, FAA Directives System. Display the information so that it is accessible to the controllers having need for it.

## 6−4−2. MINIMUM IFR ALTITUDES (MIA)

Determine minimum IFR altitude information for each control sector and display them at the sector. This must include off-airway minimum IFR altitude information to assist controllers in applying 14 CFR section 91.177 for off-airway vectors and direct route operations. Facility air traffic managers must determine the appropriate chart/map method for displaying this information at the sector. Facilities must submit their MIA charts for review periodically. Submit MIA charts to Aeronautical Information Services (AIS), including automated data submissions, to ensure that obstacle clearance and controlled airspace requirements are met.

***NOTE−***

1. *This may be accomplished by appending the data on sector charts or MVA charts. Special translucent sectional charts are also available. For assistance in obtaining MIA sector charts contact the Radar Video Map group at 9-AJV-HQ-ATCPRODUCTS@faa.gov.*
2. *For guidance in the preparation and review of Minimum IFR Altitude charts see FAA Order JO 7210.37, En Route Instrument Flight Rules (IFR) Minimum IFR Altitude (MIA) Sector Charts.*

***REFERENCE-***

*FAA Order JO 7210.3, Para 3−8−2, Radar Mapping Standards.*

## 6−4−3. SPECIAL USE FREQUENCIES

Special use frequencies (296.7, 321.3, 364.8 and 369.9 MHz) are controller-to-pilot communication channels established to minimize frequency changes for certain military aircraft operating in the high altitude sectors. The specific frequencies must not be publicized. However, information concerning their authorized use may be published in official military documents or in agency directives.

## 6−4−4. PRACTICE INSTRUMENT APPROACHES

**a.** Where ARTCCs provide approach control service, ATMs must evaluate those airports where basic radar service is available for determining where IFR separation to VFR aircraft conducting practice instrument approaches will be provided. The ATM must consider the impact on operations and service requirements when determining the airports that will receive this additional service.

**b.** ATMs must issue a Letter to Airmen (LTA) advising the users of airports where IFR separation is provided for VFR aircraft conducting practice instrument approaches. The LTA must specify which facility will handle the aircraft practicing instrument approaches and include the

appropriate frequencies. Airport(s) where this service is provided must be specified in a facility directive.

***REFERENCE−***
*FAA Order JO 7210.3, Para 4−1−3, Service Area Review.*
*FAA Order JO 7210.3, Para 4−5−2, Letters to Airmen.*

**c.** Where a facility directive requires the application of IFR separation to VFR aircraft practicing instrument approaches, IFR separation must be provided in accordance with FAA Order JO 7110.65, Chapter 4, Section 8.

**d.** Temporary conditions (e.g., available staffing, equipment operating status, VIP movement, TFRs, or unusual operations) may impact a facility's ability to provide practice instrument approach services. Facilities may elect to suspend practice instrument approaches when a temporary condition exists.

**e.** At airports with a nonapproach control tower, or an airport with a Flight Service Station (FSS) that provides Local Airport Advisory (LAA), procedures for handling VFR aircraft conducting practice instrument approaches must be included in an LOA, if applicable.

# Section 5. Air Carrier Computer Interface Program

## 6−5−1. GENERAL

Apply the provisions of this section when coordinating and implementing the air carrier computer interface program. The term *air carrier* used in this section includes scheduled air taxi operators that have the capability to transmit flight plans via the NADIN/Center B interface to ARTCC computer programs.

## 6−5−2. FACILITY RESPONSIBILITIES

The ARTCC, upon request from an air carrier to participate in this program, must:

**a.** Obtain local contacts from the air carrier for coordinating the program.

**b.** Provide the air carrier with a contact for the continued coordination of the program.

**c.** Ensure that the air carrier is apprised of the criteria in paragraph 6−5−3, Criteria for Participation.

## 6−5−3. CRITERIA FOR PARTICIPATION

Air carriers participating in the program must be advised of the following criteria:

**a.** Departure points and destinations must be contained within the CONUS. However, some users have made previous arrangements with various ICAO States (Puerto Rico, Panama, Canada, etc.) to accept domestic format. These agreements must be honored.

**b.** Flight plans must not be filed more than 3 hours in advance of the proposed departure times. Flight plans must be telephoned to the appropriate facility if less than 45 minutes from the proposed departure time. All changes in the flight plan after filing must be telephoned to the appropriate facility.

**c.** All flight plans must adhere to the format convention and content specified in paragraph 6−5−4, Format Conventions, and paragraph 6−5−5, Message Content.

## 6−5−4. FORMAT CONVENTIONS

Flight plans must be filed in the following format:

**a.** Data input must adhere to a fixed order and not exceed the stated maximum number of characters or elements allowed for each field in messages addressed to an ARTCC computer.

**b.** Each field of data is composed of one or more elements. Discrete elements of information within a field are separated by delimiters; generally, virgules (/) or periods.

**c.** Some fields contain the necessary functions to operate the computer adapters and are designated by alpha characters. Do not separate these fields with spaces.

**d.** One space character must be entered at the end of each data field, except:

**1.** The first data field of a message must not be preceded by a space.

**2.** The last data field of message need not be followed by a space.

**3.** The Remarks (Field 11) terminate with the last nonspace character transmitted.

## 6−5−5. MESSAGE CONTENT

The complete message content, the order of data, the number of characters allowed within any data field or element, and any associated operational procedure or restrictions must be as follows: (See FIG 6−5−1).

**a.** Start of Message Code (Field A). Appropriate individual company coding to ensure entry into the AFTN system.

**b.** Preamble Line (Field B). Consists of priority and addressees in ICAO format.

**c.** End of Line Function (Field C). Three characters composed of carriage return, carriage return, line feed.

**d.** Computer Adapter Turn-on Code (Field D). Three characters specifying the facility adapter code plus carriage return, carriage return, line feed.

**e.** Source Identification (Field 00). Ten characters followed by a space character in the following order:

**1.** Three-character address of the originating office.

**2.** Four-character (digits) time in UTC.

**3.** Three characters (digits) representing the number of the message being transmitted to the specific facility. All facilities will have individual sequence numbers beginning with number 000 at 0000Z.

**f.** Message Type (Field 01). The letters “FP” followed by a space character.

**g.** Aircraft Identification (Field 02). Consists of two to seven characters followed by a space character. The first character of the identification must be a letter.

**h.** Aircraft Data (Field 03). Consists of two to nine characters followed by a space character. Aircraft data within the field may vary from one to three elements consisting of:

**1.** Super or heavy aircraft indicator (H/): When aircraft are designated super orheavy, the heavy indicator is mandatory.

**2.** Type of Aircraft: This element is mandatory and contains the standard aircraft type designator, in accordance with FAA Order JO 7360.1, Aircraft Type Designators.

**3.** Equipment Suffix: This element is optional and consists of a slash followed by one letter which is one of the approved designators identifying transponder and/or navigation equipment.

**i.** Airspeed (Field 05): Consists of two to four characters followed by a space character. This field must include the filed true airspeed in knots or Mach speed.

**j.** Departure Point (Field 06): The airport of departure must be two to a maximum of five characters using the authorized identifier accessible through FAA Order JO 7350.9, Location Identifiers, and must duplicate the first element of the route of flight (Field 10).

**k.** Proposed Departure Time (Field 07): Consists of five characters followed by a space character. This field contains the letter “P” followed by a four-digit time group (in UTC).

**l.** Requested Altitude (Field 09): Consists of two to three characters followed by a space character. Altitudes or flight levels, as appropriate, must be expressed in hundreds of feet.

**m.** Route of Flight (Field 10): The route of flight consists of the departure point, the route of flight, and a destination:

**1.** Field 10 is fixed sequence field and must begin with a fix; e.g., fix.route.fix.route., etc. An element is separated from another element by a period character.

**2.** When consecutive fix elements or route elements are filed, the fixed sequence format is maintained by inserting two period characters between the filed Field 10 elements; e.g., fix..fix or route..route.

**3.** The maximum number of filed field elements for computer-addressed flight plans is 40. Double period insertions do not count against the 40-element limitation.

**(a)** Fix Descriptions: A fix identifies a geographic point and must be one of either domestic, Canadian, or international identifiers, which are two to twelve alphanumeric characters.

**(b)** Route Descriptions: A route element must be one of the following:

**(1)** Airway: The official airway designator must be filed.

**(2)** Standard Instrument Departures (SID): SIDs, if used, must be filed by the computer-code designator as the second element of Field 10 and followed by the transition fix.

**(3)** Standard Terminal Arrivals (STAR): STARs, if used, must be filed by the computer-code designator as the next to last element of Field 10 and be immediately preceded by the entry or transition fix.

**(4)** Published Radials: Published radials; e.g., within a preferred route, are considered airways. Do not file unpublished radials.

***EXAMPLE–***
*“.RBV020”*
*“.JFK053”*
*“DPK017”*

**(5)** North American Routes (NAR): Numerically coded routes preplanned over existing airways and route system to and from specific coastal fixes serving the North Atlantic.

***EXAMPLE–***
*“.NA50”*
*“.NA9”*

**(c)** Estimated Time En Route Suffix: Consists of an element separator (/) and four digits appended to the destination. Leading zeros are required, and the time en route is expressed in hours and minutes.

***EXAMPLE–***
*“.STL/0105”*

**n.** Remarks (Field 11): Consists of the remarks code character--a clear sky symbol or an overcast sky symbol, and the remarks.

***NOTE–***
*If remarks (Field 11) are present, a space is required after the last element of Field 10. If remarks are not present, no space is required, and Field E (End of Text) should be the next entry.*

**1.** The overcast sky symbol limits the transmittal of the remarks to the center controlling a point of departure. This should be used when the only remarks are a request for a full route

clearance (FRC). It may also be used when it is known that the remarks are only pertinent to the center controlling the departure airport.

**2.** Remarks are not interpreted by the NAS En Route Program and are optional. When used, they must be limited to flight information pertinent to ATC.

**o.** End of Text Signal/End of Message Function (Field E).

***NOTE−***
*Fields 04 and 08 are not applicable to proposed flight plans and have been intentionally omitted. (See FIG 6−5−1.)*

*TBL 6−5−1*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **(A)** | | **(B)** | **(C)** | **(D)** | **(00)** | |
| **Individual company coding** | | | **FF KZFWZDZX** | **DTG KDALAALX** | **AAL1630001** | | |
| | | | | | | | |
| | **(01)** | **(02)** | **(03)** | **(05)** | **(06)** | **(07)** | **(09)** |
| | **FP** | **AAL123** | **B727/A** | **0350** | **OKC** | **P1830** | **160** |
| | | | | | | | |
| | **(10)** | | | | **(11)** | | **(E)** |
| | **OKC..GAG.V280.AMA/0139** | | | | **-> Pressurization inoperative** | | **Enter Key** |

*TBL 6−5−2*

| ***Computer Flight Data Input Chart*** | | | |
|---|---|---|---|
| ***Field*** | ***Element*** | ***Example*** | ***Requirements*** |
| A | Start of Message (SOM code) | /B | Required for SOM recognition |
| B | Priority/Address Line | FF KZFWZQZX | Provides priority and addressee |
| C | DTG/Originator | DTG KDALAALX | Identifies time of transmission and originator |
| D | End of Line (EOL) Function | New Line Key | Required to end all lines except line of text |
| E | EOT/EOM | Enter Key | Terminates message |

# Section 6. En Route Decision Support Tool (EDST)

## 6−6−1. GENERAL

EDST is used by the sector team in performing its strategic planning responsibilities. EDST uses flight plan data, forecast winds, aircraft performance characteristics, and track data to derive expected aircraft trajectories, and to predict conflicts between aircraft and between aircraft and special use or designated airspace. It also provides trial planning and enhanced flight data management capabilities.

## 6−6−2. OPERATIONS SUPERVISOR-IN-CHARGE RESPONSIBILITIES

**a.** Where authorized, perform EDST data entries to keep the activation status of designated Airspace Configuration Elements current.

**b.** Ensure that the EDST Airspace Status View information accurately reflects current Special Activity Airspace (SAA) status.

**c.** Perform coordination and designated actions in the event of an EDSToutage or degradation, in accordance with the requirements of this order and as designated by facility directive.

**d.** Assist in sector preparations needed to transition to and from EDST operations.

**e.** Ensure changes to restrictions based on the Restrictions Inventory and Evaluation are implemented in a timely manner.

## 6−6−3. OPERATIONS MANAGER-IN-CHARGE RESPONSIBILITIES

**a.** Ensure that the EDST Airspace Status View information accurately reflects current SAA status.

**b.** Perform coordination and designated actions in the event of an EDST outage or degradation, in accordance with the requirements of this order and as designated by facility directive.

**c.** Ensure changes to restrictions based on the Restrictions Inventory and Evaluation are implemented in a timely manner.

## 6−6−4. FACILITY MANAGER RESPONSIBILITIES

**a.** Ensure LOAs, SOPs, and Sector Position Binders are current to support EDST.

**1.** .Facility managers must consider EDST functions and limitations in reviewing all current LOAs and/or negotiating all future LOAs.

**2.** The following items should be considered when reviewing LOAs:

**(a)** Interfacility coordination procedures.

**(b)** Special Activity Airspace (SAA) use and status.

**(c)** Restriction relaxation/removal.

**(d)** Outage notification.

**(e)** Degradation of functions notification.

**(f)** Automated Information Transfer (AIT) procedures.

**b.** Ensure all facility directives are current to support EDST. Directives must include, but are not limited to:

**1.** Outages.

**2.** Airspace Configuration Elements Data Entry.

**3.** Standard Use of Automated Flight Data Management.

4. Sectors authorized to use Inappropriate Altitude for Direction of Flight (IAFDOF) Manual Mode.
5. Sectors authorized to use the Drop Track Delete function and the conditions under which it may be used.
6. Conditions under which a controller can deactivate an adapted EDST restriction.
7. Local requirements for posting flight progress strips that exceed national requirements.
8. Facility standard for annotating status of manual coordination at sectors where automated coordination with an external facility is not available (e.g., international facility, VFR tower). Facility directives may require either the use of the Coordination Menu or flight progress strips, and must define a standard for each sector.
9. Facility standard for annotating hold instructions and reporting delay information at sectors. Facility directives may require either the use of the ERAM Hold Data Menu, ERAM Hold view, flight progress strips, or a facility-approved worksheet, and must define a standard for each sector.

**c.** Ensure the Restrictions Inventory and Evaluation is conducted and maintained in accordance with this order.

**d.** Ensure changes to restrictions based on the Restrictions Inventory and Evaluation are implemented in a timely manner.

## 6−6−5. EDST AIRSPACE CONFIGURATION ELEMENTS

**a.** Airspace Configuration Elements are:

1. Special Activity Airspace (SAA).
2. Airport Stream Filters (ASF).
3. Adapted restrictions.

**b.** For each EDSTadapted airspace configuration element, facility directives must designate at least one primary position and one secondary position to be responsible to update the status (e.g., active/inactive) and/or the activation schedule for that element.

***NOTE−***

1. *Accurate conflict probe results require timely updates to the current activation status and/or the projected activation schedule for airspace configuration elements.*
2. *Designating a position to have secondary responsibility for each EDST Airspace Configuration Element is essential to maintain the capability to perform updates in the event that equipment at the primary position is temporarily out of service.*
3. *Positions to be considered for primary or secondary designation include a specified sector, TMU, or operations supervisor.*

**c.** ATC positions and personnel authorized by facility directive must perform automation entries in a timely manner to update the status of SAAs, restrictions, and ASF.

**d.** For an EDST airspace configuration element that is associated with a particular sector or sectors and whose status is highly dynamic in nature:

1. The designated sector(s) should be assigned the primary responsibility to keep the EDST status current.

2. The TMU or the appropriate operations supervisor should be assigned the secondary responsibility to keep EDST status current.

## 6−6−6. STANDARD USE OF AUTOMATED FLIGHT DATA MANAGEMENT

Use of the checkbox flight data management feature of EDST must be standardized in accordance with individual facility directives.

## 6−6−7. EDST OUTAGES

**a.** In accordance with Chapter 8, NAS En Route Automation, and the requirements in this chapter, facilities must develop and maintain procedures for transition to and from EDST operations.

***NOTE−***
*The back-up for EDST is flight progress strips.*

**b.** Planned EDST Outages.

1. Schedule preventive or periodic maintenance of EDST to coincide with periods of low air traffic volume.
2. Notification of planned local EDST outages must be coordinated with the Operations Manager no less than 2 hours in advance.
3. The Operations Manager must notify the adjacent EDST facilities of a planned outage no less than 1 hour in advance.
4. The Operations Manager must notify Operations Supervisors of a planned EDST outage as soon as known.
5. Each Operations Supervisor must notify the sector teams in their area of a planned EDST outage as soon as known.
6. At least 20 minutes prior to a localEDSToutage, Operations Supervisors must ensure that sectors resume posting and maintenance of flight progress strips, in accordance with FAA Order JO 7110.65, Air Traffic Control, requirements for a non-EDST environment, except as otherwise permitted by facility directive.

**c.** Unplanned EDST Outages.

1. A facility directive must include a checklist detailing actions to be taken and roles and responsibilities during an unplanned EDST outage.
2. When an unplanned EDST outage occurs, sectors must post and maintain flight progress strips in accordance with FAA Order JO 7110.65, Air Traffic Control, requirements for a non-EDST environment, except as otherwise permitted by facility directive.

***NOTE−***

1. *A full transition to strips may not be necessary based on the duration of the outage. Outages of short duration may allow continued use of the EDST data while strips are prepared for use in the event that the outage continues.*
2. *A "snapshot" of EDST flight data at the time of the outage will be available to the sector team. Although the data will not be updated and will become stale, it may be used to assist the sector team while reestablishing the support of strips.*

3. Any failure recovery action that will result in the automatic clearing of the EDST data on a position's display must be approved by the Operations Manager.

**d.** Degraded Conditions.

**1.** In the event that EDST is operational, but alert data may be affected due to an associated equipment malfunction, the National Operations Manager (NOM) must notify the Operations Manager who must in turn notify Operations Supervisors. Each Operations Supervisor must ensure that each sector team in their area of specialization is cognizant of the potential for degradation.

**2.** When the associated equipment malfunction is corrected, the NOM must notify the Operations Manager who must in turn notify Operations Supervisors. Each Operations Supervisor must ensure that each sector team in their area of specialization is cognizant that the source of possible degradation has been corrected.

## 6−6−8. RESTRICTIONS INVENTORY AND EVALUATION

**a.** Facilities must identify responsibilities and establish procedures for the creation and maintenance of a facility restriction inventory. Facility plans should include identification and cataloging each air traffic restriction, by type, purpose, and frequency/ duration in effect.

**b.** Facilities must create a plan and conduct ongoing evaluations on the need to relax or remove restrictions not warranted during EDST operations. This must include EDST impact on ability to relax/remove restrictions and identification of dependencies between ability to remove restrictions and automation capabilities/ limitations.

**c.** Submit annually to the Vice President of En Route and Oceanic Services, an Evaluation Report on facility restriction relaxation/removal related to EDST.

**d.** Prior to implementation of restriction changes each ARTCC must:

**1.** Coordinate with any affected ATC facility.

**2.** Coordinate with the ATCSCC, as appropriate.

**3.** Inform individual air carriers, as appropriate.

## 6−6−9. TRAFFIC COUNTS AND DELAY REPORTING

**a.** Automated counts of traffic activities are the preferred methods.

**b.** Adherence to all applicable delay reporting directives must continue while EDST is operational.

**c.** Delay information, must be recorded on available flight progress strips, on facility approved forms, or via the automated delay reporting features for aircraft in hold. Facility directives must detail the procedures for collecting and reporting this information to the ATCSCC.

## 6−6−10. COMPUTER DATA RETENTION

Follow the guidelines detailed in this order to retain EDST recorded data.

## 6−6−11. WAIVER TO INTERIM ALTITUDE REQUIREMENTS

**a.** If a facility directive has been issued to waive the mandatory computer entry of interim altitudes, controllers and supervisors in any affected area and adjacent areas or facilities must be informed of the resulting potential for misleading conflict probe alert data.

**b.** Each facility should strongly consider the benefits of conflict probe in evaluating any current or future waiver for data entry of interim altitudes. Conflict probe accuracy in assigning alert priorities for surrounding sectors, including those in adjacent ERAM facilities, are dependent upon the subject sector's entry/update of interim altitudes.

## 6−6−12. TRANSFER OF POSITION RESPONSIBILITY

Each facility must ensure that pertinent EDST information is integrated into any Position Relief briefing list, whether manual or electronic.

# Section 7. Advanced Technologies and Oceanic Procedures (ATOP)

## 6−7−1. GENERAL

**a.** ATOP is an Air Traffic Control (ATC) System deployed in designated en route and oceanic airspace. ATOP includes both surveillance and flight data processing, which provides the controllers with automated decision support tools to establish, monitor, and maintain separation between aircraft, and aircraft to airspace and terrain.

**b.** ATOP capabilities include:

**1.** MEARTS based radar surveillance processing.

**2.** Conflict Prediction and Reporting for conflict probe.

**3.** Automatic Dependence Surveillance-Addressable (ADS-A).

**4.** Automatic Dependence Surveillance-Broadcast (ADS-B).

**5.** Controller Pilot Data Link Communications (CPDLC).

**6.** ATC Interfacility Data Communications (AIDC).

**7.** Weather Deviation Tool.

**8.** Decision Support Tools used primarily for situation awareness.

**9.** Electronic Flight Data including Electronic Flight Strips.

## 6−7−2. OPERATIONAL SUPERVISOR-IN-CHARGE RESPONSIBILITIES

In addition to the watch supervision described in Chapter 2, Administration of Facilities, Section 6, Watch Supervision-Terminal/En Route, facilities must provide in facility directives the operational duties and procedures for the Supervisor-In-Charge associated with the ATOP System. Responsibilities and procedures must include but are not limited to the following:

**a.** Disseminate flight information received at the Supervisor workstation in a timely manner.

**b.** Supervisor workstation message management.

**c.** ATOP data management when a channel changeover is being performed.

**d.** Assignment of Error Repair responsibilities.

## 6−7−3. ERROR REPAIR POSITION RESPONSIBILITIES

Facilities must define responsibilities and develop procedures associated with the ATOP System for the Error Repair position. Responsibilities and procedures must include but are not limited to:

**a.** Disseminate messages received at the workstation in a timely manner.

**b.** Edit and repair messages.

## 6−7−4. FACILITY MANAGER RESPONSIBILITIES

**a.** Ensure LOAs, SOPs, MOUs and Sector Position Binders are current to support ATOP.

**1.** Facility managers must consider ATOP functions and limitations when reviewing current LOAs and/or negotiating future LOAs.

**2.** Consider the following items when reviewing LOAs:

**(a)** Interfacility coordination procedures.

**(b)** Outage notification.

**(c)** Degraded functions notification.

**(d)** Automated Information Transfer Procedures.

**b.** Ensure all facility directives, where applicable, support ATOP. Directives should include but are not limited to:

**1.** System problem reporting.

**2.** Airspace and sector configuration.

**3.** Use of surveillance sources.

**4.** Use of paper strips and strip marking.

**5.** Electronic flight data management.

**6.** Conflict Probe/Weather Deviation Tool/Decision Support Tools use, limitations, and exceptions.

**7.** Internal coordination.

**8.** Contingency plans.

**9.** Controller preference management.

## 6−7−5. TRANSFER OF POSITION

In addition to the procedures outlined in paragraph 6, Step-by-Step Process, of Appendix A, Standard Operating Practice (SOP) for the Transfer of Position Responsibility, in FAA Order JO 7110.65, Air Traffic Control, ensure facility directives include, at a minimum, the following procedures:

**a.** Position relief briefing checklist.

**b.** Sign-over procedures.

## 6−7−6. ATOP CHANNEL CHANGEOVERS

Facilities must identify the procedures for a channel changeover that include a checklist detailing actions to be taken, and roles and responsibilities.

## 6−7−7. OUTAGES

In accordance with Chapter 8, NAS En Route Automation, and requirements in this chapter, facilities must develop and maintain procedures for the transition to and from, and during ATOP degraded operations. A facility directive must include a checklist detailing actions, roles, and responsibilities during planned and unplanned outage or degraded operation.

## 6−7−8. CONTROLLER PILOT DATA LINK COMMUNICATIONS

Facility managers must ensure that local procedures are developed for the use of CPDLC. These procedures must include but not be limited to:

**a.** The use of free-text messages in air-to-ground communication.

**b.** Data link limitations and exceptions.

**c.** Lost communications procedures.

**d.** Frequency assignment for automated transfer.

# Section 8. Reduced Vertical Separation Minimum (RVSM)

## 6−8−1. GENERAL

**a.** RVSM airspace is defined as any airspace between FL290 and FL410 inclusive, where eligible aircraft are separated vertically by 1,000 feet. Additional altitudes provideusers fuel savings and operational efficiencies while providing ATC flexibility, mitigation of conflict points, enhanced sector throughput and reduced controller workload.

**b.** RVSM is applied in RVSM airspace over the domestic United States, Alaska, the Gulf of America where the FAA provides air traffic services, the San Juan FIR, across international borders with Canada and Mexico, and the Pacific and Atlantic Oceanic airspace controlled by the FAA. All aircraft operating in RVSM airspace must be RVSM eligible unless they qualify for an exception as listed below.

**c.** The following non-RVSM aircraft are exceptions to the exclusive RVSM airspace, however, access may be approved, workload-permitting:

**1.** DoD aircraft.

**2.** DoD-certified aircraft operated by NASA (T38, F15, F18, WB57, S3, and U2 aircraft only).

**3.** MEDEVAC aircraft.

**4.** Aircraft being flown by manufacturers for development and certification.

**5.** Foreign State aircraft.

**d.** The following aircraft operating within oceanic airspace or transiting to/from oceanic airspace are excepted:

**1.** Aircraft being initially delivered to the State of Registry or Operator;

**2.** Aircraft that was formerly RVSM approved but has experienced an equipment failure and is being flown to a maintenance facility for repair in order to meet RVSM requirements and/or obtain approval;

**3.** Aircraft being utilized for mercy or humanitarian purposes;

**4.** Within the Oakland, Anchorage, and Arctic FIRs, an aircraft transporting a spare engine mounted under the wing.

**e.** Two thousand feet separation must be applied for aircraft transitioning RVSM airspace whenever one of the aircraft is not RVSM eligible.

**f.** Non-RVSM exception aircraft may access RVSM airspace in one of the following ways:

**1.** LOA: Complies with a Letter of Agreement (LOA) for operations within a single or adjacent ARTCCs.

**2.** File-and-Fly: Files a flight plan and makes the initial request to access RVSM airspace by requesting an ATC clearance.

**g.** Facilities with RVSM airspace must:

**1.** Provide guidance in the facility Standard Operating Procedures (SOP) for managing non-RVSM flights.

**2.** Where available, display the Center Monitor on the Traffic Situation Display (TSD) in each area and the Traffic Management Unit (TMU). This will aid in the coordination and decision making process for approving non-RVSM flights.

## 6−8−2. FACILITY MANAGER RESPONSIBILITIES

**a.** Ensure all facility directives are current to support RVSM.

**b.** Ensure all LOAs, SOPs, and Sector Position Binders are current to support RVSM.

**c.** Ensure airspace is continually reviewed for impact of RVSM.

**d.** Ensure all height deviations of 300 feet or more are recorded and forwarded to the FAA Technical Center in Atlantic City, New Jersey at NAARMO@faa.gov.

## 6−8−3. OPERATIONS MANAGER-IN-CHARGE RESPONSIBILITIES

Responsibilities must include but not be limited to the following:

**a.** Maintain an operational awareness of RVSM impact specifically any non-RVSM aircraft being worked within RVSM airspace.

**b.** Ensure proper coordination is accomplished between the STMC/TMU and the operations supervisors/controllers-in-charge regarding the accommodation and handling of any non-RVSM aircraft.

**c.** Ensure, in conjunction with the Traffic Management Officer, that monitor alert values are addressed with RVSM impacts considered.

**d.** Ensure the proper RVSM software is turned on.

## 6−8−4. OPERATIONS SUPERVISOR-IN-CHARGE/CONTROLLER-IN-CHARGE RESPONSIBILITIES

Responsibilities must include but not be limited to the following:

**a.** Maintain an awareness of all operational impacts associated with RVSM, specifically any non-RVSM aircraft currently within area sectors or projected to be in sectors under his/her area of responsibility.

**b.** Ensure sector personnel have been properly briefed regarding any known non-RVSM aircraft in or projected to be in sectors under his/her area of responsibility.

**c.** Ensure sector workload remains manageable when non-RVSM aircraft are in or projected to be in sectors under his/her area of responsibility.

**d.** Coordinate all non-RVSM aircraft with operational supervisors/CIC as appropriate, both internally and externally, to ensure the aircraft is coordinated and accepted along its route of flight.

**e.** Non-RVSM Exception Flights Outbound from the U.S. The operational supervisor/CIC from the last area to have communications and operational control of the aircraft in the facility where an aircraft departs RVSM airspace designated for U.S. air traffic control, or exit facility, must coordinate with the international point-of-contact in a timely manner.

**f.** Ensure controllers at applicable sectors have their situation display properly aligned to display the RVSM indicator depicting those non-RVSM.

## 6−8−5. NON-RVSM REQUIREMENTS

**a.** RVSM approval is required for aircraft to operate within RVSM airspace. The operator must determine that the appropriate State authority has approved the aircraft.

**b.** DoD, DoD-certified aircraft operated by NASA (T38, F15, F18, WB57, S3, and U2 aircraft only), MEDEVAC, aircraft operated by manufacturers for certification and development, and

Foreign State exception aircraft will be accommodated in RVSM airspace on a workload permitting basis.

**c.** Within oceanic airspace or transiting to/from oceanic airspace aircraft being initially delivered to the State of Registry or Operator, an aircraft that was formerly RVSM approved but has experienced an equipment failure and is being flown to a maintenance facility for repair in order to meet RVSM requirements and/or obtain approval; an aircraft being utilized for mercy or humanitarian purposes; and within the Oakland, Anchorage, and Arctic FIRs, an aircraft transporting a spare engine mounted under the wing will be accommodated in RVSM airspace on a workload permitting basis.

**d.** Non-RVSM Exception Flights Inbound to U.S. The TMU at the facility where an aircraft penetrates RVSM airspace designated for U.S. air traffic control, or entry facility, receives the coordination from an international point-of-contact advising of an inbound non-RVSM exception. The TMU must coordinate with the operational supervisor/CIC in a timely manner.

## 6−8−6. EQUIPMENT SUFFIX AND DISPLAY MANAGEMENT

RVSM aircraft will file a “W" in the equipment field of an ICAO flight plan, or a suffix showing RVSM capability in a domestic flight plan (/H, /W, /L, or /Z). NAS automation shows non-RVSM aircraft with a coral box around the fourth character in the altitude segment of the data block. The conflict alert function uses the flight plan indication of RVSM capability to determine the appropriate separation standard to apply.

## 6−8−7. MOUNTAIN WAVE ACTIVITY (MWA)

In areas of known MWA, aircraft operators have been encouraged to report encountering this weather event and the severity of its impact. Operators may request assistance in the form of reroutes, change of altitude, vectors, or merging target procedures.

## 6−8−8. WAKE TURBULENCE AND WEATHER RELATED TURBULENCE

**a.** *Domestic:* Aircraft experiencing turbulence can be anticipated to advise ATC and request a clearance for mitigation in the form of vectors, altitude change, or to fly an offset.

**b.** *Oceanic:* Aircraft experiencing turbulence can be anticipated to advise ATC and request a revised clearance. In instances where a revised clearance is not possible or practicable, the aircraft may fly a lateral offset not to exceed 2NM from the assigned route or track. Advise ATC as soon as practical and return to the assigned route when the offset is no longer required.

## 6−8−9. SUSPENSION OF RVSM

**a.** *Domestic:* RVSM will not be suspended in domestic airspace. Should turbulence or other weather phenomena require, separation can be increased in a defined area and thoroughly coordinated operationally.

**b.** *Oceanic:* Air Traffic Service providers will consider suspending RVSM procedures within affected areas when pilot reports of greater than moderate turbulence are received. Within airspace where RVSM procedures are suspended, the vertical separation minimum between all aircraft will be 2,000 feet above FL290.

# Section 9. En Route Information Display System (ERIDS)

## 6−9−1. GENERAL

ERIDS is a real time, interactive, electronic information display system that is used as a replacement for paper sources of information. ERIDS provides controllers, supervisors, and traffic management personnel with access to aeronautical data, weather data, airspace charts, ATC procedures, NOTAMs, PIREPs, and other sources of ATC information.

## 6−9−2. REQUIREMENTS

**a.** Where available, ERIDS must be used to provide controllers with the following information:

**1.** Sector binder information.

***REFERENCE−***
*FAA Order JO 7210.3, Para 6−2−2, En Route Sector Information Binder.*
*FAA Order JO 7210.3, Para 2−1−3, Position/Sector Binders.*

**2.** Notices to Airmen (NOTAMs). Facilities using ERIDS for NOTAM distribution must develop a backup plan in the event ERIDS becomes unavailable/unusable.

**3.** National directives.

**4.** United States Government flight information publications/DoD flight information publications.

**5.** Other air traffic information and lists determined by facility directives.

**b.** ERIDS may be used to record and disseminate PIREPs.

**c.** ERIDS must not be used to disseminate dynamic operational information; for example, miles-in-trail restrictions, runway in use, weather information other than PIREPS, etc.

**d.** Facilities must develop local procedures to meet the following requirements:

**1.** Facilities using ERIDS must ensure that the provisions of FAA Order JO 7210.3, paragraph 6−2−2, are met in the event of an ERIDS outage or degradation.

**2.** Facilities using ERIDS in lieu of sector information binders must ensure that all information is available and maintained for each operational sector in accordance with the provisions of FAA Order JO 7210.3, paragraph 6−2−2.

# Section 10. En Route Data Communications

## 6−10−1. CONTROLLER PILOT DATA LINK COMMUNICATIONS (CPDLC)

All ARTCC ATMs must ensure that the following requirements are incorporated into facility documents, as appropriate, prior to the operational use of CPDLC.

**a.** CPDLC shutdowns must be coordinated with all affected personnel and users unless operational conditions require an emergency shutdown of the service.

**1.** The Operations Manager-in-Charge (OMIC) must coordinate with each area to ensure controllers stop using CPDLC.

**2.** Controllers must use voice to broadcast a message alerting pilots to the shutdown.

***NOTE−***
*A NOTAM may be issued for a longer-term outage.*

**3.** Controllers must take action to ensure that any open or abnormally closed uplinks at the time of the shutdown will be resolved, by voice, with each aircraft.

**b.** A record of the operational status of CPDLC and its components must be maintained to include system on/off status, initial contact (IC) on/off status, service provider outages, service volume antenna outages, and other pertinent information.

**c.** Ensure Operations Supervisor (OS) and Controllers-in-Charge (CIC) brief the operational status of CPDLC and its components when relieved of position.

**d.** Establish procedures to update the frequency management tables to accurately reflect current frequency assignments.

***NOTE−***
*Frequency management tables are used by the CPDLC system to determine the proper radio frequency to use when sending a transfer of communication (TOC) uplink to an aircraft.*

**e.** Establish procedures to coordinate any changes to frequency management tables that will impact adjacent facilities.

***NOTE−***

1. *When a frequency is out of service, any adjacent ARTCC that might use that frequency in a TOC uplink has to be informed so its frequency management tables can be updated.*
2. *Prior to CPDLC implementation, sector combinations and frequency assignments were normally coordinated across facility boundaries between controllers at the operational positions. With the implementation of CPDLC, controllers should forward that information to the OS/CIC on duty so that the frequency management tables can be updated.*

**f.** Blocked List Procedures

**1.** Contact ZTL or ZLC flight data unit to manually have an aircraft added or removed from the Blocked List.

**2.** When aircraft are automatically added to the blocked list by the system, for reasons other than excessive logons, flight data personnel at ZTL and ZLC are directed to remove them from the blocked list manually.

***NOTE−***
*Aircraft that are added to the blocked list for excessive logons will not be automatically removed from the blocked list by flight data personnel at ZTL and ZLC.*

**g.** Technical Operations (TO) personnel must be notified when an outage or problem occurs with any element of the Terminal Data Link System (TDLS).

# Chapter 7. En Route Data

## Section 1. Performance Checks

### 7−1−1. RADAR PERFORMANCE CHECKS

Daily radar performance checks and special radar accuracy checks of long-range radar (LRR) systems used by FAA for ATC must be accomplished as follows:

**a.** Radar systems performance must be evaluated by radar-qualified air traffic controllers through daily observations and use of the radar systems. FAA Flight Check aircraft may be used to assist the controller in performing radar checks. Controllers should utilize Flight Check aircraft or targets of opportunity to verify radar video and fixed map accuracy when necessary.

***NOTE−***
*Neither the daily radar performance checks nor the special radar accuracy checks replace commissioning and special flight inspection. (See paragraph 3−7−1, Commissioning Radar Facilities.)*

**b.** Accuracy of radar display systems must be certified on a daily basis. For digitized (narrowband) radar systems, this check is performed by the computer program and is certified daily by Technical Operations personnel. Controllers must monitor the acceptability of the digitized system by indirect methods; e.g., stability and accuracy of presentation, visible alarm lights, and accuracy of registration. Sector controllers must report radar problems to the OS/CIC.

**c.** Narrowband radar systems must not be used for operational purposes unless they are certified by the appropriate Technical Operations personnel. Uncertified radar subsystems must be inhibited from an operational narrowband system. The OMIC must make an entry on FAA Form 7230-4 when the digitized radar system is certified and/or when the display from an uncertified radar subsystem is inhibited or restored to the operational system.

### 7−1−2. SPECIAL RADAR ACCURACY CHECKS

**a.** When these checks are made, consider video and fixed map accuracy. To ensure a thorough understanding of the program and its objectives by all personnel, close coordination is required among air traffic and technical operations personnel. Initial coordination for common digitizer radar accuracy flight checks is effected by the Maintenance Control Center (MCC) coordinator with the facility's test coordinator and Technical Operations. Effect interfacility coordination and with the ARTCC within which the Flight Check aircraft originates. Give special attention to assure the unique assignment of a discrete beacon code; i.e., assure that other aircraft within the same radar coverage as the Flight Check aircraft are not assigned the same beacon code and that the beacon code assigned the Flight Check aircraft is not changed.

**b.** The ARTCC air traffic manager must ensure that a sufficient number of controllers are fully qualified to participate in the special radar accuracy check. A detailed list of minimum accuracy requirements of the radar must be made available to the controller/s.

**c.** The controller/s assigned to participate in these checks must be thoroughly familiar with the requirements set forth herein as well as the commissioning flight inspection data.

***NOTE−***
*FAA aircraft normally operate on published routes.*

**d.** When necessary, ARTCC controllers must:

**1.** Check the accuracy of as many of the predetermined checkpoints as possible while the Flight Check aircraft is operating within the area of radar coverage.

**2.** Request the pilot to advise when he/she is over each predetermined checkpoint. When these checks are being conducted, the pilot must alert the controller that the checkpoint is being approached and state “mark” when over the point.

**3.** Do not change the previously assigned discrete beacon code.

**e.** Satisfactory radar performance of video and fixed map accuracy will be such that an aircraft reporting over a checkpoint will be within a circular area about the checkpoint, the radius of which is 3 percent of the distance from the checkpoint to the radar antenna site or 500 feet, whichever is greater.

**1.** Type radar system.

**2.** Date.

**3.** Aircraft identification.

**4.** Type aircraft.

**5.** Altitude/flight level.

**6.** Aircraft reported position.

**7.** Radar indicated position.

**8.** Discrepancy.

**9.** Primary or secondary radar.

**10.** CP or LP.

# Section 2. Deficiencies

## 7−2−1. DEFICIENCIES IN SYSTEM

Note deficiencies in the radar system on FAA Form 7230-4. Reconcile them as follows:

**a.** After consultation with the Technical Operations representative, the ARTCC air traffic manager or his/her designated representative must decide if the radar system is usable. Consider atmospheric or other phenomena that may temporarily affect the radar performance.

**b.** A certification by Technical Operations personnel that the malfunction has been corrected must be entered on the sector's and the OMIC log.

***NOTE−***
*Technical Operations representatives ground check the equipment to determine if the system is operating satisfactorily or request a special flight check.*

## 7−2−2. AMPLITRON OR PARAMETRIC AMPLIFIER FAILURE

**a.** When an ARSR/amplitron fails, the magnetron continues to feed normal magnetron power to the transmitting system. In the receiving system, a failure of the parametric amplifier will not cause a complete system failure. Under these conditions, the radar system still has limited operational capabilities.

**b.** When amplitron and/or parametric amplifier service fails in both channels at the same time, the radar will continue to operate but a loss of coverage will be experienced. The Technical Operations technician will immediately advise the ARTCC OMIC of any failure. Following this, the technician will provide an estimate of the shortest period of time required to restore normal service to one channel and will estimate how much time, if any, could be saved by a complete radar shutdown. The OMIC must determine the course of action to be followed. The Technical Operations technician will abide by the OMIC's decision and proceed accordingly.

**c.** The OMIC must contact Technical Operations, which will then issue a NOTAM as required.

## 7−2−3. ELECTRONIC ATTACK (EA)

At joint-use radar locations, EA activity can subsequently result in a request to apply EA videos to the radar system, which may necessitate the decertification of the narrowband search radar. The SE should be consulted concerning the effect of EA on the operational use of the radar (narrowband/broadband) prior to approving/disapproving a request to conduct EA activity.

# Chapter 8. NAS En Route Automation

## Section 1. General

### 8−1−1. TRANSITION PROCEDURES

**a.** Facilities must develop and maintain current detailed procedures for transition to and from the various automated and non-automated modes of operation.

**b.** The transition plans must include as a minimum:

**1.** Transition decision authority; i.e., the individual responsible for making the transition decision.

**2.** Specific transition procedures.

**3.** Detailed checklists specifying the duties and the responsibilities for the OMIC, STMCIC, OS, Radar Position (R), and other appropriate positions. The checklist must include, as a minimum, the following information/procedures:

**(a)** Transition decision authority.

**(b)** Coordination/notification procedures (intra- and interfacility).

**(c)** Specific duties/responsibilities (including detection and resolution of potential conflicts).

***NOTE−***
*Whenever possible, coordination/notification procedures and duties/responsibilities should be listed in the order in which they are to be accomplished.*

### 8−1−2. ALTRV FLIGHT DATA PROCESSING

**a.** Facilities must process ALTRV flight plans as follows:

**1.** Classified ALTRV data, stationary and/or flight plan information, must not be entered into the computer, processed, stored, or transmitted by the computer unless specific declassification data is provided; for example, “declassified for NOTAM/computer flight plan processing 24 hours in advance.” In the absence of declassified data, process this information manually and pass to only those personnel with a need to know. All data must be marked with the appropriate level of security classification, collected when notification to all applicable parties is completed, and destroyed according to security guidelines.

***NOTE−***
*The use of a mission plan message is not authorized for processing classified ALTRV flight plans.*

**2.** The military operations specialist at the departure ARTCC or where the ALTRV begins must ensure that unclassified ALTRV missions are entered into the NAS computer to destination or to ALTRV end point.

***NOTE−***
*Base operations within Anchorage ARTCC's jurisdiction may enter ALTRV flight plans into the NAS computer.*

3. All flight plans for military aircraft (including ALTRVs) to or through the Anchorage FIRs must be given normal addressing plus PAZAZQZX and PAZNZQZX.
4. Unclassified ALTRV flight plans that have a block altitude change must be entered to the destination airport or ALTRV end point. An "XXX" must be entered into the route of flight immediately after each fix where a block altitude change is to occur to prevent the production of flight progress strips containing erroneous altitude information. The air traffic specialist working the area where the "XXX" has been entered must change the mission block altitude to what was previously coordinated and remove the "XXX" so that the correct block altitude will be processed to subsequent facilities.
5. Flight Plan Entries for MARSA and ALTRV
   **(a)** For domestic flight plans (not leaving U.S. domestic airspace), include "MARSA" and/or "ALTRV" in Field 11.
   **(b)** For international flight plans, include the word(s) "MARSA" and/or "ALTRV" in Reasons for Special Handling (STS/). Do not include additional/supplemental information in STS/. Include any additional/supplemental information in Remarks (RMK/).

***EXAMPLE−***
*STS/ALTRV*
*STS/MARSA RMK/AR20HFAKER1233 IR101E1802X1845 MARSA BAKER23*

**b.** The facility officer who has been designated military liaison and security duties is responsible for the development and implementation of methods for assuring the accuracy and the completeness of ALTRV flight plan and control information.

**c.** Estimates and revisions of ALTRV flight plans not processed online must be forwarded via the Aeronautical Information System from facility to facility.

## 8−1−3. COMPUTER DATA RETENTION

**a.** Retain SAR/CDR computer and DLOG (if recorded) recordings and data communications printouts for 45 days unless they are related to an accident/incident as defined in FAA Order JO 8020.16, Air Traffic Organization Aircraft Accident and Incident Notification, Investigation, and Reporting. Retention of the latter must be in accordance with FAA Order JO 1350.14, Records Management.

**b.** If a request is received to retain computer data following an accident, the printout of the relative data will suffice, and the recording tape/disc may then be returned to service through the normal rotational cycle. The printout data are considered a permanent record and must be retained in accordance with aircraft accident/incident retention requirements. Reduction of the SAR/CDR and DLOG (if recorded) tapes/discs to hard-copy format must be made at the earliest time convenient to the facility involved without derogating the ATC function and without prematurely taking the computer out of ATC service. Do not make these data and printouts a part of the accident/incident package.

**c.** If a request is received to retain a specific data recording and the data are available and contained on tape, the tape must be retained in its entirety. If the data are contained on disc, the facility may transfer all pertinent data to magnetic tape and label the tape a *Duplicate Original.* After successful transfer, the disc pack may be returned to service through the normal rotational cycle.

However, if a specific request is received to retain the disc, the disc pack must be retained in its entirety.

**d.** Treat SAR/CDR and DLOG (if recorded) recordings, *duplicate and/or originals,* and data communications printouts related to hijack aircraft the same as voice recorder audio files. (See paragraph 3−4−4, Audio Data Retention.)

## 8−1−4. FLIGHT PLAN DROP INTERVAL

Set a standard Flight Plan Drop Interval appropriate for daily operations. Coordinate increased drop interval times due to temporary conditions with underlying facilities and the Air Traffic Control System Command Center (ATCSCC). Record temporary adjustments on FAA Form 7230-4, Daily Record of Facility Operation, and the National Traffic Management Log (NTML).

# Section 2. Procedures

## 8−2−1. THREE MILE OPERATIONS

Facilities may adapt airspace to permit the use of 3 NM separation as defined in FAA Order JO 7110.65, Air Traffic Control, subparagraph 5–5–4c, subparagraph 5–5–4d, subparagraph 5–5–4e, or subparagraph 5–5–4f, provided all of the following are met:

**a.** An operational advantage will be obtained. Consideration must be given to such aspects as terminal interface, radar reliability, etc.

**b.** Facility directives are issued to:

**1.** Define the 3 NM separation area.

**2.** Permit 3 NM separation in the defined area.

**3.** Accommodate local procedural changes.

**c.** ERAM:

**1.** The 3 NM separation area is displayable on the video map.

**2.** The aircraft alert volume is adapted for 3 NM separation.

**3.** Within 40 NM of the preferred radar; or

**4.** Within 60 NM of the preferred radar when using an MSSR; or

**5.** When the facility is operating in track-based display mode.

**d.** MEARTS. EN ROUTE. Fused Display Mode (FDM):

**1.** The 3 NM separation area is displayable on the video map.

**2.** The fusion target symbol must be used at displays utilizing 3 NM separation areas.

**3.** FDM surveillance data may be used for 3 NM and 5 NM separation in terminal and enroute environments using Micro-EARTS when an operational advantage and an increase in safety and efficiency are realized. Facility directive must specify 3 NM FDM airspace using the most operationally advantageous combination of available surveillance sources and in accordance with the provisions of FAA Order JO 7110.65, paragraph 5-5-4, Minima. 3 NM FDM is not allowed when the only surveillance input is long range radar.

**4.** 3 NM FDM airspace may be enabled or disabled as needed. Once disabled, the affected airspace must use 5 NM FDM separation.

**5.** The entire facility must be in either FDM or Sensor/Mosaic Display Mode. All facility displays will return to Mosaic Display Mode, with all single sensor polygons disabled, when FDM is exited.

**e.** MEARTS Mosaic Mode: All sort boxes within 40 NM of the sensor or within 60 NM of the sensor when using an MSSR and with the single site indicator set to permit the use of 3 NM radar separation.

## 8−2−2. ADAPTED ALTIMETER SETTINGS

Ensure a current altimeter setting from the adapted reporting station for each radar sort box/ surveillance sort cell or geographic area is input into the center's computer. When an altimeter setting for an adapted reporting station cannot be obtained, enter the altimeter setting from the appropriate alternate reporting station.

## 8−2−3. ADAPTATION OF EXTERNAL ALTIMETER SETTINGS

Adaptation of altimeter settings for reporting stations outside a facility's area is optional up to the maximum number listed in the NAS adaptation specifications.

## 8−2−4. CONFLICT ALERT FUNCTION PARAMETERS

**a.** Use the approved CA preset values as defined in the ERAM Site Adaptation Manual (SAM) unless otherwise approved by the En Route and Oceanic Safety and Operation Support Office.

**b.** Facility air traffic managers are authorized to inhibit the display of CA at specified sectors and within ERAM Aircraft Alert Volumes (AAVs).

## 8−2−5. MODE C INTRUDER (MCI) ALERT PARAMETERS

**a.** Use the approved MCI CA preset values as defined in the ERAM Site Adaptation Manual (SAM) unless otherwise approved by the En Route and Oceanic Safety and Operations Support Office.

**b.** MCI Alert base altitude must be set at any value between ground level and 5,000 feet MSL at the discretion of the facility air traffic manager. When a facility's or sector's ground level is above 5,000 feet MSL, base altitudes may be set to 1,500 AGL. Any instance of base altitudes above 5,000 feet MSL must be documented and forwarded to the En Route and Oceanic Safety and Operations Support Office through the respective Service Area Operations Directorate.

**c.** Facility air traffic managers are authorized to temporarily adjust the Mode C Intruder Alert base altitude at a sector(s) when excessive MCI alerts derogate the separation of IFR traffic. For the purpose of this section, temporary is considered to be of less than 4 hours duration, not necessarily continuous, during any calendar day. The following is required when MCI base altitude is adjusted:

**1.** Log each occurrence when this procedure is used on FAA Form 7230-4, including the sector and temporary altitude.

**2.** Documentation must be forwarded according to subparagraph b above, if it is determined that a temporary adjustment of the MCI base altitude does not meet the needs of the sector.

**3.** Facility air traffic managers are authorized to inhibit the situation display of MCI Alert at specified sectors.

## 8−2−6. E-MSAW ADAPTATION

Ensure that all internal airspace is adapted for E-MSAW processing. Ensure that the internal altitude information adapted in the polygons agrees with the MIA sector charts and is in accordance with the ERAM Site Adaptation Manual.

## 8−2−7. INTERIM ALTITUDE FACILITY DIRECTIVE REQUIREMENTS

Where sector conditions (e.g., heavy traffic or sector complexity) preclude meeting the requirements of FAA Order JO 7110.65, Air Traffic Control, paragraph 5−13−3, Computer Entry of Flight Plan Information, ARTCC air traffic managers may authorize exceptions to the requirement to update the data block with a temporary altitude if an operational advantage is gained. A facility directive must be issued with instructions governing permissible procedures. It must contain:

**a.** Procedures/sectors where the directive applies.

**b.** Coordination procedures if required.

**c.** Specific instructions to input a reported altitude for non-Mode C-equipped aircraft when it will operate at an altitude before proceeding to the assigned altitude.

## 8−2−8. REQUIREMENTS FOR ERAM DATA BLOCK CHANGES WITHOUT COORDINATION

Where sector conditions offer a significant operational advantage, air traffic managers may authorize exceptions to data block change coordination required by FAA Order JO 7110.65, Air Traffic Control, paragraph 5−4−5, Transferring Controller Handoff, and FAA Order JO 7110.65, Air Traffic Control, paragraph 5−4−6, Receiving Controller Handoff. The facility directive or LOA must contain, at a minimum:

**a.** Sectors where the directive or LOA applies.

**b.** Specific situations where omission of coordination is permitted.

***EXAMPLE−***

*LOA specifies the aircraft will be descending to FL290 and changes in interim altitude are authorized after handoff to get to FL 290.*

***NOTE−***

*Consideration needs to be given to the ability of all sector team members to readily discriminate the indicator in the B4 field under varied conditions, such as font size and brightness, situation display orientation, and lighting. There is a significant operational difference between accepting a handoff with:*

***a****. An "up arrow" in which aircraft will not climb beyond displayed assigned altitude, and*

**c.** *A "T" (interim) altitude where the aircraft may climb beyond the currently displayed interim altitude.*

## 8−2−9. ERAM HOLD INFORMATION FACILITY DIRECTIVE REQUIREMENTS

Where sector conditions offer a significant operational advantage, air traffic managers may authorize exceptions to FAA Order JO 7110.65, Air Traffic Control, paragraph 5−14−9, ERAM Computer Entry Hold Information. The facility directive must contain, at a minimum:

**a.** Sectors where the directive applies.

**b.** Required coordination procedures.

**c.** Specific instructions for reporting delays.

## 8−2−10. ERAM SPECIAL ACTIVITY AIRSPACE (SAA) ADAPTATION

Facilities must ensure, at a minimum, that every SUA (excluding controlled firing areas and alert areas) and ATCAA within their Automated Problem Detection (APD) Area is adapted for SAA scheduling and alert processing.

***NOTE−***

*The dimensions of this airspace are adapted into ERAM and can be designated as either cold (inactive), pending (pend), or hot (active).*

## 8−2−11. ERAM HOLDING PATTERN ADAPTATION

Ensure published holding patterns on Standard Terminal Arrival Routes (STARs) are adapted to automatically populate the Hold Data Menu.

***NOTE−***
*Adapting holding patterns will reduce controller workload by automatically populating the Hold Data Menu. Therefore, facilities should consider adapting all frequently used holding patterns.*

## 8−2−12. ERAM MASTER TOOLBAR MAP BUTTON LABEL

Ensure the adapted label of the GEOMAP button matches the name of the GEOMAP selected at the sector. The map button label may be displayed on two lines and may include spaces to improve label readability.

***NOTE−***
*Since the GEOMAP is saved with the preference set, displaying the map name on the GEOMAP button label provides a visual indication to the controller when a GEOMAP changes as a result of invoking a preference set.*

## 8−2−13. LOCAL INTERIM ALTITUDE

Ensure that the ERAM Local Interim Altitude function is turned on.

# Section 3. Displays

## 8−3−1. DIGITAL MAP VERIFICATION

Verification of the accuracy of new or modified digital maps must be accomplished through the use of "targets of opportunity" over displayed fixes, navigational aids, etc. Any observed discrepancies must be documented to indicate the observed direction and displacement. If any errors cannot be corrected or if a facility is otherwise dissatisfied with the results from "targets of opportunity," a request may be made through the FICO for a flight inspection. If no discrepancies are noted, no documentation is required.

## 8−3−2. DATA DISPLAY FOR BLOCK ALTITUDE FLIGHTS

Facilities operating in the narrowband mode must ensure that, as a minimum, radar target symbols, aircraft identifications (ACIDs), and altitude information are displayed at all sectors affected by altitude assignments involving more than one altitude (Block Altitude) when radar separation is being provided.

## 8−3−3. SELECTED ALTITUDE LIMITS

The display of Mode C targets and limited data blocks is necessary for application of Merging Target Procedures. Sectors must ensure the display of Mode C targets and data blocks by entering appropriate altitude limits and display filters to include, as a minimum, the altitude stratum of the sector plus:

**a.** 1,200 feet above the highest and below the lowest altitude or flight level of the sector where 1,000 feet vertical separation is applicable; and

**b.** 2,200 feet above the highest and below the lowest flight level of the sector where 2,000 feet vertical separation is applicable.

***NOTE−***

1. *The data block, for purposes of this paragraph, must contain the beacon code and mode C altitude at a minimum.*
2. *Exception to these requirements may be authorized for specific altitudes in certain ARTCC sectors if defined in appropriate facility directives and approved by the respective service area operations directorate.*

## 8−3−4. AUTOMATED WEATHER DISPLAY STATUS

Facilities operating in the narrowband mode must ensure that sector controllers are immediately briefed on any change in the status of the Weather Fixed Map Unit (WFMU) or radar polarization.

# Chapter 9. Facility Statistical Data, Reports, and Forms

## Section 1. Operational Count Data

### 9−1−1. IFR AIRCRAFT HANDLED

The IFR Aircraft Handled count is the statistic maintained by ARTCCs. The statistic is used to fulfill a variety of management planning and administrative requirements, but one of the primary requirements is that of determining controller grade level. As such, it reflects the factors of knowledge and skills required by and the responsibility involved with the type of service being provided. Not every service provided will qualify for an operational count, but those which do are considered typical of the total facility responsibility.

### 9−1−2. CATEGORIES OF OPERATIONS

Maintain data on the following categories of aircraft operations:

**a.** Air Carrier: Operations by aircraft identified in Appendix 3, Air Carrier Aircraft for Air Traffic Activity Operations Count, which use three letter company designators.

**b.** Air Taxi: Operations by aircraft other than those identified in Appendix 3 which use three letter company designators or the prefix “TANGO.”

> ***NOTE−***
> *Air Taxi operators who do not have a FAA-issued designator have been authorized to use the prefix “TANGO.”*

**c.** Military: All classes of military operations.

**d.** General Aviation: Civil operations which are not classified under *air carrier* or *air taxi.*

### 9−1−3. CRITERIA FOR IFR AIRCRAFT HANDLED COUNT

**a.** *Basic Criteria:* ARTCCs must maintain a count of IFR Aircraft Handled which meet both the following criteria:

**1.** The aircraft must be:

**(a)** On an IFR flight plan or a Special VFR clearance; or

**(b)** Provided approved separation while conducting practice instrument approaches; and

**2.** The facility must have control jurisdiction over the aircraft. Radio communication while doing this is not a requirement for an allowable IFR Aircraft Handled count.

**b.** *By Operation Type:* IFR Aircraft Handled is broken down as Domestic aircraft handled and Oceanic operations. The Domestic count is further subdivided into Departure operations, Arrival operations, and Over operations. Presently, the counting of Arrivals is only an option which may be exercised by ARTCCs using a computer counting routine. Count those operations which qualify under the following guidelines:

**1.** *Domestic Departures:* Record one departure for each:

**(a)** IFR flight which originates in an ARTCCs area and enters that center's airspace. (ARTCCs must not count Departures which operate solely under tower en route control nor any other aircraft which never enters the center's airspace.)

**(b)** Airborne aircraft changing from VFR to IFR except those covered in subparagraph b3(b).

**(c)** VFR departure from a Class D or Class E surface area when cleared by the ARTCC in accordance with Special VFR procedures.

**(d)** IFR flight plan extension (alternate or new destination, or proceeding to original destination after completing practice penetrations or low approaches en route) made after the aircraft has been cleared for an approach by the center or after jurisdiction has been received by approach control.

**2.** *Domestic Arrivals:* Record one Arrival for each:

***NOTE−***
*ARTCCs using a computer counting routine may elect to count both Departures and Arrivals in lieu of counting only the Departures and multiplying by two. The purpose of this option is to provide sufficient flexibility in the counting procedures to be compatible with efficient computer utilization. When using this option, no change is made to the Departure and Over operations procedures except as noted here.*

**(a)** IFR flight terminating at an airport within the ARTCCs area.

**(b)** VFR entry into a Class D or Class E airspace when cleared by the ARTCC in accordance with SVFR procedures in lieu of the Departure count of subparagraph b1(c).

**(c)** VFR aircraft that conducts a practice instrument approach procedure and is provided IFR separation by the ARTCC when it is providing approach control service in lieu of the Over count in subparagraph b3(e).

**3.** *Domestic Overs:* Record one Over count for each:

**(a)** IFR flight not previously counted which proceeds from outside an ARTCC's advisory area and passes through the area without landing.

***NOTE−***
*Such count is not taken for en route flights traversing approach control airspace.*

**(b)** Military Training Route (MTR) operations as follows:

**(1)** IR (IFR MTRs).

**[a]** Each entry/reentry at an entry or alternate entry point.

**[b]** Each recovery to IFR en route phase of flight after completing the IR.

**(2)** VR (VFR MTRs). No count is authorized for the VR route itself as it is a VFR maneuver. Flight to and from a VR is normally conducted on an IFR flight plan. When the aircraft completing the VR requests IFR en route service:

**[a]** Record an Over count, as in subparagraph b3(c) below, for the recovery into ARTCC airspace for an IFR leg of a composite flight plan.

**[b]** Record a Departure count under subparagraph b1(b) above for the recovery into center airspace when the aircraft has not previously filed an IFR flight plan and is now requesting IFR service.

**(c)** Military aircraft recovering from a block of assigned airspace into the ARTCC's area. Only the ARTCC into whose area the aircraft recovers and which provides IFR en route service to that aircraft must take this count.

***NOTE−***
*Block of Assigned Airspace is airspace of defined vertical/lateral limits, assigned by ATC for the purpose of allowing the military to control and operate during specified periods within these areas without interference from other IFR aircraft. Such airspace includes special use airspace, ATCAAs, MOAs, and Refueling Tracks, but does not include activities, such as expanded route widths, course deviations, or random altitude blocks.*

**(d)** Civilian aircraft which recover from a block of assigned airspace, similar to the military count above, provided the block fits the definition and its use is covered by a LOA.

**(e)** VFR aircraft that conducts a practice instrument approach procedure and is provided IFR separation by the ARTCC.

**4.** *Oceanic Operations:* Facilities having oceanic airspace may record one Oceanic operation count for each:

***NOTE−***
*Oceanic operations are not categorized as Departures, Arrivals, and Overs.*

**(a)** IFR flight which penetrates an oceanic ARTCC's area. This count is independent of the Domestic count to be taken.

**(1)** Only one Domestic and one Oceanic count is normally accrued by a flight transiting domestic and oceanic areas. If the aircraft exits the FIR and then subsequently reenters, or exits ARTCC airspace to another ARTCC and then reenters, additional counts may be taken.

**(2)** ARTCCs must not take more than one Domestic count, even though the aircraft exits an ARTCC's domestic area, crosses the same ARTCC's oceanic area, and again enters the domestic area.

**(3)** An Oceanic count must not be taken for each hour an aircraft is operating “on station.”

**(b)** IFR flight which originates in an ARTCC's oceanic airspace.

## 9−1−4. MILITARY AIRCRAFT MOVEMENTS

The military services frequently fly several aircraft in formation receiving ATC services as if they were a single unit. Such operations must qualify for a Departure, Arrival, or Over count using the guidelines in paragraph 9−1−3, Criteria for IFR Aircraft Handled Count. Count such military aircraft movements as follows:

**a.** Consider flights of more than one aircraft operating in a formation and handled as a single aircraft as a single unit, however, if the formation breaks up into smaller formations, take another count for each individual formation or individual flight.

**b.** Consider as a military mission any operation involving two or more military aircraft flying over routes which require coordination to reserve an altitude or a block of altitudes and count the entire mission as one flight.

***NOTE−***
*“Military Mission” refers to an “altitude reservation” that is approved by CARF or by the ARTCC when the operation is not covered in a letter of agreement.*

**c.** Take a separate operations count for each aircraft in a military mission when:

**1.** Radar service is provided to individual aircraft (or flights).

**2.** Aircraft operating outside areas of radar coverage have at least 15 minutes separation.

## 9−1−5. USE OF AUTOMATED COUNTS

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

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

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

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

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

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

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

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

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

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

3. *Special Use:* Routinely these columns are not used but are provided for the occasional special project which may be directed by Washington Headquarters or The Service Area Director of Air Traffic Operations.
4. *Remarks:* The remarks column may be used at any time to enter pertinent remarks concerning other portions of the form.

## 9−1−8. DISTRIBUTION AND AMENDMENT

**a.** Distribute FAA Form 7230-14 as follows (it may be combined in one envelope with the other monthly forms):

1. The original and one copy to the Service Area office not later than the 2nd workday (Monday-Friday) of the following month.
2. One copy to the facility's files.

**b.** Correct any errors in the forms sent in last month by completing a new form, circling the revised fields, and marking the form “AMENDED COPY.” Amended copies of forms more than 1 month old will not be accepted unless approval has been obtained from Acquisition and Business Services, ATO Information Technology, Data Services. Send amended copies along with the current reporting month's forms to the Service Area Director of Air Traffic Operations.

# Section 2. Instrument Approach Data

## 9−2−1. GENERAL

ARTCCs are responsible for the tabulation and reporting of instrument approach data for those nontower, nonapproach control, or VFR tower airports under the ARTCC's jurisdiction to which instrument approaches are conducted. Instrument approach data are used primarily to determine the need and priority order of approach aids, such as ILS and VOR. Therefore, it is not necessary to report instrument approaches made to purely military airports unless the FAA is responsible for providing the aids for that airport. One count must be recorded for each approach meeting the criteria.

## 9−2−2. INSTRUMENT APPROACHES

**a.** An instrument approach is an approach made to an airport by an aircraft on an IFR flight plan when the visibility is less than 3 miles or the ceiling is at or below the minimum initial approach altitude.

**b.** Where no weather reporting service is available at nontower satellite airports, the following criteria in descending order must be used to determine valid instrument approaches.

**1.** A pilot report.

**2.** If the flight has not canceled its IFR flight plan prior to reaching the initial approach fix.

**3.** The official weather as reported for any airport located within 30 miles of the airport to which the approach is made.

## 9−2−3. AIRPORTS REPORTED

Instrument approaches must be reported for all airports where instrument approaches are conducted. Reporting is the responsibility of the facility having the authority for clearing the approach. Therefore, the ARTCC is responsible to report instrument approaches for the nontower airports and nonapproach control (VFR) airports in its area. At airports where there is an FAA VFR tower, the ARTCC and the tower must determine which facility must maintain the count. If the tower counts the approaches, it must forward the appropriate totals to the ARTCC for inclusion in the center's monthly report. (VFR towers do not report instrument approaches to Washington.) When the ARTCC provides approach control on a part-time basis; i.e., during periods when the primary approach control facility is closed, the ARTCC must forward the instrument approach count for those hours to the primary approach control facility for inclusion in their monthly report.

## 9−2−4. FAA FORM 7230-16, APPROACH DATA WORKSHEET

FAA Form 7230-16 is a worksheet furnished for the purpose of recording instrument approaches. It does not have a specific arrangement allowing each facility to tailor it to its own needs. Instrument approaches will be counted by the standard *air carrier, air taxi, general aviation,* and *military* categories. At the end of the month, the totals, by airport, will be transferred to FAA Form 7230-12. FAA Form 7230-16 must be retained in the facility's files.

## 9−2−5. FAA FORM 7230-12, INSTRUMENT APPROACHES MONTHLY SUMMARY

FAA Form 7230-12 is a monthly form, submitted by both ARTCC and terminal approach control facilities, for reporting the number of instrument approaches made at airports for the month. The facility's name and location will be entered; two digits each will be used for the month and the year

(January would be 01), and the three-letter identifier filled in at the top of the form. ARTCCs must check box H: ARTCC or CCF. ARTCCs must not enter any data in the block for instrument approaches terminating at a primary approach airport. ARTCCs list all airports, using a three-character identifier, under the heading “Instrument Approaches to Nonapproach Control Airport,” with the respective monthly totals by category. If an ARTCC has more airports than can be listed on the front, continue on the back of the form. In this case, the ARTCC's identifier and the month and the year must be entered again on the back. Only ARTCCs and approach controls submit this form. Under no circumstances should two facilities report the same airport. Therefore, it may be necessary for facilities to make arrangements to ensure no duplicate reporting of instrument approaches.

## 9−2−6. DISTRIBUTION AND AMENDMENT

**a.** Distribute FAA Form 7230-12 as follows (it may be combined in one envelope with the other monthly forms):

**1.** The original and one copy to the Service Area office not later than the 2nd workday (Monday-Friday) of the following month.

**2.** One copy to the facility's files (with FAA Form 7230-16).

**3.** One copy to the local airport officials as requested.

**b.** Correct any errors in the forms sent in last month by completing a new form, circling the revised fields, and marking the form “AMENDED COPY.” Amended copies of forms more than 1 month old will not be accepted unless approval has been obtained from Safety and Operations Support by the Service Area office. Send amended copies along with the current reporting month's forms to the Service Area office.

## 9−2−7. FORWARD COPY TO ADJACENT SERVICE AREA

If the report contains data for an airport which is under the administrative jurisdiction of another Service Area office, forward a copy to that Service Area office.

# Section 3. Other Reports and Forms

## 9−3−1. FAA FORM 7210-8, ELT INCIDENT

In order to expedite the data flow necessary for the accomplishment of the ELT investigations, use FAA Form 7210-8, ELT Incident for coordination with the Rescue Coordination Center (RCC) when an ELT signal is heard or reported. (See FIG 9−3−1.)

**a.** Form Disposition. Air traffic managers must ensure that forms prepared for ELT incidents which have not been closed must be readily accessible at the operating position responsible for coordinating with the RCC. Forms prepared for an ELT incident which has been closed must be retained for 45 days except when filed as part of an incident, an accident, or another case file.

**b.** Instructions for completing FAA Form 7210-8. (See FIG 9−3−1.)

**1.** Enter the ELT Incident number (#) in the upper right corner of the form.

**2.** Initial Notification:

**(a)** Enter the three-letter facility identifier followed by the initials of the person completing the form and the time, and the initials of the persons and the time coordinated with in the RCC and the ROC. If the region does not maintain a ROC, the box may be adapted for local application. Enter the date (UTC) the ELT incident number assigned.

**(b)** If the ELT signal was first heard by an aircraft, or a ground station reported that an aircraft had first heard an ELT signal, circle Acft and enter the ACID. If the signal was first heard by a ground station, circle GRD Station and enter the station ID. If the first report received was from the RCC stating that an ELT signal was being received via Search and Rescue Satellite, circle SARSAT.

**(c)** If the signal is heard on only one frequency, circle that frequency. If the signal is reported on both VHF and UHF, circle both frequencies.

**(d)** If no aircraft has been reported overdue, circle UNK. If a known aircraft is overdue, enter the aircraft ID and record the last known position.

**(e)** *Individual Signal Reports:* Enter each ELT signal report received from an aircraft or a ground station emanating from the same geographic area until sufficient reports have been received to pinpoint the signal location. If the investigation reveals that more than one ELT is transmitting in the same general area at the same time, it may be necessary to prepare another FAA Form 7210-8 and handle as separate incidents. (See FIG 9−3−1.)

**(f)** *Time Heard:* Enter the time (UTC) an aircraft, a ground station, or SARSAT first received the signal.

**(g)** *Location:* Enter the location of the aircraft when the signal was first heard.

**(h)** *Altitude:* Enter the altitude(s) of the aircraft reporting the signal.

**(i)** *Remarks:* Enter any additional information, such as signal strength, which may be pertinent to the incident investigation.

**(j)** Enter the presumed location of the ELT. This information is the product of the ARTCC investigation.

**3.** *Additional Notifications/Time (UTC):* List any airport managers, base operators, or local police notified and the time of notification. List any other notifications/time, including any ground stations not previously listed on the form.

**4.** *Incident Termination.*

**(a)** List the date and the location where the ELT was discovered. Check the appropriate category for Military/Civilian and Distress/Nondistress.

**(b)** If the source of the ELT signal was not discovered, enter an applicable statement describing the reason for investigation termination, such as: "all investigative resources exhausted" or "no additional reports received." If a more lengthy explanation is required, enter "See Reverse," and use the Additional Remarks section on the back of the form.

**(c)** Enter the date (UTC) of the ELT incident closure, followed by the initials of the person recording the closure and the time, and the initials of the persons and the time the closure is coordinated within the RCC and ROC. Enter any other notifications of incident closure by identifying the facility or organization and record the initials and the time.

**5.** *Additional Remarks:* This section, on the back of the form, may be used for overflow information or any information which is too lengthy to be included on the front of the form.

# Part 3. TERMINAL AIR TRAFFIC CONTROL FACILITIES

# Chapter 10. Terminal Operations, Services, and Equipment

## Section 1. General

### 10−1−1. OPERATING POSITION DESIGNATORS

**a.** The following designators may be used to identify operating positions in a terminal. (See TBL 10−1−1.)

*TBL 10−1−1*

**Operating Position Designators**

| | Designator | Position |
|---|---|---|
| 1. | AD | Arrival Data (Radar) |
| 2. | AP | Approach Control |
| 3. | AR | Arrival Control (Radar) |
| 4. | CC | Coordinator (Tower) |
| 5. | CD | Clearance Delivery |
| 6. | CI | Coordinator (Radar) |
| 7. | DC | Departure Control |
| 8. | DD | Departure Data (Radar) |
| 9. | DR | Departure Control (Radar) |
| 10. | EN | Flight Service |
| 11. | FD | Flight Data |
| 12. | GC | Ground Control |
| 13. | LC | Local Control |
| 14. | OM | Operations Manager |
| 15. | OS | Operations Supervisor |
| 16. | PAR | Precision Approach Radar |

| | Designator | Position |
|---|---|---|
| 17. | STMCIC | Supervisory Traffic Management Coordinator-in-Charge |

**b.** Facility air traffic managers may use designators other than those listed to accommodate local situations.

## 10−1−2. TOWER/RADAR TEAM CONCEPTS

There are no absolute divisions of responsibilities regarding position operations. The tasks to be completed remain the same whether one, two, or three people are working positions within a tower cab/facility/sector. The team, as a whole, has responsibility for the safe and efficient operation of the tower cab/facility/sector.

## 10−1−3. MILITARY ATC BOARDS

**a.** Commanders at USAF bases with flight operations have been directed by USAF to establish airfield operations boards. Among other things, the boards develop recommendations for improving ATC and airfield services and attempt to resolve local air traffic problems.

**b.** The ATCT manager, his/her representative, or the ATREP at these bases may be designated as a member of the board. The FAA member must inform the board that his/her participation does not commit the FAA to abide by the board's recommendations even though they may be approved or even suggested by him/her.

**c.** The FAA member should become familiar with Air Force Regulation 55-48, Air Force Instructions 13-203, Air Traffic Control, and 13-213, Airfield Management.

## 10−1−4. SECTIONAL AERONAUTICAL, TERMINAL AREA, AND OTHER CHARTS

**a.** Air Traffic Managers (ATMs) must ensure current operational charts and publications, including, but not limited to, Terminal Area Charts (TACs), IFR Enroute Aeronautical Charts, Sectional Aeronautical Charts, and Helicopter/Powered-Lift Route Charts, if applicable, are immediately available in the operating quarters for reference.

**b.** TACs provide information needed for flight within or in the vicinity of complex terminal airspace. These charts are typically developed for Class B airspace and may include VFR Flyway Planning Charts on the reverse side. These charts provide a large-scale portrayal of selected metropolitan complexes to assist with VFR planning and pilotage.

**c.** ATMs must review VFR checkpoints/waypoints published on Sectionals, TACs, and other VFR chart products for accuracy, completeness, and reasonableness. Nearby facilities that make use of the same area depicted on the charts must agree upon the VFR checkpoints/waypoints to be depicted.

**d.** Procedures for facilities to implement or revise VFR charts are contained in Chapter 12, National Programs, of this order.

**e.** If local implementation of VFR checkpoints/waypoints is required, a list may be developed in association with local flight schools and fixed base operators for local use. They may only be used with local users who participated in developing the list. They may not be charted or published.

## 10−1−5. AREAS OF NONVISIBILITY

Air traffic managers of towers located where portions of the airport surface are normally designated movement areas and/or where portions of the airport traffic pattern are not visible from the tower must, after coordination with the airport management, issue a letter to airmen describing the condition. The recommended wording is:

**a.** "Due to obstructed vision, (facility identification) tower is unable to provide airport traffic control service in following areas: (describe the areas)."

**b.** "Due to the movement of uncontrolled ground traffic, (facility identification) tower is unable to provide airport traffic control service in the following areas: (describe the areas)."

**c.** "Use caution, the following areas are not visible from the (facility name) tower: (describe the areas, traffic pattern, active runway)."

## 10−1−6. SELECTING ACTIVE RUNWAYS

The ATCT supervisor/CIC determines which runway/s are designated RUNWAY IN USE / ACTIVE RUNWAY / DUTY RUNWAY.

**a.** Coordinate with affected facilities.

**b.** Select the RUNWAY IN USE / ACTIVE RUNWAY / DUTY RUNWAY by considering all known factors that may in any way affect the safety of takeoff/landing operations including the initial departure and the instrument approach phases of flight within terminal area airspace. Factors to consider include: surface wind direction and velocity (including gusts), wind shear / microburst alerts/reports, airport conditions, primary airport and adjacent airport traffic flows, weather activity, arrival/departure restrictions (and other airport-specific traffic management initiatives), environmental factors, etc.

***NOTE−***
*Consider the adverse effect of short-duration changes when selecting active runways or airport configurations. For example, "chasing the wind" could have adverse effects.*

**c.** Responsibility for designating RUNWAY IN USE / ACTIVE RUNWAY / DUTY RUNWAY may be further delegated; however, a facility directive must be issued to define specific coordination requirements.

**d.** Tailwind and crosswind considerations take precedence over delay/capacity considerations, and noise abatement operations/procedures/agreements.

**e.** ATCTs must formalize, in their Standard Operating Procedures (SOP) and Letters of Agreement (LOAs) (as applicable), local procedures compliant with the provisions of this paragraph.

## 10−1−7. USE OF ACTIVE RUNWAYS

**a.** Air traffic managers must issue a facility directive containing procedures to ensure the efficient use of runways, positive control and coordination of aircraft/vehicles on or near active runways. Authorization for aircraft/vehicles to taxi/proceed on or along an active runway, for purposes other than crossing, must be provided via direct communications on the appropriate local control frequency. This authorization may be provided on the ground control frequency after coordination with local control is completed for those operations specifically described in a facility directive.

**b.** Air traffic managers must develop procedures to be included in a facility directive for the mandatory use of an approved surface memory aid at the appropriate operational position/s for:

**1.** Runway status (CLOSED/INACTIVE)
**2.** Runway crossing
**3.** Vehicle, personnel or equipment on active runway/s
**4.** Land and Hold Short Operations (LAHSO)
**5.** Line Up and Wait (LUAW)
**6.** Landing clearance

**c.** Approved memory aids will be maintained in the Surface Memory Aids Toolbox. The use of memory aids that are not already included in the Toolbox must be approved by the Director, Strategic Operations, AJT-1, through the appropriate Service Area Director of Air Traffic Operations, who will coordinate with Runway Safety (AJI-1550) for inclusion (available on CEDAR).

**d.** Air traffic managers must include procedures in the facility directive to assist the local and ground controllers in maintaining awareness of aircraft positions on the airport.

***REFERENCE−***
*FAA Order JO 7110.65, Para 3−1−4, Coordination Between Local and Ground Controllers.*
*FAA Order JO 7110.65, Para 3−1−7, Position Determination.*

**e.** FAA Order JO 7110.65, Air Traffic Control, contains procedures for the control of aircraft/vehicle movements on active runways. Exceptions may be authorized, upon approval by the Service Area Director of Air Traffic Operations, to allow prearranged coordination where equivalent procedural safeguards exist to preclude a loss of separation. Exceptions must be limited to complex locations with clearly demonstrated extraordinary requirements that cannot be met through the application of the standard procedures in FAA Order JO 7110.65. The following are required:

**1.** A facility directive that clearly defines ground/local/cab coordinator responsibilities and contains safeguards to prevent inadvertent use of runways by local/ground/cab coordinator at the same time and do not rely solely on visual observation (look-and-go).
**2.** The use of the cab coordinator in runway crossing procedures must have restraints to guard against unanticipated actions by the local controller to prevent traffic conflicts. Coordinators must not approve runway crossings in front of aircraft on the runway awaiting takeoff without first coordinating with the local controller. Similar restraints should be included with regard to landing aircraft; e.g., cutoff points that ensure the runway is clear before landing aircraft arrive over the threshold. Based on a direct knowledge of the local controller's instant traffic situation, the cab coordinator may authorize ground control to conduct an operation across an active runway. The cab coordinator must ensure the timeliness of all such operations and initiate any necessary action to prevent runway crossing incidents. When not certain of local control's traffic, the cab coordinator may still effectively function as a communications link between the local controller and the ground controller.
**3.** A separate facility directive must specify the responsibilities of the cab coordinator in authorizing active runway crossings. This directive must specify the cab coordinator's function, authority, and accountability. The Service Area Director of Air Traffic Operations must approve this directive prior to implementation.

**f.** Air traffic managers at instrumented airports with operating control towers must, in addition to the above, annually review airport surface diagrams to ensure that the runway centerline heading information is current. This may be accomplished by comparing the posted magnetic headings of the runways shown on the airport obstruction chart, corrected to the current magnetic variation for the facility, with the heading shown on the airport surface diagram. The air traffic manager must review departure procedures to ensure continued compatibility with the runway headings posted on the airport surface diagram.

**g.** Air traffic managers must develop a facility directive that defines the coordination responsibilities of local control and ground control to ensure that coordination is accomplished to accommodate an aircraft exiting the runway which must enter another taxiway/runway/ramp area (other than the one used to exit the landing runway) to taxi clear of the runway.

***NOTE−***
*This directive is only required at facilities where an aircraft exiting the runway must enter another taxiway/runway/ramp area, other than the one used to exit the landing runway, to taxi clear of the runway.*

## 10−1−8. PROCEDURES FOR OPENING AND CLOSING RUNWAYS

Each ATM:

**a.** Must ensure that the authority, responsibility, and procedures to be used when opening or closing a runway are defined in an LOA with airport management/military operations office. Items which should be addressed, if relevant, are: the use of barriers/visual aids (lighted or unlighted “X”, barricades, etc.), portions of the closed runway available for ground operations such as crossings, and information for issuing NOTAMs. Other items may be included, as appropriate.

***NOTE−***
*Only the airport management/military operations office can close or open a runway.*

**b.** Must develop and provide a tailored checklist to be used when opening and closing a runway. A facility directive must designate the position responsible for completing the checklist. Items which should be included, if relevant, are:

**1.** Coordination.
- **(a)** Airport management.
- **(b)** Intrafacility.
- **(c)** Interfacility.
- **(d)** Technical operations.
- **(e)** Traffic management.

**2.** Memory aids.
**3.** Safety Logic System.
**4.** Status information area.
**5.** Airfield lighting.
**6.** NAVAIDs.
**7.** ATIS.
**8.** Entry on the daily log.

**c.** May increase the number of items and/or the level of detail of the opening and closing checklist as they deem necessary.

**d.** Must ensure that a facility directive includes procedures for the mandatory use of an approved memory aid that indicates the status of the runway (CLOSED/INACTIVE).

**e.** Must implement approved memory aids and develop procedures outlining their use.

***NOTE−***
*When implementing these procedures, one should consider short-term versus long-term closures as well as planned versus unplanned processes.*

***REFERENCE−***
*FAA Order JO 7110.65, Para 3−3−1, Landing Area Condition.*
*FAA Order JO 7110.65, Para 3−3−2, Closed/Unsafe Runway Information.*
*FAA Order JO 7110.65, Para 4−7−12, Airport Conditions.*
*FAA Order JO 7210.3, Para 4−7−3, System Impact Reports.*
*FAA Order JO 7210.3, Para 10−1−7, Use of Active Runways.*
*FAA Order JO 7210.3, Para 18−5−13, Electronic System Impact Reports.*

## 10−1−9. FLIGHT PROGRESS STRIP USAGE

Air traffic managers at automated terminal radar facilities may waive the requirement to use flight progress strips provided:

**a.** Back-up systems such as multiple radar sites/systems are utilized.

**b.** Local procedures are documented in a facility directive. These procedures should include but not be limited to:

**1.** Departure areas and/or procedures.

**2.** Arrival procedures.

**3.** Overflight handling procedures.

**4.** Transition from radar to nonradar.

**c.** No misunderstanding will occur as a result of no strip usage.

**d.** Unused flight progress strips, facility developed forms and/or blank notepads must be provided for controller use.

**e.** Facilities must revert to flight progress strip usage if back-up systems referred to in subparagraph a above are not available.

## 10−1−10. LOW VISIBILITY OPERATIONS

**a.** Facility air traffic managers must participate in developing a local SMGCS plan when the airport is under the guidelines of the National SMGCS plan.

***REFERENCE−***
*AC 120-57, Surface Movement Guidance and Control System (SMGCS).*

**b.** Facility air traffic managers must ensure all operational personnel are properly briefed prior to the effective date of local SMGCS plan. All air traffic procedures included in the SMGCS plan must be contained in a facility directive.

## 10−1−11. FAA MOBILE/TEMPORARY AIRPORT TRAFFIC CONTROL TOWERS

A mobile or temporary airport traffic control tower may be requested by an FAA facility to provide interim air traffic services due to events that render a fixed tower uninhabitable or unable to provide airport traffic control tower service. External entities, such as flying organizations, cities, airport operators, may request an FAA mobile or temporary tower to assist in the operation of fly-ins, air races, wildfire response, etc., at non-towered locations. ATMs must consult Service Center procedures and FAA Order JO 7110.315, Mobile Airport Traffic Control Tower Siting Criteria, for guidance on mobile or temporary airport traffic control tower implementation and responsibilities.

***NOTE-***
*Procedures for the deployment of ATC services and/or assets by the DoD, including mobile airport traffic control towers, are contained in FAA Order JO 7610.14, Non-Sensitive Procedures and Requirements for Special Operations, Chapter 2, Section 1, ATC Services by the Military.*

## 10−1−12. PARTICIPATION IN LOCAL AIRPORT DEICING PLAN (LADP)

**a.** Officials, at airports operating under 49 CFR part 1540/1542 and 14 CFR part 139 subject to icing weather conditions with control towers, should develop LADPs in order to involve all interested parties in the deicing/anti-icing process. Aircraft departing from airports without a LADP are not exempt from any traffic management initiative.

**b.** The operators of these airports have been requested to host meetings involving airport users and air traffic in a partnership effort to achieve common solutions to local aircraft ground deicing/anti-icing problems. The emphasis is on developing local strategies that minimize the amount of time an aircraft spends on the ground after being deiced/anti-iced.

***NOTE-***
*Deicing is the process of removing existing frozen precipitation, frost, or ice from aircraft surfaces. Anti-icing is the process of preventing accumulation of frozen contaminants on aircraft surfaces. Both processes may involve the application of various fluids to the aircraft.*

**c.** Air traffic managers who receive requests from airport operators to participate in these meetings will use the following guidance:

**1.** When requested by the airport operator, the air traffic manager must participate in the development of a LADP. Since a LADP can affect an airport arrival rate and/or departure rate, the air traffic manager must include the participation of the air traffic manager from the appropriate ARTCC, who must participate and/or utilize their traffic management unit (TMU). The plan will be reviewed and updated annually. The plan must include:

**(a)** A clear definition of triggering mechanism(s) used to implement the LADP, e.g., holdover tables, visible precipitation.

**(b)** Assignment of responsibility to notify air traffic of implementation and cessation of the LADP.

**(c)** Air traffic facilities should not normally become the triggering mechanism. If air traffic is designated as the triggering mechanism, submit the proposed LADP to the Service Area Director of Air Traffic Operations for approval.

**2.** Develop or enhance local strategies to manage the number of aircraft at the departure runway queues and minimize the amount of time an aircraft spends on the ground after being deiced.

**3.** Gate hold procedures, when used as part of a LADP, should be initiated at the time the plan is implemented. The application of gate hold procedures during deicing/anti-icing operations are not predicated on other requirements of FAA Order JO 7210.3.

***NOTE-***
*The pilot-in-command remains the final authority as to aircraft operation. Air traffic is not responsible for tracking or adherence to aircraft holdover times.*

**4.** Coordinate the expected start time, actual start time and stop time of the LADP with the appropriate ARTCC TMU. The ARTCC TMU will forward these times to the ATCSCC.

**5.** Balance the airport flow to accommodate demand. Adjust the arrival rate with the departure rate. These rates should reflect the number of operations expected to occur during deicing/anti-icing conditions and facilitate minimizing the amount of time an aircraft spends on the ground after being deiced/anti-iced.

**6.** Aircraft operators at LADP airports are responsible for complying with issued Expect Departure Clearance Time (EDCT) times and will not be exempted from compliance with these times. However, once an aircraft has been deiced/anti-iced, it must be released unless a ground stop applicable to that aircraft is in effect. If a facility believes aircraft operators are not performing deicing/anti-icing in a manner consistent to meet the EDCT time, the facility must notify the ATCSCC through the appropriate TMU.

**7.** Allocate the available departure slot capacity, when departure rates are reduced because of deicing, consistent with available resources. Facilities should consider the following unprioritized list of options when developing departure allocation procedures.

**(a)** OPTION A: First come, first served. When departure demand exceeds capacity, the air traffic facility will minimize departure delays at the runway queue by using gatehold or an equivalent procedure.

**(b)** OPTION B: Air traffic will determine the departure allocation based upon the departure rate and the stated demand, obtained directly from the users, during a specified time period. For example, air traffic will coordinate with each user and receive their demand for a 15-minute time period. Then, based upon the total airport departure demand for the 15-minute time period, determine the number of flights which the user will be allocated, advise each user, and determine which flights they will use to fill their allocation.

**(c)** OPTION C: Airport users determine the departure allocation. Air traffic will notify the users of the departure rate in effect and the users will then advise air traffic which flights they will use to fill their allocation. Air traffic will provide input on the coordination process but will not accept an active role in developing the departure allocation.

**(d)** OPTION D: Air traffic determines the departure rate and informs the users of the number of operations expected during a specific time period. Air traffic determines the total percentage of each users' daily operations based upon a “typical busy day” by dividing each of the users total daily operations by the airports total daily operations. Then, air traffic determines each users hourly share by multiplying the users daily percentage times

the departure rate. The users will then distribute their hourly share evenly throughout the specific time intervals.

***NOTE-***

1. *Air traffic may or may not take an active role in determining the percentage of each user's operations on a "typical busy day" and each user's hourly share.*
2. *If a user has only one aircraft scheduled per hour, attempts should be made to accommodate it.*

8. Provide coordination, communication, and feedback with the parties included in the plan. Coordination should take place when airports are forecast to have icing conditions, during deicing/anti-icing and after deicing/anti-icing, to effect necessary adjustments. Prior to and after each winter season, the airport participants should assess the efficiency of the airport plan and address any specific concerns.
9. Develop an air traffic facility training program. Prior to each winter deicing/anti-icing season, conduct annual controller refresher training including, but not limited to, awareness of and sensitivity to the peculiar nature of deicing/anti-icing operations, icing conditions, and minimizing delays at the runway departure queue.

## 10−1−13. PRECISION OBSTACLE FREE ZONE (POFZ)

Coordinate with the Airport Division and Flight Standards to determine if precision approach operations are impacted by the POFZ. ILS hold lines will need to be relocated if aircraft (vertical surfaces) or vehicles fall within the POFZ.

# Section 2. Position Binders

## 10−2−1. POSITION DUTIES AND RESPONSIBILITIES

**a.** The air traffic manager may assign duties and responsibilities to positions as facility needs dictate. Those assignments may apply to one or more positions. Standards must be developed to enhance the overall operational capabilities of the facility. Local practices, procedures, equipment, communications, etc., used in this directive must be in accordance with national directives. Site specific details required for pertinent items should describe the appropriate procedure, method, strategy, system equipment, etc., necessary at the facility level to achieve the desired level of service.

**b.** The air traffic managers must retain one copy of the completed facility standard operating procedures directive in each area of operation, and distribute applicable sections to the positions to which they apply.

***REFERENCE−***
*FAA Order JO 7210.3, Para 2−1−3, Position/Sector Binders.*

**c.** Changes must be maintained in accordance with changes to national, Service Area office, and facility orders, and documents. Changes must be timely to ensure the currency of position binders. Cross reference should be provided to related documents where applicable.

## 10−2−2. TOWER/RADAR TEAM POSITION BINDERS

**a.** Position duties and responsibilities: general description.

**b.** Position information:

**1.** Frequency information - primary/back-up.

**2.** Position specific equipment - availability, not use.

**3.** Area of jurisdiction - map, video map, diagram and/or narrative.

**4.** Position procedures - may include, but not limited to:

**(a)** Arrival procedures.

**(b)** Departure procedures.

**(c)** Special procedures.

**(d)** Coordination procedures.

**(e)** LOA or LOA procedures applicable to that position.

**(f)** Normally used sector holding fixes to include published/unpublished hold, allowable altitudes, maximum speed, maximum length, direction of turn, direction from fix, and if applicable, published procedures involved. Additionally, at facilities having areas with limited or no radar coverage, include those holding patterns within these areas that contain “climb in holding” assessments as noted on FAA Form 8260-2.

**(g)** Local strip marking.

**(h)** Process flight plan information.

**(i)** Forward flight plan information.

**(j)** Process traffic management information.

**(k)** Process field condition reports.

**(l)** Process miscellaneous flight data.

**(m)** Process weather information.

**(n)** ATIS.

**(o)** SIA.

**(p)** Special flight handling.

**(q)** Emergencies.

**5.** Potential problem areas.

# Section 3. Operations

## 10−3−1. DISSEMINATION OF WEATHER INFORMATION

Facility air traffic managers must establish procedures for the prompt collection and dissemination of weather information. The procedures must address SIGMET, AIRMET (except over CONUS), CWA, PIREP and other known or observed weather that may affect aircraft safety. These procedures must contain direction for a central source to be responsible for:

***NOTE−***
*In recognition that there are several uses/definitions for the acronym CONUS, references herein to CONUS are specific to the contiguous United States (i.e., "lower 48").*

***REFERENCE−***
*FAA Order JO 7110.65, Para 2−6−6, Hazardous Inflight Weather Advisory.*

**a.** Soliciting and handling PIREPs in accordance with the provisions of FAA Order JO 7110.65, Air Traffic Control, paragraph 2−6−2, PIREP Solicitation and Dissemination.

**b.** Reviewing SIGMET, AIRMET, and CWA to determine the required distribution, and disseminating SIGMET, AIRMET and/or CWA information in accordance with the following:

***NOTE−***
*Simply attempting to accelerate the movement of all weather data will not accomplish our objectives. Greater emphasis is being placed on screening and selective dissemination of weather data. Selective dissemination takes into account the need to alert pilots to significant weather reports in sufficient detail to assist them in making decisions pertinent to flight safety and to provide the information an ATC facility requires to promote the safe and efficient use of its airspace.*

1. Disseminate pertinent information from SIGMET, AIRMET, or CWA to other terminal ATC facilities within your terminal area.
2. Disseminate selective SIGMET, AIRMET, and CWA information on a need-to-know basis in accordance with the provisions of FAA Order JO 7110.65, paragraph 2−6−6, Hazardous Inflight Weather Advisory.

## 10−3−2. WIND INSTRUMENTS AT APPROACH CONTROL FACILITIES

**a.** The same wind sensor may be used to provide wind information in ATCT and approach control facilities when they are located on the same airport.

**b.** Approach control facilities not located at the airport to which radar service is being provided may issue wind data received from the tower at that airport. The wind data may be transmitted to the approach control facility by TelAutograph, data communication circuit, voice lines, etc.

**c.** The facility air traffic manager of an approach control that provides radar service to an Air Force Base must identify facility requirements for wind indicators, in writing, to the local USAF Air Weather Service Commander.

## 10−3−3. LOW LEVEL WIND SHEAR/MICROBURST DETECTION SYSTEMS

**a.** Procedures for the dissemination of wind information derived from the Low Level Wind Shear Alert System (LLWAS) or other automated wind shear detection systems, are contained in FAA Order JO 7110.65, paragraph 3−1−8, Low Level Wind Shear/MicroburstAdvisories. Guidance to facility air traffic managers concerning the operational use of the LLWAS is as follows:

**1.** Prior to operational use of LLWAS facilities, a letter to airmen must be published explaining, as a minimum, the location and designation of the remote sensors, the capabilities and limitations of the system, and the availability of current LLWAS remote sensor wind information if requested by the pilot. A new letter to airmen must be issued whenever changes to the above minimum criteria or system upgrade/modifications are made.

***NOTE−***
*The LLWAS may be retained as a backup system no longer than 6 months after the WSP has been commissioned.*

**2.** At positions of operation where installed, LLWAS airport wind information appearing on the tower LLWAS display may be used in place of the direct dial or commissioned AWOS/ASOS automated display wind information.

***NOTE−***
*Towers having the responsibility for weather observations must comply with the requirements as specified in subparagraph 2−10−1a, Wind Instrument Sensors.*

**3.** TRACONs may use direct dial, LLWAS, or commissioned AWOS/ASOS automated display wind information for operational purposes.

**4.** Facility managers may designate the use of displayed wind information oriented to the threshold end of the runway in lieu of airport winds where LLWAS expanded network systems or LLWAS that are integrated with TDWR are installed, if deemed operationally advantageous.

**5.** The LLWAS airport, direct dial, or commissioned AWOS/ASOS automated winds may be used during outages of the sensors that provide threshold winds:

**(a)** Include in the letter to airmen an explanation that wind information given to arriving aircraft on that runway/s may be derived from the automated AWOS/ASOS wind equipment or wind sensor equipment near the runway threshold rather than from the LLWAS airport wind source. It is not intended that controllers specify the remote source when issuing these winds to arriving aircraft, except when an alert occurs. This must be explained in the letter to airmen.

**(b)** Use wind information derived from commissioned AWOS/ASOS for ATIS broadcasts and issuing weather reports. Wind information from commissioned AWOS/ASOS or LLWAS centerfield may be used when issuing surface wind to departing aircraft.

***REFERENCE−***
*FAA Order JO 7210.3, Para 2−10−1, Wind Instrument Sensors.*

**b.** When it is determined that a component or the whole LLWAS has failed, take the following action: If a component such as a remote sensor fails, notify Technical Operations (Tech Ops). During periods when wind shear is likely to occur or has been reported; e.g., frontal activity,

thunderstorms, or pilot reports, inform users by broadcasting on the ATIS that the component is out of service.

***EXAMPLE−***
*"Low level wind shear west boundary sensor out of service."*

**c.** Technical Operations is responsible for the verification of the accuracy of the LLWAS. The SMO will notify air traffic of any equipment that is out of tolerance.

## 10−3−4. RELAY OF RVR VALUES

**a.** Relay of RVR values from the weather observing facility to the control tower may be discontinued at the request of the tower when there is no traffic activity at that specific location.

**b.** Establish relative priorities on the visibility information at locations with two or more RVR runways where data is required for two or more runways.

## 10−3−5. ADVANCE APPROACH INFORMATION

Where more than one position could issue the data, assign responsibility for issuing advance approach information to a specific position in a facility directive. Display the information so that it is readily accessible to the controller having a need for it.

## 10−3−6. ILS HEIGHT/DISTANCE LIMITATIONS

**a.** An ILS is normally flight checked to 4,500 feet and 18 miles for the localizer and to 4,500 feet and 10 miles for the glide slope.

**b.** If an operational need to exceed these limitations exists, ATC submits an Expanded Service Volume (ESV) request IAW 8260.19, with a description of the flight procedure requiring it. Flight inspection must validate the ESV.

## 10−3−7. LAND AND HOLD SHORT OPERATIONS (LAHSO)

**a.** The air traffic manager must refer to FAA Order JO 7110.118, Land and Hold Short Operations (LAHSO).

**b.** Technical questions concerning LAHSO may be addressed to the Operations Support Group; or, in turn, to Mission Readiness Services, Operational Policy, AJV-P, via 9-AJV-P-HQ-Correspondence@faa.gov.

## 10−3−8. LINE UP AND WAIT (LUAW) OPERATIONS

**a.** The ATM must:

**1.** Determine an operational need exists before conducting LUAW operations.

**2.** Before authorizing LUAW operations, conduct a review of the impact that airport configuration and local conditions may have on the application of LUAW procedures.

**3.** Prepare a facility directive. The directive must prescribe items (a) through (d). Items (e) through (i) must be included if applicable.

**(a)** Local procedures for conducting these operations.

**(b)** Methods to assist the local controller in maintaining awareness of aircraft positions on the airport, for example, annotating flight progress strips or marking the location of aircraft with color-coded chips on a magnetic diagram of the airport.

***REFERENCE−***
*FAA Order JO 7210.3, Para 10−1−7, Use of Active Runways.*

**(c)** The consolidation and staffing of positions.

**(d)** The requirements necessary for issuing a landing clearance with an aircraft holding in position.

**(1)** The safety logic system must be operated in full core alert runway configuration.

**(2)** The reported weather must be ceiling of 800 feet or more.

**(3)** The reported visibility must be 2 miles or more.

***REFERENCE−***
*FAA Order JO 7110.65, Para 3−9−4, Line Up and Wait (LUAW), subpara c1.*
*FAA Order JO 7110.65, Para 3−10−5, Landing Clearance, subpara b.*

**(e)** Runway geometry, for example, the physical configuration of runways and other airport movement areas.

**(f)** Weather conditions, time of day, for example, prevailing light conditions.

***REFERENCE−***
*FAA Order JO 7110.65, Para 3−9−4, Line Up and Wait (LUAW), subpara c1 and g.*

**(g)** Fleet mix.

***REFERENCE−***
*FAA Order JO 7110.65, Para 3−9−6, Same Runway Separation.*
*FAA Order JO 7110.65, Para 3−9−7, Wake Turbulence Separation for Intersection Departures.*
*FAA Order JO 7110.65, Para 3−9−8, Intersecting Runway Separation.*

**(h)** Traffic volume; complexity restrictions.

**(i)** Obstructions or limitations to visibility from controller-to-aircraft and aircraft-to-aircraft perspectives.

**4.** Local control position must not be consolidated/combined with any other non-local control position. For example, local control must not be consolidated/combined with the operations supervisor (OS)/controller-in-charge (CIC) position, clearance delivery, flight data, ground control, cab coordinator, etc. Local control can be combined with other local control positions to include tower associate (local assist) or local monitor position. When a Class B/helicopter position with defined control tower airspace is established, this position can be combined with local control.

**5.** The tower associate (local assist) position or a local monitor position must be staffed to permit more than one aircraft at a time to LUAW on the same runway between sunrise and sunset.

**6.** The OS/CIC position should not be combined with any other position.

**7.** Ensure OS/CICs review paragraph 2−6−1a, Watch Supervision, with an emphasis on maintaining situational awareness and management of the operational environment with a goal toward eliminating distractions.

**8.** Do not authorize LUAW operations at an intersection between sunset and sunrise unless the following is implemented:

**(a)** The runway is used as a departure-only runway.

**(b)** Only one aircraft at a time is permitted to LUAW on the same runway.

**(c)** Document on FAA Form 7230-4, Daily Record of Facility Operation, the following: "LUAW at INT of RWY (number) and TWY (name) IN EFFECT" when using runway as a departure-only runway. "LUAW at INT of RWY (number) and TWY (name) SUSPENDED" when the runway is not used as a departure-only runway.

**(d)** At least 90 days before planned implementation, ATMs must submit the local directive outlining this operation to the appropriate Service Area Director of Air Traffic Operations for approval. The appropriate Service Area Director of Air Traffic Operations must be notified of any proposed operational changes (for example, a change to the runway or taxiway for conducting LUAW operations).

**b.** ATMs must submit operational need for LUAW and a facility directive to the appropriate Service Area Director of Air Traffic Operations for approval. ATMs must maintain a copy of the approval correspondence from the appropriate Service Area Director of Air Traffic Operations.

**c.** The appropriate Service Area Director of Air Traffic Operations must ensure an annual review of LUAW operations. The results of this review must be forwarded to and archived by the Service Area Director of Air Traffic Operations.

## 10−3−9. VISUAL SEPARATION

Air traffic managers at adjacent ATCTs who wish to conduct tower-applied visual separation are required to complete the following:

**a.** Prepare a facility directive at each facility and enter into an LOA between the concerned facilities. At a minimum, the LOA must include:

**1.** Required equipment to conduct the operation.

**2.** Clear definition of the specific runway configurations and flows for the operation.

**3.** Ceiling and visibility requirements.

**4.** Missed approach instructions, where applicable.

**5.** A requirement that the aircraft type and intentions be made known to all controllers providing visual separation under these procedures.

**6.** Procedures for OS/CIC personnel to:

**(a)** Accomplish coordination between all concerned facilities prior to conducting and upon termination of the specified operation,

**(b)** Assess the operation during equipment failures.

**(c)** Terminate the operation when not permitted due to weather conditions.

**b.** Ensure that all personnel receive initial, and when appropriate, recurrent/annual refresher training.

**c.** Document the operation in a Letter to Airmen and publish it on the NOTAM Management Service (NMS) website.

**d.** Submit an operational needs request along with an update adding tower-applied visual separation procedures to their facility directives. These documents must be approved by the appropriate Air Traffic Services Service Area Director prior to implementation.

**e.** ATMs must maintain a copy of the approval correspondence.

***REFERENCE−***
*FAA Order JO 7110.65, Para 7−2−1, Visual Separation.*
*FAA Order JO 7210.3, Para 4−3−2, Appropriate Subjects.*

## 10−3−10. TAKEOFF CLEARANCE

At those airports where the airport configuration does not allow for an aircraft to completely cross one runway and hold short of the departure runway and/or where airports do not have runway hold markings between runways, the ATM must establish guidelines for how aircraft are cleared for takeoff based on the airport configurations. These guidelines must ensure aircraft are still precluded from mistakenly departing from other than the assigned runway while taking into account factors affecting aircraft being "clear of the runway," for example, minimum distance between runways, presence of hold position markings, signage, etc. A facility directive must include where these procedures are able to be applied.

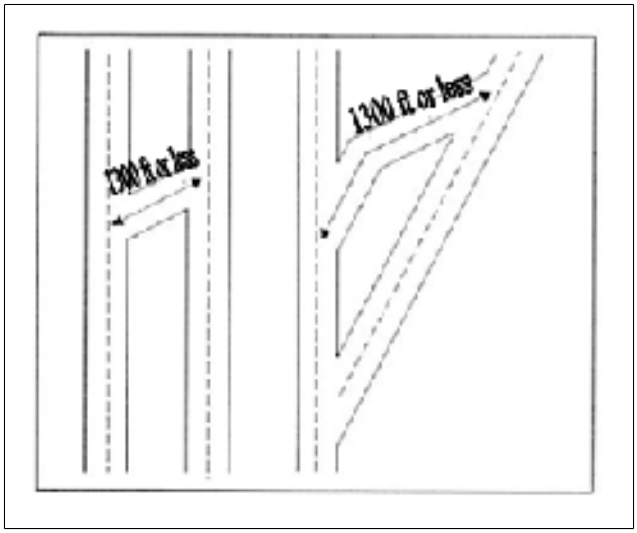
***REFERENCE−***
*FAA Order JO 7110.65, Para 3−9−10, Takeoff Clearance.*
*P/CG Term - Clear of the Runway.*

## 10−3−11. MULTIPLE RUNWAY CROSSINGS

**a.** Air traffic managers at airports where the taxi route between runway centerlines is 1,300 feet or less must submit a request to the appropriate Service Area Director of Air Traffic Operations for approval before authorizing multiple runway crossings.

***REFERENCE−***
*FAA Order JO 7110.65, Para 3−7−2, Taxi and Ground Movement Operations.*

***FIG 10−3−1***
**Multiple Runway Crossings**




**b.** The request must address the specific locations where multiple runway crossings will be authorized. This must only include locations where the intervening taxi route is 1,300 feet or less between runway centerlines.

**c.** Facilities must keep a copy of the approval correspondence issued by the appropriate Service Area Director of Air Traffic Operations.

**d.** Facility directives must include a diagram that depicts the runway/taxiway intersections where multiple runway crossings are authorized.

**e.** The Service Area Director of Air Traffic Operations must conduct an annual audit of multiple runway crossing operations authorized in their areas. The audit must ensure compliance with all applicable taxi procedures identified in FAA Order JO 7110.65 paragraph 3−7−2. The audit should include a review of all runway incursions attributable to multiple runway crossing clearances and all necessary documentation required above.

***NOTE−***
*Two or more Permission Based Exemptions may not be combined in multiple runway crossing clearances that exceed 1,300 feet.*

## 10−3−12. AIRPORT CONSTRUCTION

Whenever there is construction on a movement area, or on a non-movement area that affects movement area operations, the ATM must:

**a.** Notify the Airport Construction Advisory Council via email to the following address: 9-AJA-ConstructionCouncil@faa.gov. The email should describe the construction project in detail.

**b.** Create, approve, and publish appropriate changes to local procedures.

**c.** Ensure training for all operational personnel is completed and documented.

**d.** Provide continued training and/or briefings for the duration of the construction project to ensure operational personnel are advised on construction changes as the project progresses.

**e.** Ensure the latest version of the "Runway-Taxiway Construction Best Practices" for preparation and operations is reviewed by appropriate personnel during construction.

**f.** Ensure the latest version of the "Runway-Taxiway Construction Checklist" for preparation and operations is used and completed by appropriate personnel.

***NOTE–***
*Both the "Runway-Taxiway Construction Best Practices" and "Runway-Taxiway Construction Checklist" are available on the Runway Safety website. Go to the FAA homepage, search Runway Safety and click the Construction link.*

***REFERENCE–***
*FAA Order JO 7110.65, Para 2–9–3, Content.*
*FAA Order JO 7110.65, Para 3–7–1, Ground Traffic Movement.*
*FAA Order JO 7110.65, Para 3–9–1, Departure Information.*
*FAA Order JO 7110.65, Para 3–9–4, Line Up and Wait (LUAW).*
*FAA Order JO 7110.65, Para 3–9–10, Takeoff Clearance.*
*FAA Order JO 7110.65, Para 3–10–1, Landing Information.*
*FAA Order JO 7110.65, Para 3–10–5, Landing Clearance.*
*FAA Order JO 7210.3, Para 10–3–13, Change in Runway Length Due to Construction.*
*FAA Order JO 7210.3, Para 10–4–1, Automatic Terminal Information Service (ATIS).*

## 10–3–13. CHANGE IN RUNWAY LENGTH DUE TO CONSTRUCTION

When a runway length has been temporarily or permanently shortened, local procedures must be issued to include procedures covering the phraseology for all taxi, takeoff and landing clearances, ATIS broadcasts, NOTAMs, and other significant activities to ensure safety is not compromised. The ATM must:

**a.** Review and publish local weather criteria for each runway selected during periods of construction affecting the available runway length, for example:

**1.** 800' ceiling and 2 SM visibility – arrival/departure runway.

**2.** Weather less than 2 SM visibility - departure only runway.

**b.** Ensure training for operational personnel is completed prior to any runway length changes that include the following:

**1.** Use of the term "full length."

**2.** Use of the term "shortened."

**3.** Review of current and future national "Runway Construction Changes" training materials.

**c.** Provide continued training and/or briefings for the duration of the construction project to ensure operational personnel are advised of construction changes as the project progresses.

***REFERENCE−***
*FAA Order JO 7110.65, Para 2−9−3, Content.*
*FAA Order JO 7110.65, Para 3−7−1, Ground Traffic Movement.*
*FAA Order JO 7110.65, Para 3−9−1, Departure Information.*
*FAA Order JO 7110.65, Para 3−9−4, Line Up and Wait (LUAW).*
*FAA Order JO 7110.65, Para 3−9−10, Takeoff Clearance.*
*FAA Order JO 7110.65, Para 3−10−1, Landing Information.*
*FAA Order JO 7110.65, Para 3−10−5, Landing Clearance.*
*FAA Order JO 7210.3, Para 10−3−12, Airport Construction.*
*FAA Order JO 7210.3, Para 10−4−1, Automatic Terminal Information Service (ATIS).*

## 10−3−14. TEMPORARY AUTHORIZATION AND USE OF A TAXIWAY AS A RUNWAY

The airport owner/operator has principal authority to determine the use of the airport surface in accordance with applicable laws, regulations, and FAA policies. Accordingly, the airport traffic control tower does not have authority to use a taxiway as a runway unless otherwise authorized in writing by the airport owner/operator and the Service Area Director of Operations. In limited circumstances, such as airport construction or special events, an ATM may recommend temporary use of a taxiway as a runway but must first obtain written authorization from the airport owner/operator and take actions as specified below.

***REFERENCE−***
*14 CFR Part 139, Certification of Airports*
*AC 150/5300-13, Airport Design.*
*AC 150/5340-1, Standards for Airport Marking*
*AC 150/5340-18, Standards for Airport Sign Systems*
*AC 150/5370-2, Operational Safety on Airports During Construction.*

***NOTE−***
*The airport owner/operator must submit the appropriate airspace case to the FAA in advance of the planned effective date of the change in airport use. The owner/operator will be provided a Determination Letter on the outcome of the airspace case to include any special requirements. The ATM should obtain a copy of the Determination Letter from the airport owner/operator for awareness.*

**a.** The airport owner/operator and ATM must plan and coordinate any temporary authorization for the use of a taxiway as a runway. The ATM must notify the General Manager and the OSG once these discussions have started.

***REFERENCE−***
*FAA Order JO 7210.3, Para 4−2−1, Local Coordination/Conferences.*

**b.** The OSG must assist the General Manager and ATM for use of the planned authorization. This includes but is not limited to OSG coordination with Flight Standards Service.

**c.** Authorization for an operating airport traffic control tower to use a taxiway as a runway is limited to VFR weather conditions, sunrise to sunset, for same runway separation (SRS)

Category I and II aircraft only, per FAA Order JO 7360.1, Aircraft Type Designators. Any proposal for an authorization outside of these limitations requires additional coordination with Airports Division, Flight Standards Service, and/or the OSG, as well as submission of a waiver request per Chapter 1 of this order.

***REFERENCE−***
*FAA Order JO 7110.65, Para 3−9−6, Same Runway Separation.*

**d.** Upon receipt of written authorization from the airport owner/operator to temporarily use a taxiway as a runway, and any supporting documentation to include the OE/AAA determination letter (if any), the ATM must notify the General Manager and the OSG.

**e.** The General Manager must review the written authorization and determine if it should be forwarded, with documentation, to the Service Area Director of Air Traffic Operations.

**f.** The ATM must ensure actions necessary for operational safety, both before and during the temporary use period, are taken (e.g., safety risk management, Letter to Airmen, and/or NOTAM). The length of time necessary for the parties to take these actions will vary based on operational complexity and airport considerations.

**g.** Authorization from the Service Area Director of Air Traffic Operations must not exceed one year from the effective date. An extension may be granted for an additional period up to one year to complete arrangements to return to normal operations.

**h.** The ATM must timely notify the General Manager of any need for an extension, but no later than 30 days prior to expiration of the authorization. If at the end of a 24-month period from the initial authorization the taxiway is still needed as a runway, additional justification and a new request for authorization must be initiated by the ATM.

## 10−3−15. APPROACHES TO PARALLEL RUNWAYS

**a.** Where vectors are provided to intercept parallel final approach courses, facilities must review and, where necessary, address speed requirements to reduce the potential for overshoot situations.

**b.** When determining speed requirements, consider, at a minimum, the following:

**1.** Airspace constraints.
**2.** Field elevation.
**3.** Fleet mix.
**4.** Airport layout.
**5.** Traffic flow(s).
**6.** Local weather.

**c.** When speed requirements are implemented, those requirements must be contained in a facility directive.

## 10−3−16. GO-AROUND/MISSED APPROACH AND NON-INTERSECTING CONVERGING RUNWAY OPERATIONS

Tower facility directives must address procedures for go-arounds and/or missed approaches for all runway configurations.

**a.** Facilities must give consideration, at a minimum, to the following factors:

**1.** Operational position configuration.

2. Communication and/or control transfer.
3. Runway configuration.
4. Evaluation of existing waivers (for example, reduced separation on final).
5. Wake turbulence.
6. Weather conditions.
7. Type of approach (instrument or visual).

***REFERENCE−***
*P/CG Term - Go Around.*
*P/CG Term - Low Approach.*
*P/CG Term - Missed Approach.*
*FAA Order JO 7110.65, Para 3−8−1, Sequence/Spacing Application.*
*FAA Order JO 7110.65, Para 3−8−2, Touch-and-Go or Stop-and-Go or Low Approach.*
*FAA Order JO 7110.65, Para 4−8−11, Practice Instrument Approaches.*
*FAA Order JO 7110.65, Para 4−8−12, Low Approach and Touch-and-Go.*
*FAA Order JO 7110.65, Para 5−5−4, Minima.*
*FAA Order JO 7110.65, Para 5−6−3, Vectors Below Minimum Altitude.*
*FAA Order JO 7110.65, Para 5−8−4, Departure and Arrival.*
*FAA Order JO 7110.65, Para 5−8−5, Departures and Arrivals on Parallel or Nonintersecting Diverging Runways.*
*FAA Order JO 7110.65, Para 7−2−1, Visual Separation.*
*FAA Order JO 7210.3, Para 10−4−13, Simultaneous Converging Instrument Approaches, Subpara b4(b).*
*FAA Order JO 7110.308, Para 6b1(d), Para 6c2(i).*

**b.** Where facilities vector aircraft conducting go-arounds or missed approaches below the minimum altitude for instrument operations, facility directives including LOAs, where applicable, must include:

1. Authorized headings or range of headings from each runway end to be used for vectoring aircraft conducting missed approaches/go-arounds until reaching the MVA/MIA. Authorized headings must be evaluated by the Service Center FPT if newly designated, and when changes are made; and
2. The display of those prominent obstacles on a video map, consistent with the assigned flight path, that influence the determination of the authorized headings. Prominent obstacles, as defined in the Pilot/Controller Glossary, can be determined with the assistance of the Service Center FPT. When no prominent obstacles are identified, the facility directive must include a statement of this determination.
3. A statement that air traffic is responsible for terrain and obstruction avoidance when vectoring aircraft, not on a published procedure below the MVA/MIA during climbout, and are assumed to climb at the minimum climb gradient of 200 feet/NM.

***REFERENCE−***
*FAA Order JO 7110.65, Para 5−6−3, Vectors Below Minimum Altitude.*
*FAA Order 1050.1, Environmental Impacts: Policies and Procedures.*

**c.** Non-intersecting Converging Runway Operations (CRO):

1. ATMs must develop procedural mitigations if non-intersecting CRO operations are conducted and a 1 NM extension of the runway centerline crosses the centerline of the other

runway or the 1 NM extension of a runway crosses the 1 NM extension of another runway. A facility directive must:

**(a)** Specify procedures to ensure that an arrival that executes a go-around does not conflict with a departure off the non-intersecting converging runway. (See FIG 10−3−2 and FIG 10−3−3.)

*FIG 10−3−2*

**Departure/Arrival Non-Intersecting Converging Runway Operations**

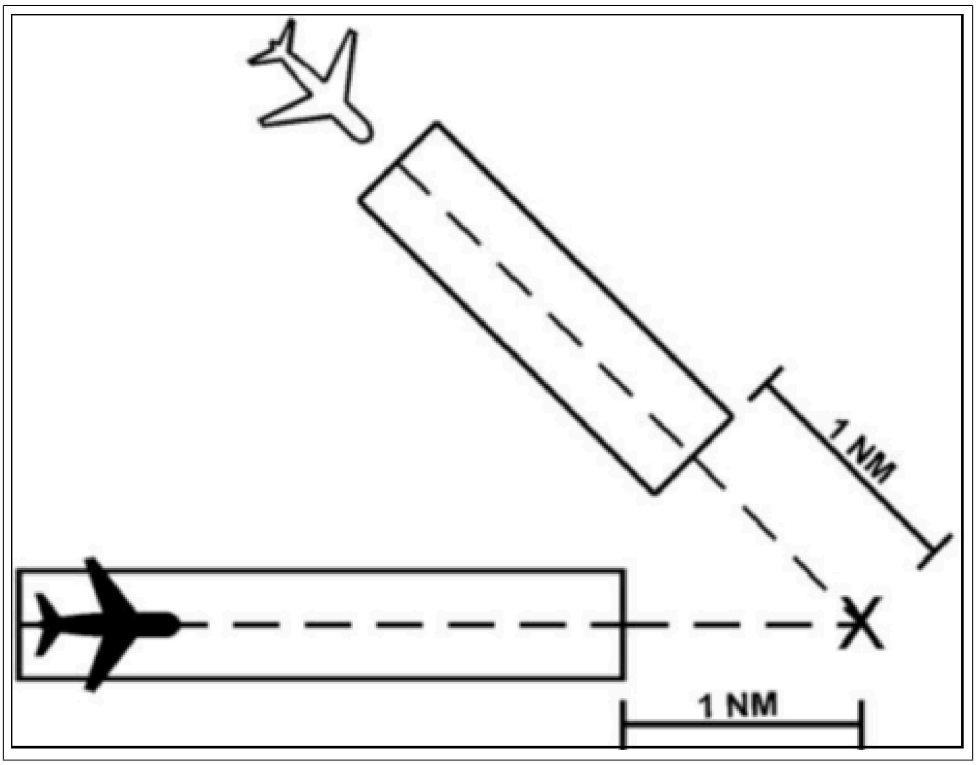
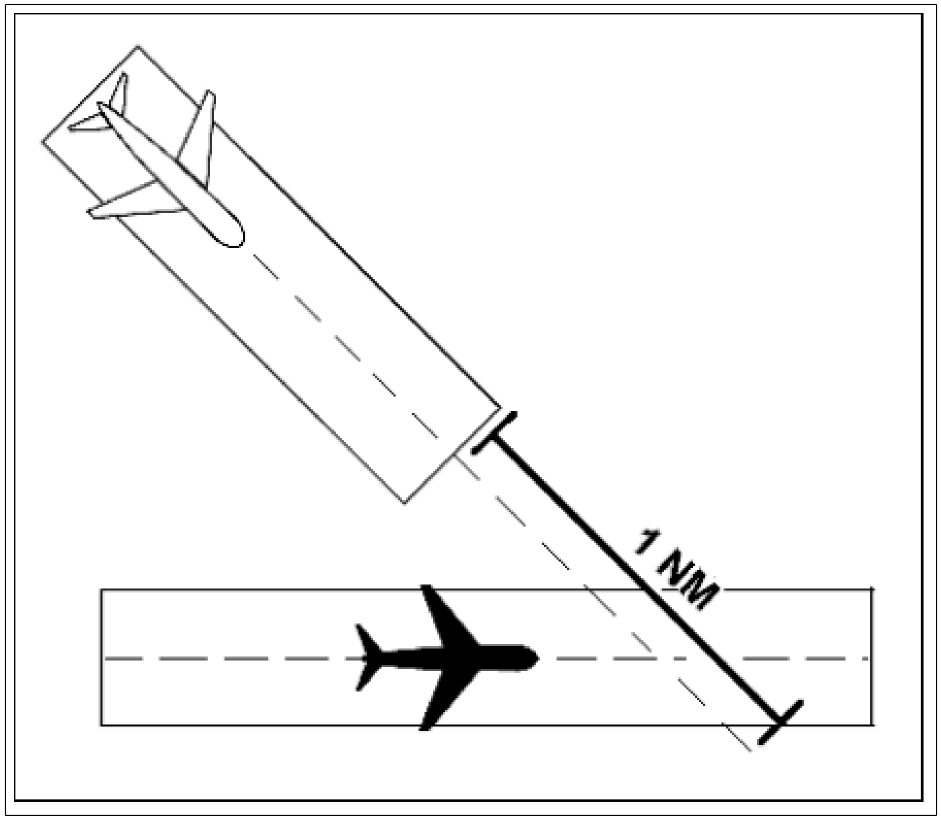


*FIG 10−3−3*

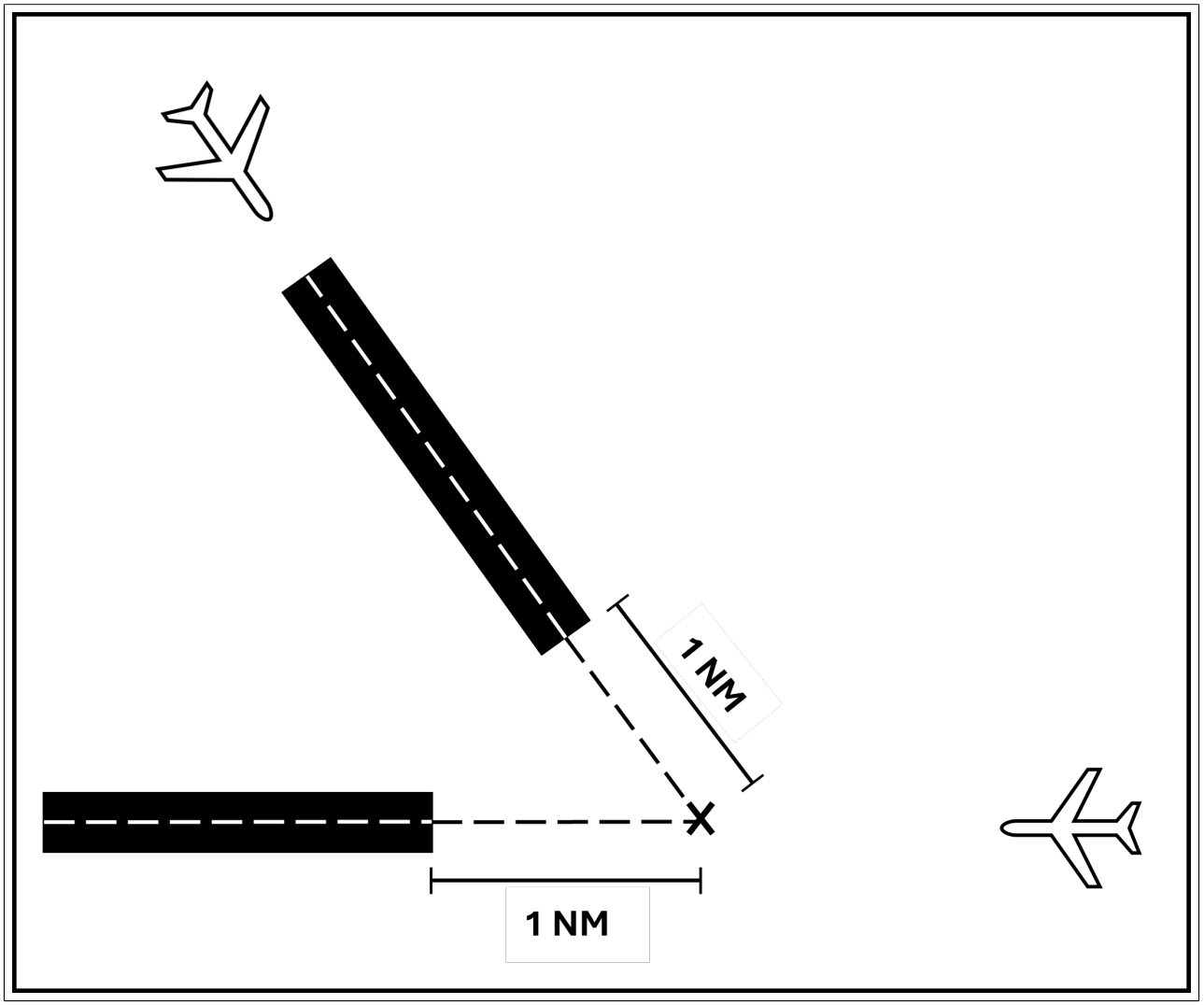
**Departure/Arrival Non-Intersecting Converging Runway Operations**



**(b)** Specify procedures to ensure that an arrival that executes a go-around does not conflict with an arrival to the non-intersecting converging runway. (See FIG 10−3−4.)

*FIG 10−3−4*

**Arrival/Arrival Non-Intersecting Converging Runway Operations**




**(c)** Define technological tools that assist with locally developed procedures, where applicable.

***NOTE−***

*Tools available for ATM consideration may include, but are not limited to:*

*a. Arrival Departure Window (ADW)*

*b. ASDE-X/ASSC Virtual Runway Intersection Point (VRIP)*

*c. Cutoff Points (CP) developed with the use of enhanced TARGETS.*

***REFERENCE−***

*FAA Order JO 7110.65, Para 3−9−9, Nonintersecting Converging Runway Operations.*

**(d)** Specify procedures to be used when conditions dictate intersecting runway separation standards must be applied.

***REFERENCE−***
*FAA Order JO 7110.65, Para 3−9−8, Intersecting Runway/Intersecting Flight Path Operations.*
*FAA Order JO 7110.65, Para 3−10−4, Intersecting Runway/Intersecting Flight Path Operations.*

**2.** A facility may be permitted to conduct independent non-intersecting CRO without the use of mitigations for runway pairs in subparagraph c1 above when:

**(a)** A safety analysis and/or simulation modeling is conducted for the non-intersecting CRO runway pair and the arrival/departure configuration meets the FAA target level of safety. For example, SCIA (see paragraph 10−4−13) or Dependent Converging Instrument Approaches (DCIA) (see FAA Order JO 7110.110) implementation may serve as an alternative to developing mitigations under subparagraph c1 above.

**(b)** Runway configurations and operational constraints for which these provisions are applied must be specified in a facility directive.

***NOTE−***
*The above provisions will only be considered after review of a facility Safety Risk Management Document (SRMD).*

**3.** All non-intersecting CRO procedures under subparagraph c above must be approved by the Director, Strategic Operations, Headquarters, AJT-1.

**d.** The ATM must review facility go-around/missed approach and/or non-intersecting CRO procedures on an annual basis and revise as necessary.

## 10−3−17. EQUIVALENT LATERAL SPACING OPERATIONS (ELSO)

At locations conducting 10 degree course divergence for simultaneous or successive RNAV departures on the same runway or parallel runways that are separated by 2,500 feet or more, air traffic managers must complete the following:

**a.** Create radar video map overlays that depict the initial departure tracks from each affected runway end.

**b.** Develop and administer initial controller training for ELSO. Annual proficiency training on local ELSO procedures are required.

**c.** Include in the facility Standard Operating Procedures or a Letter of Agreement with a satellite tower, that the OM/OS/CIC assess the feasibility of continuing ELSO when wind conditions dictate that aircraft cannot consistently fly the intended RNAV track. This is due to the detrimental effects of a strong cross wind component affecting initial departure tracks.

# Section 4. Services

## 10−4−1. AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS)

**a.** ATIS provides advance non-control airport/terminal area and meteorological information for use by aircraft arriving and departing and operating within the terminal area. This can be accomplished by data link text, available upon request, and/or a voice message recording, which is a repetitive broadcast on a voice outlet.

**b.** Assign ATIS responsibilities to a specific position of operation. These must include updating ATIS messages and disseminating current messages to pertinent positions of operation.

**c.** Before transmitting, the voice and/or text message must be reviewed to ensure content is complete and accurate.

**1.** The specialist preparing a voice recording must ensure:

**(a)** The speech rate is not excessive.

**(b)** The enunciation is of the highest quality.

**(c)** Each part of the message is easily understood.

**2.** When appropriate, voice/text must be cross-checked to ensure the message content is the same.

**d.** At airports with runway and/or taxiway construction, facilities must ensure ATIS message content is complete, accurate, and contains the proper information related to runway closures and available length (feet). When staffing permits, ATIS messages(s) with runway and/or taxiway construction must be reviewed by the OS/CIC to ensure message content is correct.

***REFERENCE−***

*FAA Order JO 7110.65, Para 2−9−3, Content.*

*FAA Order JO 7110.65, Para 3−7−1, Ground Traffic Movement.*

*FAA Order JO 7110.65, Para 3−9−1, Departure Information.*

*FAA Order JO 7110.65, Para 3−9−4, Line Up and Wait (LUAW).*

*FAA Order JO 7110.65, Para 3−9−10, Takeoff Clearance.*

*FAA Order JO 7110.65, Para 3−10−1, Landing Information.*

*FAA Order JO 7110.65, Para 3−10−5, Landing Clearance.*

*FAA Order JO 7210.3, Para 10−3−12, Airport Construction.*

*FAA Order JO 7210.3, Para 10−3−13, Change in Runway Length Due to Construction.*

**e.** Specific sequential portions of the alphabet may be assigned between facilities or for an arrival and departure ATIS when confusion could result from using the entire alphabet for each ATIS.

**1.** A LOA must be established between facilities designating the ATIS codes which will be used by each facility.

**2.** A facility directive must be developed designating the ATIS alphabet codes which will be used by each facility or for an arrival and departure ATIS.

***REFERENCE−***

*FAA Order JO 7110.65, Para 2−9−1, Application.*

***EXAMPLE−***
*Departure ATIS codes could be assigned codes of "Alfa" through "Mike" and arrival ATIS codes assigned "November" through "Zulu." The ATIS codes may also be divided between facilities.*

**f.** Make ATIS messages a matter of record on facility recorders. If not possible, retain a written record of each message in the facility's files for 45 days.

**g.** Keep messages as brief and as concise as possible. The optimum duration will be obtained by using an average speech rate.

***NOTE−***
*The following example would be approximately 30 to 40 seconds using an average speech rate of 100 to 150 words per minute.*

***EXAMPLE−***
*"Boston Tower Information Delta. One four zero zero Zulu. Wind two five zero at one zero. Visibility one zero. Ceiling four thousand five hundred broken. Temperature three four. Dew point two eight. Altimeter three zero one zero. ILS-DME Runway two seven Approach in use. Departing Runway two two right. Hazardous weather information for (geographical area) available on Flight Service frequencies. Advise on initial contact you have Information Delta."*

**h.** During the hours of operation, part-time towers that have ATIS capabilities and ASOS/AWOS ground to air broadcast capability, must ensure that the latest METAR/SPECI weather sequence is broadcast only on ATIS. ASOS/AWOS must not be allowed to broadcast weather concurrent with ATIS.

**i.** During the hours of non-operation, part-time towers that have ATIS capabilities should record for continuous broadcast the following information:

**1.** The local tower hours of operation.
**2.** ASOS/AWOS frequency.
**3.** The appropriate common traffic advisory frequency (CTAF).
**4.** The frequency for operating radio controlled approach lights.
**5.** The FAA facility and frequency for additional information.

***NOTE−***
*Those facilities that have ASOS/AWOS broadcast capability must allow the automated weather report to be broadcast on the ASOS/AWOS frequency in the one-minute update mode.*

***EXAMPLE−***
*(Name of tower) tower hours of operation are (time) local time to (time) local time. The frequency for automated weather is (frequency). The common traffic advisory frequency is (frequency). Pilot operated approach lighting is available on (frequency). For additional information contact (name of approach control or center) on (frequency).*

## 10−4−2. MINIMUM IFR ALTITUDES (MIA)

At terminal facilities that require minimum IFR altitude (MIA) charts, determine MIA information for each control sector and display them at the sector. This must include off-airway minimum IFR

altitude information to assist controllers in applying 14 CFR section 91.177 for off-airway vectors and direct route operations. Facility air traffic managers must determine the appropriate chart/map method for displaying this information at the sector. Forward charts and chart data records to the appropriate Service Center Operations Support Group for certification and annual review.

***NOTE−***

***1.*** *For guidance in the preparation and review of Minimum IFR Altitude charts, see FAA Order JO 7210.37, En Route Instrument Flight Rules (IFR) Minimum IFR Altitude (MIA) Sector Charts.*

**1.** *This may be accomplished by appending the data on sector charts or MVA charts; special translucent sectional charts are also available. For assistance in obtaining MIA sector charts, contact the Radar Video Map group at 9-AJV-HQ-ATCPRODUCTS@faa.gov.*

## 10−4−3. PRE-DEPARTURE CLEARANCE (PDC)

**a.** The ATM must determine the mode of PDC operation. Prior to use of the “AUTO" mode, facilities must establish procedures to immediately detect and promptly correct any data transmitted in error.

**1.** Facilities must not transmit clearance information through the use of “auto” mode 2 hours prior to closing, in cases where the facility is part-time.

**2.** Facilities must establish procedures to disable the automatic sending of clearances prior to closing and include clearance void time instructions.

**b.** The ATM must establish a facility directive for transmitting automated clearances. The directive must contain local procedures and responsibilities for processing clearances and must include the following:

**1.** Procedures to review clearances for accuracy and route integrity. Include procedures for correcting information prior to transmitting and/or to verbally correct information that has changed or been transmitted in error.

**2.** Procedures for issuing Departure Procedures (DP), Standard Instrument Departure (SID) procedures, climb-out procedures, altitude information, departure frequencies, and other air traffic control information in accordance with FAA Order JO 7110.65, Air Traffic Control, Chapter 14, Data Link Communications.

**3.** Responsible positions and procedures to ensure that all applicable clearance information, in accordance with FAA Order JO 7110.65, Air Traffic Control, is conveyed to the pilot either via Selectable Fields or verbal communication.

**4.** Local procedures for use of Selectable Fields in accordance with FAA Order JO 7110.65, Air Traffic Control, Chapter 14, Data Link Communications.

**5.** Procedures for monitoring and reporting routes, which are routinely generated by automation, that differ from the filed route (indicated with plus signs on flight progress strip) to the facility POC TAS, who will report to the appropriate ARTCC POC as necessary.

**6.** Only include information that is not contrary to that in an assigned SID and necessary for a facility specific operation. Once transmitted, if any clearance information changes or if it is contrary to the information in an assigned SID, that information must be issued verbally.

**7.** Do not imply or use terms such as “cleared as filed" or “as filed" in a PDC automated clearance.

**8.** Only standard contractions found in FAA Order JO 7340.2, Contractions, must be used in populating Selectable Fields.

**9.** Procedures for operating in “AUTO" mode, when applicable.

**(a)** Facilities must not transmit clearance information through the use of “auto” mode 2 hours prior to closing, in cases where the facility is part-time.

**(b)** Establish procedures to disable the automatic sending of clearances prior to closing and include clearance void time instructions.

**10.** A Letter to Airmen (LTA) outlining the services being provided by PDC must be issued for a minimum of 2 years following commissioning of the system.

**(a)** The LTA should include facility-specific limitations, flight plan requirements, or restrictions that would reject PDCs.

**(b)** The LTA must direct applicants who request to participate in PDC to contact Terminal Data Link System (TDLS) Second Level Engineering Team, AJW-17, at AMC-ATOW-TDLS-Support@faa.gov.

## 10−4−4. CONTROLLER PILOT DATA LINK COMMUNICATIONS (CPDLC)

The ATM must establish a facility directive for transmitting automated clearances. The directive must contain local procedures and responsibilities for processing clearances and must include the following:

**a.** Procedures to review all clearances, including initial and revised clearances for accuracy and route integrity.

**b.** Procedures for correcting errors via voice if unable to use CPDLC.

> ***PHRASEOLOGY−***
> *DISREGARD CPDLC MESSAGE*

**c.** Procedures for issuing DPs, SIDs, climb-out procedures, altitude information, departure frequencies, and other air traffic control information in accordance with FAA Order JO 7110.65, Air Traffic Control, Chapter 14, Data Link Communications.

**d.** Procedures for accomplishing coordination prior to transmitting revised clearances.

**e.** Procedures for ensuring acknowledgment of WILCO, UNABLE, and STANDBY for revised clearances.

**f.** Procedures for handling all flight deck responses.

**g.** Procedures for handling controller alerts, errors, and timeouts.

**h.** Responsible positions and procedures to ensure that all applicable clearance information in accordance with FAA Order JO 7110.65, Air Traffic Control, is conveyed to the pilot either via verbal communication or CPDLC.

**i.** Procedures for operating in “AUTO" mode, when applicable.

**1.** Facilities must not transmit clearance information through the use of “auto” mode 2 hours prior to closing, in cases where the facility is part-time.

**2.** Establish procedures to disable the automatic sending of clearances prior to closing and include clearance void time instructions.

## 10−4−5. TDLS APPLICATION SPECIALIST (TAS)

The ATM must designate two air traffic personnel as facility TASs. The TASs must:

**a.** Complete the TDLS Application Specialist Course #50085001 prior to editing adaptations at the Maintenance TDLS Menu (MTM) Console.

**b.** Configure air traffic components of TDLS, incorporate air traffic operational data, monitor data and configurations to ensure accuracy and currency, make adjustments to TDLS as required, and maintain the TDLS adaptation for currency and optimum usability.

***NOTE–***
*When configuring the TDLS MTM, the TAS should use published SID codes and transitions. For each SID in their local adaptation, enter the SID name and number, the common point, and all associated transitions, if any. If a facility deviates from this, local documentation should be established outlining the deviations. Coordination with overlying and adjacent facilities may be necessary if deviating from the above settings.*

**c.** Share responsibility and coordinate with the Technical Operations (TO) TDLS System Administrator(s) as necessary.

**d.** Receive reports and monitor routes, which are routinely generated by automation, that differ from the filed route (indicated with plus signs on flight progress strip). Investigate likely causes of multiple, repeated occurrences. Report the findings to appropriate ARTCC DCL POC.

## 10−4−6. PRETAXI CLEARANCE PROCEDURES

**a.** If a need exists, facilities should develop pretaxi clearance procedures for departing IFR aircraft. Use of CD frequency is desirable for implementing such procedures. However, facilities without CD frequency may use GC frequency for pretaxi clearance if the service can be provided without derogating the primary function of GC. When developing pretaxi clearance procedures, do the following:

**1.** Coordinate the proposed procedures with the airport users.

**2.** Inform System Safety and Procedures, when procedures are implemented.

**b.** Include the following in pretaxi procedures:

**1.** The procedures are not mandatory.

**2.** The pilot calls CD or GC not more than 10 minutes before proposed taxi time.

**3.** The IFR clearance or the delay information should be issued at the time of initial callup.

**4.** When the IFR clearance is issued on CD frequency, the aircraft is changed to GC for taxi clearance.

**5.** Normally, the pilot need not inform GC of having received IFR clearance on CD frequency. Some high activity towers with unique operating position arrangements or operating conditions may require the pilot to inform GC of a portion of his/her routing or that he/she has received his/her IFR clearance.

***NOTE–***
*For facilities where TFDM capabilities have been deployed, see FAA Order JO 7210.637, Terminal Flight Data Manager Electronic Flight Strips.*

## 10−4−7. GATE HOLD PROCEDURES

**a.** The objective of gate hold procedures is to restrict departure delays to 15 minutes or less after engine start and taxi time. Facility air traffic managers must ensure gate hold procedures and

departure delay information are made available to all pilots prior to engine startup. Implement gate hold procedures when departure delays exceed or are expected to exceed 15 minutes.

**b.** Facility air traffic managers must meet with airport management and users to develop local gate hold procedures at airports that have identified the need and where air traffic operations dictate. Gate hold procedures, when required, will be developed in accordance with limitations imposed by local conditions. Include the following general provisions in the procedures when gatehold procedures are established.

**1.** Pilots must contact GC/CD prior to starting engines to receive start time or taxi time, as appropriate. The sequence for departure must be maintained in accordance with the initial callup unless modified by flow control restrictions.

**2.** Develop notification procedures for aircraft unable to transmit without engine(s) running.

***NOTE−***
*Inability to contact GC/CD prior to engine start must not be justification to alter the departure sequence.*

**3.** The operator has the final authority to decide whether to absorb the delay at the gate, have the aircraft towed to another area, or taxi to a delay absorbing area.

**4.** GC/CD frequency is to be monitored by the pilot. A new proposed engine start time or taxi time must be issued if the delay changes.

***NOTE−***
*For facilities where TFDM capabilities have been deployed, see FAA Order JO 7210.637, Terminal Flight Data Manager Electronic Flight Strips.*

## 10−4−8. ADVISORY SERVICE TO ARRIVING VFR FLIGHTS

When it is desirable to reduce the workload at the LC position, procedures should be established whereby arriving aircraft make their first contact with the control tower on the approach control frequency, regardless of weather, provided the following conditions exist:

**a.** Approach control and LC positions use separate frequencies.

**b.** ATC service to IFR flights is not affected.

**c.** Use of the procedure will not hinder the operation of VFR aircraft by requiring excessive routing or spacing.

**d.** Consideration is given to establishing radio contact points based on time or distance rather than on landmarks with which some pilots may not be familiar.

**e.** Where possible, radio contact points and the routes between them and the airport are different from those used by IFR flights.

**f.** Pilot participation is encouraged rather than required, and compliance with the procedures is not made mandatory.

## 10−4−9. PRACTICE INSTRUMENT APPROACHES

**a.** VFR aircraft practicing instrument approaches at the approach control's primary airport(s) must be provided IFR separation in accordance with FAA Order JO 7110.65, Air Traffic Control, Chapter 4, Section 8. The primary airport is the airport from which approach control service

is provided, except for remoted facilities where the ATM will designate the primary airport(s). The primary airport(s) must be specified in a facility directive.

**b.** ATMs must evaluate those airports where basic radar service is available for determining where IFR separation to VFR aircraft conducting practice instrument approaches will be provided. The ATM must consider the impact on operations and service requirements when determining the airports that will receive this additional service.

**c.** The ATM must issue a Letter to Airmen (LTA) advising the users of airports where IFR separation is provided for VFR aircraft conducting practice instrument approaches. The LTA must specify which facility will handle the aircraft practicing instrument approaches and include the appropriate frequencies. Airport(s) where this service is provided must be specified in a facility directive.

***REFERENCE−***
*FAA Order JO 7210.3, Para 4−1−3, Service Area Review.*
*FAA Order JO 7210.3, Para 4−5−2, Letters to Airmen.*

**d.** Where a facility directive requires the application of IFR separation to VFR aircraft practicing instrument approaches, IFR separation must be provided in accordance with FAA Order JO 7110.65, Chapter 4, Section 8.

**e.** Temporary conditions (e.g., available staffing, equipment operating status, VIP movement, TFRs, or unusual operations) may impact a facility's ability to provide practice instrument approach services. Facilities may elect to suspend practice instrument approaches when a temporary condition exists.

**f.** At airports with a nonapproach control tower, or an airport with a Flight Service Station (FSS) that provides Local Airport Advisory (LAA), procedures for handling VFR aircraft conducting practice instrument approaches must be included in an LOA, if applicable.

## 10−4−10. SIMULTANEOUS INDEPENDENT APPROACHES

**a.** Simultaneous independent approaches may be conducted when:

**1.** Dual parallel runway centerlines are at least 3,600 feet apart, or dual parallel runway centerlines are at least 3,000 feet apart with a 2.5º to 3.0º offset approach to either runway.

**2.** Triple parallel approaches may be conducted when:

**(a)** Parallel runway centerlines are at least 3,900 feet apart; or

**(b)** Parallel runway centerlines are at least 3,000 feet apart, a 2.5º to 3.0º offset approach to both outside runways; or

**(c)** Parallel runway centerlines are at least 3,000 feet apart, a single 2.5º to 3.0º offset approach to either outside runway while parallel approaches to the remaining two runways are separated by at least 3,900 feet.

**(d)** Parallel approaches to airports where the airport field elevation is more than 2,000 feet MSL require the use of the final monitor aid (FMA) system.



**b.** At locations with high update rate surveillance capable of update rates of 1.2 seconds or faster, and where fusion display mode is utilized, simultaneous independent approaches may be conducted under the following conditions:

**1.** Dual parallel runway centerlines are at least 3,100 feet apart, or dual parallel runway centerlines are at least 2,500 feet apart with a 2.5º to 3.0º offset approach to either runway.

**2.** Triple parallel runway centerlines are at least 3,100 feet apart, or triple parallel runway centerlines are at least 2,500 feet apart with a 2.5º to 3.0º offset approach to both outside runways, or triple parallel runway centerlines are at least 2,500 feet apart, and a single 2.5º to 3.0º offset approach to either outside runway while parallel approaches to the remaining two runways are separated by at least 3,100 feet.

**3.** A surveillance update rate of at least 1.2 seconds is required for monitoring the no transgression zone (NTZ) when conducting simultaneous independent approaches to the runway centerline spacing (RCLS) provided in this paragraph.

***NOTE-***

***1.*** *The facility ATM notifies the Safety Performance Monitoring Team (AJI-313) when implementing HUR surveillance procedures for the first time.*

***2.*** *Where RCLS is ≤3400 feet, the normal operating zone (NOZ) is constant at 700 feet; and for RCLS ≥3400 feet, the no transgression zone (NTZ) remains constant at 2000 feet.*

***3.*** *Technical Operations' Navigation & Surveillance Enterprise Control Center (NECC) monitors the health and status of the ADS-B Service 24/7/365. The NECC notifies those locations using HUR procedures when the ADS-B service is not providing the required target update performance along the full length of the NTZ. When informed by the NECC that the required target update performance is not meeting expectations, facility is expected to cease HUR procedures.*

***4.*** *At this time, STARS cannot provide the controller with real time notification of target update performance that meet the requirements to achieve HUR surveillance benefits.*

***5.*** *Parallel approach turn-on at or above 5,000 feet MSL with RCLS less than 3,400 feet may result in increased TCAS RA events.*

***REFERENCE-***

*FAA Order 6000.15, General Maintenance Handbook for National Airspace System (NAS) Facilities, Appendix K.*

**c.** Instrument approach procedures are annotated with “simultaneous approach authorized.”

**d.** Equipment required to maintain communication, navigation, and surveillance systems is operational with the glideslope exception as detailed in paragraph 10–4–11.

**e.** When simultaneous approaches are being conducted, the pilot is expected to inform approach control, prior to departing an outer fix, if the aircraft does not have the appropriate airborne equipment or they do not choose to conduct a simultaneous approach. Provide individual handling to such aircraft.

**f.** Prior to implementing Established on RNP (EoR) operations to parallel runways with centerline spacing 9,000 feet or less (9,200 feet or less at field locations above 5,000 MSL), air traffic managers must:

**1.** Document all approach and/or transition pairings to be used during EoR operations. Document any existing approach and/or transition that requires application of incorrect flight procedure track separation (see FAA Order 8260.3, Chapter 16).

2. Ensure approved EoR approach pairings comply with the EoR procedure criteria identified in FAA Order 8260.3, Chapter 16.
3. Obtain authorization from the Service Area Director of Air Traffic Operations for the approved instrument approach pairings.
4. Ensure facility directives/letters of agreement list the authorized approach pairs and address the integration of EoR operations with straight-in operations to the same or parallel runway/s. Facility directives/letters of agreement must address, at a minimum, breakout procedures, monitoring, and training requirements.

***REFERENCE-***
*FAA Order JO 7110.65, Para 5–9–7, Simultaneous Independent Approaches-Dual & Triple.*
*P/CG Term - Established on RNP Concept.*

## 10−4−11. GLIDESLOPE OUTAGE CONTINGENCY PLANS AND AUTHORIZATION

**a.** During glideslope outages, facilities with an approved glideslope outage contingency plan may continue conducting simultaneous independent approaches without vertical guidance for a period of no more than 29 days. The ATM is responsible for developing the glideslope outage contingency plan with assistance from the OSG, if needed. At a minimum, the plan must identify the following special provisions, conditions, and limitations listed below:

1. An LOA with the ATCT (or facility directive for a combined facility) must contain a description of the procedures, requirements, and any limitations as specified in the facility contingency plan for glideslope out of service procedures.
2. The ATC facility must notify Technical Operations personnel of the glideslope outage.

***REFERENCE-***
*FAA Order JO 7210.3, Para 3–5–2, System Component Malfunctions.*

3. The ATC facility must notify arriving pilots that the glideslope is out of service and that the Chart Note stating “LNAV Procedure NA during simultaneous operations” is NOTAMed not applicable. This can be accomplished via the ATIS broadcast.
4. When informed of a full ILS or glideslope outage, ATC facilities that conduct simultaneous approaches must include in a facility directive to notify the Flight Procedure NOTAM center at 405–954–8260 to issue a NOTAM for the RNAV (GPS) approach for the runway with the outage. The NOTAM informs users to disregard the LNAV procedure NA chart note. The facility must also inform the Flight Procedure NOTAM center to cancel the NOTAM when appropriate.
5. Any other facility-specific requirements specified in the local facility contingency plan for glideslope out procedures must be complied with before conducting simultaneous independent approach procedures.
6. Controllers must be provided with annual refresher training concerning the application of these procedures.
7. The ATC facility must record when the glideslope outage occurs and any adverse impact on the operation on FAA Form 7230–4, Daily Record of Facility Operation.

8. Any loss of separation or breakout associated with operations under a contingency plan for glideslope out or RNAV approaches to LNAV minimums must be reported to the District General Manager.
9. The facility must have radar coverage down to the decision altitude or minimum descent altitude, as applicable.
10. Approaches must be terminated to the runway without a glideslope or RNAV approach to LNAV minima whenever the reported visibility is below the straight-in localizer or RNAV approach to LNAV minimum for that runway.
11. Any equipment required for the approach with the glideslope out of service must be operational, such as DME or VORTAC.

**b.** New/revised glideslope outage contingency plan approval process:

1. The ATM must ensure the contingency plan is reviewed and approved by their District General Manager. If approved, the plan is routed through the OSG to the Service Area Director of Air Traffic Operations for approval.
2. Once approved at the Service Area Level, the OSG submits the plan to Air Traffic Services, Headquarters, Strategic Operations (AJT-1) for approval via email to 9-ajt-hq-correspondence@faa.gov.
3. If approved by AJT-1, the OSG forwards the plan to the Service Area's applicable Air Traffic Safety Oversight Service (AOV), Operations Branch (AOV-210/220/230) for AOV approval.
4. Once AOV has approved the contingency plan, the OSG returns the final document to the initiating facility, and any other impacted facilities.

**c.** For facilities to conduct simultaneous independent approaches without vertical guidance for a period greater than 29 days, a Letter of Authorization must be processed through Mission Readiness Services, Operational Policy, AJV-P, as outlined in Appendix 4. An approved glideslope outage contingency plan as described in subparagraph b above, is required to request this authorization.

## 10−4−12. SIMULTANEOUS WIDELY-SPACED PARALLEL OPERATIONS

**a.** Simultaneous independent approaches towidely-spaced parallel runways without final monitors may be conducted when:

1. Instrument approach procedures are annotated with "Simultaneous Approach Authorized."
2. A separate approach system is required for each parallel runway. A minimum distance of more than 9,000 feet between centerlines is required when approaches are conducted at airports with field elevations at or below 5,000 feet MSL, or 9,200 feet between runway centerlines is required with a field elevation above 5,000 feet MSL. Other integral parts of the total Simultaneous Approach System include radar, communications, ATC procedures, and appropriate airborne equipment.
3. Weather activity is closely monitored that could impact the final approach course. Weather conditions in the vicinity of either final approach course may dictate a change of the approach in use.
4. All turn-ons and final approaches are monitored by radar. Since the primary responsibility for navigation rests with the pilot, instructions from the controller are limited to those necessary to ensure separation between aircraft. Information and instructions are issued as necessary to contain the aircraft on the final approach course. Aircraft which are observed deviating from

the assigned final approach course are instructed to alter course left or right, as appropriate, to return to the desired course. Unless altitude separation is assured between aircraft, immediate action must be taken by the controller monitoring the adjacent parallel approach course to require the aircraft in potential conflict to alter its flight path to avoid the deviating aircraft.

**5.** Missed approach procedures are established with climbs on diverging courses. To reduce the possibility of error, the missed approach procedure for a single runway operation should be revised, as necessary, to be identical with that of a simultaneous approach operation.

**6.** Separate radar and local control positions are established for each final approach course.

**b.** Record the time the operation begins and ends on the facility log.

**c.** Where possible, establish standard breakout procedures for each simultaneous operation. If traffic patterns and airspace permit, the standard breakout altitude should be the same as the missed approach altitude.

**d.** Provide individual handling to an aircraft when the crew informs you that the aircraft does not have the appropriate airborne equipment or they choose not to conduct a simultaneous approach.

**e.** Facility ATMs must ensure approach pairings, when conducted under the EoR concept, are identified in a Facility Directive and a Letter of Agreement (LOA), if applicable.

***REFERENCE−***
*FAA Order JO 7110.65, Para 5−9−10, Simultaneous Independent Approaches to Widely-Spaced Parallel Runways Without Final Monitors.*
*P/CG-Term Established on RNP Concept.*

## 10−4−13. SIMULTANEOUS CONVERGING INSTRUMENT APPROACHES

**a.** The procedures to conduct Simultaneous Converging Instrument Approaches (SCIA) must be developed in accordance with the following paragraphs.

**1.** The ATM must:

**(a)** Determine that the volume and complexity of aircraft operations requires the use of simultaneous converging instrument approaches. Additionally, no adverse impact on the users or air traffic control facilities can result from the implementation of the procedure.

**(b)** Coordinate with airport operations to ensure that runway intersection identification markings are in accordance with appropriate standards if the runways intersect.

**(c)** Coordinate with the responsible Service Area Flight Procedures Team (FPT) through the service area Operations Support Group (OSG) for the feasibility of SCIA procedural design and the ability to achieve minimums sufficient to justify procedural development. The FPT must consider all aspects of the approach, including NAVAIDS, approach lighting, and airport lighting.

**(d)** Prepare a staff study which includes:

**(1)** Type of aircraft and user groups that will be involved in SCIA operations.

**(2)** Anticipated effect on airport/ airspace capacity, including projected reductions in departure delays, airport arrival rate and projected savings in aircraft fuel consumption.

**(3)** Daily time periods during which the procedure would be applied.

**(4)** A preliminary environmental assessment in accordance with FAA Order 1050.1, Environmental Impacts: Policies and Procedures (see paragraph 4−1−6, Preliminary Environmental Review).

**2.** After completing steps 1 through 4 above, the ATM must:

**(a)** Submit the request for SCIA operations, to include the completed staff study and a draft graphic of the ILS/GLS or other Approach with Vertical Guidance (APV), to their OSG for review.

**(1)** The OSG must coordinate the procedure with the appropriate Flight Standards Group within the Office of Safety Standards.

**(2)** When approved, the OSG will process the package through the FPT for development.

**(b)** Develop a Letter to Airmen defining local procedures to be used at least 30 days before the effective date. Additional means of publicizing local procedures must be employed in accordance with paragraph 4−2−4, Coordination of ATC Procedures.

**b.** The requirements for conducting SCIA operations to converging runways are:

**1.** Operational air traffic control radar.

**2.** Precision Approaches and/or Approach with Vertical Guidance (APV) must be established on each runway. The authorized approach types are: ILS, GLS, RNAV (GPS) with LPV and/or LNAV/VNAV minimums, or RNAV (RNP).

**3.** Non-intersecting final approach segments.

**4.** SIAP specifically titled "Converging" and is published in parenthesis after the title of the procedure, for example, ILS V Rwy 17 (Converging).

**(a)** Missed approach points (MAP) must be at least 3 nautical miles (NM) apart, and

**(b)** Published missed approach procedures diverge by at least 45 degreesand the associated primary TERPS surfaces do not overlap.

***REFERENCE−***

*FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS), Section 10-3.*

**(c)** The ATM must designate a primary and secondary runway for SCIA runway configurations including separation responsibility and procedures to be applied in the event a missed approach is initiated inside the MAP.

**(d)** Flight Procedures will determine the appropriate approach minimums for both primary and secondary runways for each SCIA configuration.

**5.** Converging approaches must not be conducted simultaneously to runways that intersect, when the ceiling is less than 1,000 feet or the visibility is less than 3 miles.

**6.** Converging approaches to runways that do not intersect may be conducted when the ceiling is less than 1,000 feet or visibility less than 3 miles provided all other conditions of this directive are met.

**7.** Application of this procedure to intersecting runways does not relieve the controller of the responsibility to provide intersecting runways separation as required in FAA Order JO 7110.65, paragraph 3−10−4.

**8.** A facility directive or letter of agreement must be developed specifying as a minimum:

**(a)** The runway configurations to be used during SCIA operations,

**(b)** Separation responsibility and procedures, to be applied, in the event a missed approach is initiated inside the MAP,

**(c)** Coordination requirements,

**(d)** Weather minima applicable to each configuration, if different from published minima.

***NOTE−***
*The ATM may establish higher minima than published on the SIAP to preclude, to the extent feasible, the possibility of a weather related missed approach.*

**c.** Authorize simultaneous instrument approaches to converging runways under the following conditions:

**1.** Only straight-in approaches must be made.

**2.** All appropriate communication, navigation, and surveillance systems are operating normally.

**3.** Aircraft must be informed on initial contact, or as soon as possible, that simultaneous converging approaches are in use. Broadcasting this information on the ATIS satisfies this requirement.

**4.** Weather activity that could impact the final approach courses must be closely monitored. Discontinue SCIA operations if weather trends indicate deteriorating conditions which would make a missed approach likely.

**d.** Record any occurrence of simultaneous missed approaches while conducting SCIA on FAA Form 7230-4, Daily Record of Facility Operation and submit a mandatory occurrence report (MOR).

## 10−4−14. SIMULTANEOUS OFFSET INSTRUMENT APPROACHES

**a.** Simultaneous Offset Instrument Approaches (SOIA) may be conducted at airports with dual parallel runways with centerlines separated by at least 750 feet and less than 3,000 feet, with one straight-in Instrument Landing System (ILS) and one Localizer Directional Aid (LDA), offset by 2.5 to 3.0 degrees in accordance with the provisions of an authorization issued by the Director, Strategic Operations, AJT-1 in coordination with AFS. A color digital display set to a 4 to 1 (4:1) aspect ratio (AR) with visual and aural alerts, such as STARS final monitor aid (FMA) is required.

**b.** Notification procedures for pilots unable to accept an ILS PRM or LDA PRM approach clearance can be found on the Attention All Users Page (AAUP) of the Standard Instrument Approach Procedures (SIAP) for the specific airport PRM approach.

**c.** Closely monitor weather activity that could impact the final approach course. Weather conditions in the vicinity of either final approach course may dictate a change of the approach in use. (See paragraph 10−1−6, Selecting Active Runways, subparagraph b Note.)

**d.** All turn-ons and final approaches are monitored by radar. Since the primary responsibility for navigation rests with the pilot, instructions from the controller are limited to those necessary to ensure separation between aircraft and to prevent aircraft from penetrating the NTZ. Information and instructions are issued, as necessary, to contain the aircraft's flight path within the Normal Operating Zone (NOZ). Aircraft which are observed approaching the No Transgression Zone (NTZ) are instructed to alter course left or right, as appropriate, to return to the desired course. Unless altitude separation is assured between aircraft, immediate action must be taken by the controller monitoring the adjacent parallel approach course to require the aircraft in potential conflict to alter its flight path to avoid the deviating aircraft.

**e.** Missed approach procedures are established with climbs on diverging courses. To reduce the possibility of error, the missed approach procedure for a single runway operation should be revised, as necessary, to be identical with that of the SOIA operation.

**f.** Where possible, establish standard breakout procedures for each simultaneous operation. If traffic patterns and airspace permit, the standard breakout altitude should be the same as the missed approach altitude.

**g.** The following requirements must be met for conducting SOIA:

**1.** All PRM, FMA, ILS, LDA with glideslope, distance measuring equipment, and communications frequencies must be fully operational.

**2.** The common NOZ and NTZ lines between the final approach course centerlines must be depicted on the radar video map. The NTZ must be 2,000 feet wide and centered an equal distance from the final approach centerlines. The remaining spaces between the final approach courses are the NOZs associated with each course.

**3.** Establish monitor positions for each final approach course that have override transmit and receive capability on the appropriate control tower frequencies. A check of the override capability at each monitor position must be completed before monitoring begins. Monitor displays must be located in such proximity to permit direct verbal coordination between monitor controllers. A single display may be used for two monitor positions.

**4.** Facility directives must define the position responsible for providing the minimum applicable longitudinal separation between aircraft on the same final approach course.

**h.** Dual local control positions, while not mandatory, are desirable.

**i.** Where possible, establish standard breakout procedures for each simultaneous operation. If traffic patterns and airspace permit, the standard breakout altitude should be the same as the missed approach altitude.

**j.** Wake turbulence requirements between aircraft on adjacent final approach courses inside the LDA MAP are as follows (standard in-trail wake separation must be applied between aircraft on the same approach course):

**1.** When runways are at least 2,500 feet apart, there are no wake turbulence requirements between aircraft on adjacent final approach courses.

**2.** For runways less than 2,500 feet apart, whenever the ceiling is greater than or equal to 500 feet above the MVA, wake vortex spacing between aircraft on adjacent final approach courses need not be applied.

**3.** For runways less than 2,500 feet apart, whenever the ceiling is less than 500 feet above the MVA, wake vortex spacing between aircraft on adjacent final approach courses, as described in FAA Order JO 7110.65, Air Traffic Control, paragraph 5−5−4, Minima, must be applied unless acceptable mitigating techniques and operational procedures are approved by the Director, Strategic Operations, AJT-1, pursuant to an AFS safety assessment. A request for a safety assessment must be submitted to the Director, Strategic Operations, AJT-1, through the Service Area Director of Air Traffic Operations. The wake turbulence mitigation techniques employed will be based on each airport's specific runway geometry and meteorological conditions and implemented through local facility directives.

**4.** All applicable wake turbulence advisories must be issued.

**k.** A local implementation team must be established at each facility conducting SOIA. The team should be comprised of representatives from the local airport sponsor and other aviation organizations. The team will monitor local operational integrity issues and report/refer issues for national consideration as appropriate.

**l.** For any new proposal to conduct SOIA, an operational need must be identified by the ATC facility manager, validated by the appropriate Service Area Director of Air Traffic Operations, and forwarded to the Director, Strategic Operations, AJT-1, for appropriate action. The statement of operational need should identify any required site-specific procedures.

## 10−4−15. REDUCED SEPARATION ON FINAL

Separation between aircraft may be reduced to 2.5 NM in-trail separation on the final approach course within 10 NM of the runway provided an average Runway Occupancy Time (ROT) of 50 seconds or less is documented for each runway. ROT is the length of time required for an arriving aircraft to proceed from over the runway threshold to a point clear of the runway. The average ROT is calculated by using the average of the ROT of no less than 250 arrivals. The 250 arrivals need not be consecutive but must contain a representative sample of the types of aircraft that use the runway. Average ROT documentation must be revalidated within 30 days if there is a significant change in runway/taxiway configuration, fleet mix, or other factors that may increase ROT. Revalidation need not be done for situations that are temporary in nature. Only the ROT for the affected runway(s) will need to be revalidated. All validation and revalidation documentation must be retained and contain the following information for each arrival:

**a.** Aircraft call sign.
**b.** Aircraft type.
**c.** Time across the threshold.
**d.** Time clear of the runway.
**e.** Items c and d above may be omitted if using a stopwatch. Record the total number of seconds required for an aircraft to proceed from over the landing threshold to a point clear of the runway when using a stopwatch.

***REFERENCE−***
*FAA Order JO 7110.65, Para 5−5−4, Minima, Subpara j.*

# Section 5. Terminal Radar

## 10−5−1. SHUTDOWN OF PAR ANTENNAS

When PAR equipment is not required for ATC controller training, maintenance, or other use, shut down the antenna. Keep the main power supply and the high voltage system energized to permit immediate restoration of PAR equipment for operational use.

## 10−5−2. RADAR DISPLAY INDICATORS

**a.** Radar approach and departure control functions will normally be conducted from a TRACON. Either direct view or a CTRD may be used. These functions may be performed from the tower cab:

**1.** If not more than two radar operating positions are required and CTRDs are used on a permanent basis.

**2.** If more than two operating positions are required and CTRDs are installed on an interim basis pending the establishment of a TRACON.

**3.** On a temporary basis if other than CTRDs are installed.

**b.** Consider the following if scan conversion type bright display equipment is used:

**1.** A standard bright display installation consists of one operational and one standby scan conversion unit. The range and centering selected for the master bright display will be the same on all slaved bright display indicators.

**2.** If the particular radar operating positions concerned require a capability for individual beacon decoding, each bright display position will require a separate scan conversion unit.

**3.** That a determination must be made if surveillance approach capability would be lost using only scan conversion bright display indicators. If the determination is that it would be lost, at least one direct view indicator must be retained.

**c.** VFR Radar Advisory Service functions will normally be conducted from the TRACON.

**d.** A CTRD installed in the tower cab for LC use must be positioned where it can be conveniently viewed from the local controller's normal sitting or standing position.

**e.** PAR functions will normally be conducted in a TRACON.

**f.** ASDE indicators must be placed in the tower cab so as to serve the LC and GC positions.

**g.** The CTRD may be used for any terminal radar function.

**h.** The 12-inch or larger display monitor may be used in lieu of a CTRD when authorized by the region and the display is certified by Technical Operations (Tech Ops). Any display monitor less than 12 inches must not be used for ATC separation purposes. It is primarily to provide alphanumeric readout capability to the CD/FD position at locations where that position has keyboard access to STARS.

## 10−5−3. FUNCTIONAL USE OF CERTIFIED TOWER RADAR DISPLAYS

**a.** At towers combined with full radar approach control facilities where controllers rotate between the approach control and the tower, CTRDs may be used by local controllers for any terminal radar function provided their ability to satisfy FAA's air traffic responsibilities regarding the aircraft operating on the runways or within the surface area for which the tower has

responsibility is not impaired. The conditions and/or limitations for the radar usage must be specified by a facility directive.

**b.** At towers combined with full radar approach control facilities where controllers do not rotate between the approach control and the tower, or at towers not combined with full radar approach control facilities, CTRDs may be used by local controllers for the following functions:

**1.** To determine an aircraft's identification, exact location, or spatial relationship to other aircraft.

***NOTE−***
*This authorization does not alter visual separation procedures. When employing visual separation, the provisions of FAA Order JO 7110.65, Air Traffic Control, paragraph 7−2−1, Visual Separation, apply.*

**2.** To provide aircraft with radar traffic advisories.

**3.** To provide a direction or suggested headings to VFR aircraft as a method for radar identification or as an advisory aid to navigation.

**4.** To provide information and instructions to aircraft operating within the surface area for which the tower has responsibility.

**5.** To ensure separation between successive departures, between arrivals and departures, and between overflights and departures within the surface area for which the tower has responsibility provided:

**(a)** There is no airspace delegated to the tower;

**(b)** The local controllers have radar training and certification commensurate with their radar duties;

**(c)** An LOA, approved by the Service Area Director of Air Traffic Operations, exists with the IFR facility having control jurisdiction which authorizes the specific radar function and prescribes the procedures to be used;

**(d)** The LOA prescribes the process for a transition to nonradar procedures or the suspension of separation authority in the event of a radar outage;

**(e)** The procedures for giving and receiving radar handoffs or point outs do not impair the local controller's ability to satisfy FAA's air traffic responsibilities regarding the aircraft operating on the runways or within the surface area for which the tower has responsibility; and

**(f)** The procedures for ensuring radar separation do not require the tower to provide radar vectors.

**c.** At locations where uncertified tower displays are in use, the services and phraseology set forth in FAA Order JO 7110.65, Air Traffic Control, Chapter 5, Radar, must not be utilized. Uncertified displays must be used only as an aid to assist controllers in visually locating aircraft or in determining their spatial relationship to known geographical points.

**d.** Operational applications of tower radar displays other than those outlined in subparagraphs a and b, and/orwhere the tower has been delegated airspace, require a staff study as prescribed in paragraph 2−1−16, Authorization for Separation Services by Towers.

## 10−5−4. ASR PERFORMANCE CHECKS

Each radar controller is responsible for determining on a day-to-day basis if the quality of their radar display and video display accuracy is satisfactory for ATC purposes.

**a.** At locations using digital terminal automation systems (DTAS) such as STARS or MEARTS, daily ASR performance checks are not required. DTAS conducts continuous self-monitoring checks for performance and alignment.

**b.** At facilities that do not use a DTAS, radar quality and performance is determined by comparing identified targets against data obtained during the commissioning flight check or through minimum performance criteria determined jointly by air traffic and Technical Operations personnel. Radar controllers must be familiar with commissioning flight check and minimum performance data. Air traffic managers must make this information available to the controllers. Aircraft selected for these daily checks should be small aircraft similar in size to those used in the commissioning flight checks.

**c.** The daily radar performance check must be a part of the routine checks of equipment. (See paragraph 4−6−5, Preparation of FAA Form 7230-4). The check must be accomplished once each watch. It is recognized that on some watches this check may not be accomplished because of the lack of traffic.

***REFERENCE−***
*FAA Order JO 7110.65, Para 5−1−2, Alignment Check.*

## 10−5−5. DEFICIENCIES IN SYSTEM

Note deficiencies in the radar system on FAA Form 7230-4. Reconcile them as follows:

**a.** After consultation with the Technical Operations representative, the terminal air traffic manager or his/her representative must decide if this radar system is usable. Consider atmospheric or other phenomena that may temporarily affect radar performance.

**b.** Certification by Technical Operations personnel that a malfunction has been corrected must be entered on FAA Form 7230-4.

***NOTE−***
*Technical Operations representatives may ground check the equipment to determine if the radar system is operating satisfactorily or request a special flight check.*

## 10−5−6. RADAR TOLERANCES

ASR systems must conform to the following tolerances for radar performance checks:

**a.** *Coverage:* A usable target return (one which is not missed on more than two consecutive scans) will be maintained along the entire airway/route or arrival/departure control routes for which radar service is provided. Tracking accuracy along these routes will be within the fix/map accuracy in subparagraph b. Radar services for arrival or departure routes are considered to exist between the normal handoff point and a point $^{1}/_{2}$ mile from the end of a runway or for secondary airports, the point where the aircraft leaves or enters the bottom fringe of the radar coverage pattern.

**b.** *Horizontal:* No tolerance assigned.

**c.** *Vertical - Acceptance Check:* A complete radar coverage pattern must be flown to determine whether the radar meets engineering and operational specifications.

**d.** *Commissioning:* The vertical coverage pattern will meet the operational requirements of the facility in both the horizontal (distance from the antenna to the outer fringe) and the vertical planes.

**e.** *Accuracy:*

**f.** *Fix/map accuracy:* Radar accuracy must be such that reporting aircraft are within a circular area about the fix, the radius of which is 3 percent of the fix-to-station distance or 500 feet (1,000 feet for air traffic control radar beacon system (ATCRBS)), whichever is the greater.

**g.** *Fixed Target Identification:* No tolerance assigned.

**h.** *MTI:* No tolerance assigned.

**i.** *Surveillance Approaches:*Radar used for surveillance approaches must present a usable target return (one which is not missed on more than two consecutive scans) through the final course as follows:

**j.** *Approach to Runway (Straight-in):* The surveillance approach course line will coincide with the runway centerline extended. Maximum error left or right of the runway edges must not exceed 500 feet at the missed approach point.

**k.** *Approach to an Airport (Circling):* The approach course may be aligned to the center of the airport or, where advantageous, to any portion of the usable landing area. For helicopters only, the final approach may be established to a missed approach point not farther than 2,600 feet from the center of the landing area, or for a point-in-space approach, to a point from which flight to the landing area must be accomplished by visual reference to a prescribed route along the surface. In each instance, approach guidance will be provided to the prescribed missed approach point. Guidance accuracy must be within 3 percent of the distance between the selected delivery point and the radar antenna.

**l.** Surveillance approaches must meet the tolerances in subparagraphs j and k or will be canceled.

## 10−5−7. RECOMMENDED ALTITUDES FOR SURVEILLANCE APPROACHES

At locations which provide surveillance approaches, facility managers must request the office responsible for the preparation of the approach to provide the recommended altitudes for the final approach. This information will be placed in the radar facility where it will be readily available for the controllers to use as required.

## 10−5−8. ASDE PERFORMANCE CHECKS

One hour prior to the anticipated need to use the ASDE, turn the equipment on and evaluate its performance.

# Section 6. Airport Lighting

## 10−6−1. GENERAL

The airport manager/operator is responsible for operating airport lights during the hours the tower is closed.

## 10−6−2. OPERATION OF LIGHTS WHEN TOWER IS CLOSED

When the tower is closed, the airport lights must be operated:

**a.** By the on-site FSS when:

**1.** The controls are extended into the station and are located conveniently at the operating position.

**2.** The operating quarters afford a sufficient view to determine the operating status of the lights without the specialist having to leave his/her post of duty, or an indicator is provided in the station's quarters which will show the actual operating status.

**b.** If no FSS is located on the airport and the lighting controls are provided in the tower cab, tower personnel before closing the tower must ensure that the airport rotating beacon, obstruction lights, and boundary lights are turned on. All other lighting systems, including runway lights, must be set in accordance with a letter of agreement with the airport manager/operator. However, runway lights must not be lighted by tower personnel if a NOTAM closing that runway is in effect.

**c.** At locations where the setting of the runway edge lights control the associated medium approach light system/runway alignment indicator lights, include in a letter of agreement with the airport manager/operator that during the period the tower is closed, the runway edge lights must be operated at the following step settings:

**1.** High Intensity Runway Lights (HIRL)- Step 3.

**2.** Medium Intensity Runway Lights-Step 2.

**d.** If the airport manager/operator will not agree to the step settings, the provisions of subparagraph c above, must apply. In addition, notify the appropriate FSDO.

**e.** If the airport manager/operator will not enter into a letter of agreement, all runway lighting controls operating from the tower must be turned off. If appropriate, a runway lighting NOTAM will be issued.

## 10−6−3. INCOMPATIBLE LIGHT SYSTEM OPERATION

If the operation of a light system is not compatible with the instructions herein, or if the manager/operator of a civil airport or the commanding officer of a military airport prescribes an operating period different from those in this section or FAA Order JO 7110.65, Air Traffic Control, Chapter 3, Section 4, Airport Lighting, or FAA Order JO 7110.10, Flight Services, (except for the airport rotating beacon), the airport lighting system may be operated if a letter of agreement is executed. Each agreement must set forth the operating periods, the pertinent requirements, and a statement that the lights will be available upon pilot request. If an agreement covers the operation of runway lights while the tower or the FSS is closed, it must also contain the following clauses:

**a.** The airport owner/operator covenants and expressly agrees that with regard to any liability which may arise from the operation of the runway lights at the airport during any period

when the airport traffic control tower (flight service station) at (name) airport is closed or nonoperational, that each party must be solely and exclusively liable for the negligence of its own agents, servants, and/or employees, in accordance with applicable law, and that neither party looks to the other to save or hold it harmless for the consequences of any negligence on the part of one of its own agents, servants, and/or employees.

**b.** Runway lights may not be lighted by tower (FSS) personnel if a NOTAM closing that runway is in effect.

## 10−6−4. APPROACH LIGHT SYSTEMS

**a.** The procedures in this paragraph pertain to the following approach light systems (see FAA Order 6750.24E, Instrument Landing System and Ancillary Electronic Component Configuration and Performance Requirements), Appendix A:

**1.** ALSF-1: Approach Light System (ALS) with Sequenced Flasher Lights (SFL) in Category 1 configuration.

**2.** ALSF-2: Approach Light System with Sequenced Flasher Lights in Category 2 configuration.

**3.** MALS: Medium Intensity Approach Light System. When associated with Sequenced Flashers, MALSF.

**4.** MALSR: Medium Intensity Approach Lights with Runway Alignment Indicator Lights.

**5.** SSALS: Simplified Short Approach Light System. When complemented by Sequenced Flashers, SSALF.

**6.** SSALR: Simplified Short Approach Lights with Runway Alignment Indicator Lights.

**7.** ODALS: Omnidirectional Approach Lighting System.

**b.** Facility air traffic managers having responsibility for approach light systems must adhere to the following:

**1.** Where an approach light system monitoring device is provided, perform a monitor check at the beginning of each workday. Consult with the Technical Operations technician for monitor check procedures. Report any discrepancy noted in the monitor check or any report of malfunction, either observed or received from any source, to the Technical Operations technician as soon as possible regardless of the time (day/night).

***NOTE−***
*During periods of known commercial electrical power shortage within the areas where the approach lighting system is located, the monitor check should be delayed until off-peak hours. The interval between monitor checks must not exceed 24 hours during electrical power shortages.*

**2.** When the monitor alarms, advise aircraft on approach that the monitor panel indicates a system malfunction.

**(a)** The approach light system should not be reported as unusable or inoperative until receipt of the technician's report that the system is not operating or is malfunctioning unless it can be determined by visual reference from the tower or from a reliable source (for example, pilot, airport manager) that one of these two conditions exists.

**(b)** If the system is reported as unusable or inoperative, the air traffic manager must ensure that Technical Operations issue the appropriate NOTAM.

***REFERENCE−***
*FAA Order 6750.24E, Appendix A, Instrument Landing System and Ancillary Electronic Component Configuration and Performance Requirements.*
*FAA Order JO 7110.65, Para 3−3−3, Timely Information.*
*FAA Order JO 7110.65, Para 4−7−12, Airport Conditions.*
*FAA Order JO 7930.2, Para 5−2−1, Lighting Aids.*

**3.** Monitors do not indicate light obscurement due to snow, sand, plant growth, etc. When such a condition is reported or suspected, request the Technical Operations technician to describe the visibility condition of the approach light system. If the technician reports at least four adjacent bars or four consecutive sequence flashers are obscured, the air traffic facility manager must send the appropriate NOTAM.

**4.** At locations which do not have duplicate lighting controls in the FSS on the airport, operation of the ALS during the hours of darkness when the tower is unmanned must be as follows:

**(a)** ALSF-1 and ALSF-2 must be turned on and set to intensity #3. The Sequence Flashing Lights (SFL) must not be turned on.

**(b)** SSALR not controlled by radio or other suitable means must be turned on and set to intensity #3. The Runway Alignment Indicator Lights (RAIL) must not be turned on unless the ALS has been modified to provide variable RAIL intensity.

**(c)** MALSR not controlled by runway edge lights, radio, or other suitable means must be turned on and set to intensity #2 for Three Step MALS/Three Step RAIL, and Low setting for Two Step MALS/One Step RAIL. The RAIL must not be turned on unless the ALS has been modified to provide variable RAIL intensity.

**(d)** When MALSR intensity is controlled by runway edge lights, apply the procedures in subparagraph 10−6−2c.

**(e)** If the ALS system is equipped with ground-to-ground/air-to-ground links, tower personnel must switch the system to air-to-ground radio control before closing the tower.

**(f)** Issue a NOTAM containing information that the system is unattended and the appropriate FSFO having jurisdiction over the area must be notified of the operational status of the ALS.

**(g)** When required to meet local atmospheric, topographic, or twilight conditions, prepare a facility directive specifying the intensity settings for the ALS and forward a copy to the FSDO.

**c.** At airports with air traffic control towers equipped with airport lighting control panels that do not provide direct indication of airport lighting intensities, the ATM, with the airport operator, must annually review and compare the preset selection settings configured in the tower lighting control system to verify that they comply with FAA requirements.

## 10−6−5. VISUAL APPROACH SLOPE INDICATOR (VASI) SYSTEMS

**a.** There are three basic VASI configurations: VASI-2, VASI-4, and VASI-12. Two additional configurations were developed for use with long-bodied aircraft by adding a third bar to either the VASI-4 or the VASI-12. These configurations are referred to as VASI-6 and VASI-16.

**b.** The basic FAA standard for VASI systems permit independent operation by means of a photoelectric device. This system has no remote monitor and no on-off control feature. It is intended for continuous operation.

**c.** Other VASI systems in use include the following:

**1.** The basic VASI as described in subparagraph b, except at locations where the system was installed with an on–off remote switch in the control tower. If an on–off switch is provided, it is intended that the VASI be operated on a continuous basis when the runway it serves is in use. Airport operators at some locations may request the facility air traffic manager to operate this system only during certain hours and/or conditions. Procedures for part-time or conditional VASI operation must be contained in an LOA.

***NOTE–***
*When VASI systems are installed under the FAA's Airport Improvement Program, the sponsor may negotiate a letter of agreement with the ATO through the regional Airports Division for a part-time VASI operation.*

**2.** Systems that are operated remotely from the control tower may be either two-step or three-step. It is intended that these systems be operated on a continuous basis when the runway they serve is in use.

**3.** Systems with steep descent profiles intended for STOL operations may be operated on an individual aircraft basis or as determined by the facility air traffic manager dependent upon the frequency of use.

**d.** The basic FAA standard VASI is not provided with a remote status indicator. At locations where a VASI remote status indicator is installed, specialists must notify air traffic when a malfunction is indicated or reported. The VASI should not be turned off nor a NOTAM issued unless the Technical Operations technician advises it is inoperative or if it is obvious that it is inoperative. In the event the technician advises there is a one side operating condition at locations with a VASI on both sides of a runway, the system must remain in operation and NOTAM indicating partial operations issued.

## 10−6−6. PRECISION APPROACH PATH INDICATOR (PAPI) SYSTEMS

**a.** The basic FAA standard for PAPI systems permit independent operation by means of a photoelectric device. This system has no remote monitor and no on-off control feature. It is intended for continuous operation.

**b.** Other PAPI systems in use include the following:

**1.** The basic PAPI system as described in subparagraph a, except at locations where the system was installed with an on–off remote switch in the control tower. If an on–off switch is provided, it is intended that the PAPI be operated on a continuous basis when the runway it serves is in use. Airport operators at some locations may request the facility air traffic manager to operate this system only during certain hours and/or conditions. Procedures for part-time or conditional PAPI operation must be contained in an LOA.

**2.** Systems that are operated remotely from the control tower may be five-step. It is intended that these systems be operated on a continuous basis when the runway they serve is in use.

> ***NOTE–***
> *When PAPI systems are installed under the FAA's Airport Improvement Program, the sponsor may negotiate a letter of agreement with the ATO through the regional Airports Division for a part-time PAPI operation.*

## 10–6–7. RUNWAY AND TAXIWAY LIGHTS

When required, prepare a facility directive specifying local procedures for the operation of Runway End Identifier Lights (REIL), High Speed Turnoff Lights, or Runway Centerline and Touchdown Zone Light Systems (RCLS TDZL), and forward a copy to the FSDO.

## 10–6–8. RUNWAY FLOODLIGHTS

Where runway floodlights are installed, local procedures must be established for their operation. These must provide that they be turned off when an aircraft is required to taxi toward the lights and they may be blinding to the pilot. Also, that they must be operated as requested by a pilot for his/her operation.

## 10–6–9. RUNWAY EDGE LIGHTS ASSOCIATED WITH MEDIUM APPROACH LIGHT SYSTEM/RUNWAY ALIGNMENT INDICATOR LIGHTS

Two MALS/RAIL installations associated with runway edge lights are available. One is a two step brightness MALS and a one step brightness RAIL. The other is a three step brightness MALS and a three step brightness RAIL. The associations with runway edge step settings are shown in the following table. Facility air traffic managers must coordinate with the Technical Operations SMO sector to determine which of the two has been installed and issue a facility directive informing facility personnel. (For intensity settings see TBL 10–6–1.)

***TBL 10–6–1***

**MALSR Step Intensity Settings**

| ***Runway Edge Lights*** | | ***Two Step MALS/One Step RAIL*** | | ***Three Step MALS/Three Step RAIL*** | |
|---|---|---|---|---|---|
| ***Intensity*** | | ***Intensity*** | | ***Intensity*** | |
| HIRL | MIRL | MALS | RAIL | MALS | RAIL |
| Step 5 | Step 3 | 100% | 100% | 100% | 100% |
| Step 4 | | | 100% | 100% | 100% |
| Step 3 | Step 2 | 10% | OFF | 20% | 26% outer<br>8% inner |
| Step 2 | | | OFF | 4% | 1% |
| Step 1 | Step 1 | OFF | OFF | 4% | 1% |

## 10−6−10. RUNWAY STATUS LIGHTS (RWSL)

*TERMINAL*

The RWSL is a system of runway and taxiway lighting which enhances pilot situational awareness by illuminating runway entrance lights (REL) when the runway is unsafe for entry or crossing, and take-off hold lights (THL) when the runway is unsafe for departure. The RWSL system uses a configuration of in-pavement lights installed on taxiways and runways that indicate runway status only; they are not intended to indicate a clearance. The RWSL system works in conjunction with the ASDE-X/ASSC system along with the Field Lighting System (FLS).

**a.** ATMs must ensure that when available or operating normally, the RWSL systems are operated on a continuous basis.

**b.** As part of the facility checklist, operation of the system must be verified once each shift.

# Section 7. Airport Arrival Rate (AAR)

## 10−7−1. PURPOSE

To establish standards for determining the airport arrival rate (AAR).

## 10−7−2. POLICY

Airport runways are assets of the National Airspace System (NAS). System-wide standards for AARs enable the Air Traffic Organization (ATO) to manage these assets in the most efficient manner.

## 10−7−3. DEFINITIONS

**a.** AAR: A dynamic parameter specifying the number of arrival aircraft that an airport, in conjunction with terminal airspace, can accept under specific conditions throughout any consecutive sixty (60) minute period.

**b.** Airport Primary Runway Configuration: An airport runway configuration which handles three (3) percent or more of the annual operations.

## 10−7−4. RESPONSIBILITIES

**a.** System Operations Services is responsible for the development, establishment, and implementation of AARs at select airports in the NAS.

**b.** The Deputy Director of System Operations (DDSO) in collaboration with Terminal Facility Managers must:

**1.** Identify the airport primary runway configurations for airport(s) identified by System Operations Services.

**2.** Establish optimal AARs for airport(s) using the method detailed in paragraph 10−7−5, Calculating AARs.

**3.** Review and validate the airport primary runway configurations and associated AARs in February of each year, or at more frequent intervals if required.

***NOTE−***
*In the event consensus cannot be reached between facilities, the DDSO will make the final determination.*

**c.** DDSOs must ensure that the data is entered in the National Traffic Management Log (NTML) under the runway template.

**d.** Consistent with paragraph 10−1−6, Selecting Active Runways, Terminal Facility Managers must ensure efficiency at airport(s) within their jurisdiction consistent with the goals outlined in the Administrator's Flight Plan.

## 10−7−5. CALCULATING AARS

**a.** Calculate optimal AAR values for each airport runway configuration for the following weather conditions:

**1.** Visual Meteorological Conditions (VMC)- Weather allows vectoring for a visual approach.

**2.** Marginal VMC- Weather does not allow vectoring for a visual approach, but visual separation on final is possible.

3. Instrument Meteorological Conditions (IMC)- Visual approaches and visual separation on final are not possible.
4. Low IMC- Weather dictates Category II or III operations, or 2.5 miles-in-trail (MIT) on final is not available.

**b.** Calculate the maximum runway arrival capacity for each runway using the following methodology:

1. Determine the average ground speed crossing the runway threshold and the spacing interval required between successive arrivals.
2. Divide the ground speed by the spacing interval or use TBL 10−7−1, Maximum Runway Capacity, to determine the maximum runway arrival capacity.

   **FORMULA:**
   Ground Speed in knots at threshold / Spacing Interval at runway threshold in miles

***NOTE−***
*When the maximum runway arrival capacity is a fraction, round down to the next whole number.*

***EXAMPLE−***

1. *130 / 3.25 = 40 Runway capacity = 40*
2. *125 / 3.0 = 41.66 Runway capacity = 41*

***TBL 10−7−1***

**Maximum Runway Capacity**

| Threshold Ground Speed | Miles Between Aircraft | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 6 | 7 | 8 | 9 | 10 |
| 130 Knots | 52 | 43 | 37 | 32 | 28 | 26 | 21 | 18 | 16 | 14 | 13 |
| 140 Knots | 56 | 46 | 40 | 35 | 31 | 28 | 23 | 20 | 17 | 15 | 14 |

**c.** Identify any conditions that may reduce the maximum runway arrival capacity. These factors include, but are not limited to:

1. Intersecting arrival/departure runways.
2. Distance between arrival runways.
3. Dual purpose runways (shared arrivals and departures).
4. Land and Hold Short utilization.
5. Availability of high speed taxiways.
6. Airspace limitations/constraints.
7. Procedural limitations (missed approach protection, noise abatement, etc.).
8. Taxiway layouts.
9. Meteorological conditions.

**d.** Determine the adjusted runway arrival capacity by adjusting the maximum runway capacities using the factors in subparagraph c for each runway used in an airport configuration. Total the

adjusted runway arrival capacities for all runways used in an airport configuration to determine the optimal AAR for that airport runway configuration.

## 10−7−6. OPERATIONAL AARS

**a.** When using an airport primary runway configuration, the associated optimal AAR must be utilized. The DDSOs must ensure that the responsible person at the Aviation System Performance Metrics (ASPM) airports document the runway information in the NTML.

**b.** Real-time factors may dictate dynamic adjustments to the optimal AAR. These factors include, but are not limited to:

**1.** Aircraft type/fleet mix.

**2.** Runway conditions.

**3.** Runway/taxiway construction.

**4.** Equipment outages.

**5.** TRACON constraints.

These factors will be included in the facility log. The DDSOs must ensure that the responsible person at the ASPM airports document the information in the NTML.

**c.** A dynamic adjustment to the AAR is subject to the review and approval of the Director of System Operations, ATCSCC.

**d.** Non-primary configurations at ASPM airports must be entered in the NTML as “Other,” and free-text used to describe the configuration and associated AAR.

# Chapter 11. FAA Contract Tower Operation and Administration

## Section 1. Organizational Responsibilities

### 11−1−1. ATO LEVEL OF SUPPORT

**a.** The FAA Contract Tower (FCT) Program is a federally funded program that provides contract air traffic control services at designated towers.

**b.** FAA organizations must provide the same level of operational support and guidance to contract towers as provided to similar FAA Airport Traffic Control Towers (ATCT).

### 11−1−2. FAA HEADQUARTERS

**a.** The Program Management Organization, Enterprise Services (AJM-3), is responsible for oversight of the FCT Program. The AJT-1200 Policy Team provides guidance and direction for Headquarters, Service Area, and FCT personnel in the provision of air traffic control services at FCT locations.

**b.** The FAA Acquisition and Contracting (AAQ-1) Office designates a Contracting Officer (CO) for the FCT national contracts.

**1.** The CO has sole responsibility for modifications and/or changes to the contract. Other FAA personnel that deal directly with contractor personnel must be familiar with the terms of the contract and must use caution not to require actions of the contractor that fall within the purview of the CO.

**2.** AJT-1200 must review all contract modifications with the CO prior to execution.

### 11−1−3. ATO SERVICE CENTERS

**a.** Planning & Requirements Group (PRG) must:

**1.** Appoint the FCT Program Implementation Manager (PIM) as the point of contact (POC) at the Service Center for coordinating issues affecting the FCT Program.

**2.** Provide FCT applicant contact information to appropriate FAA lines of business (LOB).

**b.** Operations Support Group (OSG) must provide a POC for coordinating FCT issues.

**c.** Quality Control Group (QCG) must provide a POC for coordinating FCT issues.

**1.** Assign each FCT to a district.

### 11−1−4. AJT DISTRICT OFFICES

ATC facilities that interface with an FCT must contact the district whenever FCT issues cannot be resolved at the local level.

**a.** Operational FCT issues that cannot be resolved at the district level must be coordinated with the respective OSG.

**b.** Non-operational FCT issues that cannot be resolved at the district level must be coordinated with the respective FCT Program Implementation Manager (PIM).

**c.** The district may delegate day-to-day operational support and/or certification responsibilities to other FAA facilities.

# Section 2. Operations and Staffing

## 11−2−1. REQUESTS FOR ADDITIONAL SERVICES

**a.** The FCT contracts specify the terms under which ATC services will be provided, including hours of operation for each FCT.

**b.** FAA personnel must not require actions of the contractor that fall outside the scope of the contract; for example, extension of the hours of operation or requests for additional staffing. Only the CO can effect modifications to a contract.

## 11−2−2. FAA STAFFING FOR SPECIAL EVENTS

**a.** AJT district offices must coordinate with AJT-1200 through the Service Area Office whenever FAA staffing for special events (for example, Sun ’n Fun, EAA AirVenture Oshkosh, etc.) will be needed at an FCT. Staffing and supervisory schedules must be reviewed by the District Office.

**b.** At no time must an FAA controller act in a supervisory capacity (OM/OS/CIC/Trainer, etc.) over an FCT controller, nor must an FCT controller act in a supervisory capacity over an FAA controller.

## 11−2−3. LETTERS OF AGREEMENT (LOA)

FCTs are authorized to negotiate with, and enter into LOAs with FAA facilities, National Airspace System (NAS) users, and airport operators/tenants in accordance with FAA directives.

**a.** The AJT district must provide assistance to the FCT air traffic manager for the development of local procedures, facility LOAs, etc.

**b.** The contractor must comply with the service area's LOA processing procedures.

**c.** Within 90 days of assuming air traffic manager responsibilities, the FCT Air Traffic Manager (ATM)will conduct and document a review of the facility LOAs to determine if they are operationally valid and accurately reflect the facility's procedures.

## 11−2−4. EMERGENCY AND CONTINGENCY SITUATIONS

FAA facilities must provide assistance to FCTs during emergency and/or contingency situations. Requests outside the scope of an LOA or approved contingency plan must be coordinated through the Service Center.

## 11−2−5. FACILITY DIRECTIVES REPOSITORY (FDR)

In addition to other required directives, FCT ATMs will ensure the most current version of all facility LOAs are uploaded into the Facility Directives Repository. Directives deemed proprietary will have only the dated or revision-numbered cover page uploaded.

***NOTE−***
*LOAs containing contingency plan information must not be posted to the FDR. LOAs with such information must be posted to the National Operational Contingency Plan database.*

## 11−2−6. FAA CONTRACT TOWER (FCT) AIR TRAFFIC CONTROLLER ELIGIBILITY

To be eligible to be employed as an air traffic controller at an FAA Contract Tower, a person must meet the requirements of 14 CFR part 65 and part 67, and

**a.** Have held a previous Control Tower Operator (CTO) certificate or FAA Office of Aviation Safety Management (ASM) credential with a tower rating, or

**b.** Have a valid Enhanced Air Traffic Collegiate Training Initiative (E-CTI) tower endorsement letter or graduated from an FAA-approved Control Tower Operator Partnership (CTO-P) school, or

**c.** Have been a DoD radar-certified controller or an FAA radar-certified controller. In such cases, the FCT vendor must ensure the employee satisfies CTO requirements.

***NOTE-***
*There is no maximum age restriction for FCT air traffic controllers.*

# Section 3. Training

## 11−3−1. TESTING AND CERTIFICATION

**a.** The AJT district must ensure that facility rating, control tower operator (CTO) certification, or FAA Air Traffic Safety Oversight Credential actions are performed. The FCT ATM must contact the district in a timely manner to schedule CTO certification with a designated Control Tower Operator Examiner (CTO-E).

**b.** At Limited Aviation Weather Reporting Stations (LAWRS) designated FCTs, the FCT ATM must arrange initial LAWRS observer training and testing and coordinate certification or certificate transfer with Aviation Weather Observation Program (AWOP) via email to: 9-AJO-AJR-FS-AWOP@faa.gov.

## 11−3−2. BRIEFING/TRAINING ITEMS

**a.** ATO Headquarters organizations, Service Center Offices, and districts must ensure that required briefing materials are distributed in a format that can be utilized by FCT facilities.

**b.** AJT districts must ensure that all required briefing items are forwarded to their assigned FCTs.

## 11−3−3. CIC DESIGNATION AT FCT-OPERATED FACILITIES

CIC designation at FCT-operated facilities differs from CIC designation at FAA-operated facilities due to administrative differences. For FCTs, candidates for CIC must:

**a.** Have been prior certified FAA/DoD/military controllers, or have FCT CIC experience, with assessment by the ATM that the candidate's experience is suitable for CIC designation. Candidates hired via Enhanced Air Traffic Collegiate Training Initiative or Control Tower Operator Partnership (CTO-P) must have been certified for 6 months in the facility where CIC duties will be performed. The Service Area Director of Air Traffic Operations may issue a facility waiver for the 6-month requirement where a more immediate assignment is needed. Waivers to facilities will be for 2 years.

**b.** Be operationally current.

**c.** Be selected by the ATM.

# Section 4. Documents, Forms, and Charts

## 11−4−1. OPERATIONAL DIRECTIVES

**a.** The FCT PIM must ensure that "New Start" FCT locations are included on the distribution list.

**b.** Districts must:

**1.** Ensure that FCTs are equipped with appropriate copies (print or digital) of regulations and FAA directives (excluding FARs and CFRs), including changes and/or amendments to those directives; and

**2.** Assist FCTs when additional copies are required.

**c.** Contractors must notify the district whenever additional copies of the regulations and FAA directives are needed.

## 11−4−2. PROVISION OF INFORMATION AND DATA

**a.** The Service Center and/or district may require operational information from FCTs and/or ask for access to operational data. Voluminous or unusual requests should be routed to AJT-1200, through the Service Area POC, for direct coordination with contractor management personnel.

**b.** The contractor must provide hourly traffic count data to the FAA in addition to operational data reporting requirements, per FAA Order JO 7210.55.

## 11−4−3. FORMS AND CHARTS

**a.** The districts must ensure that FCTs are provided with a sufficient supply of operational forms required by the documents, directives, and regulations (excluding FARs and CFRs); and

**b.** Current operational charts and publications, such as terminal area charts, sectionals, etc.

## 11−4−4. TRAINING MATERIAL

**a.** The FAA must ensure all locations are provided with required training material.

**b.** The contractor must contact the district to request additional material.

# Section 5. Operational Documents, Directives, and Regulations

## 11−5−1. FAA DOCUMENTS, DIRECTIVES, AND REGULATIONS

FAA documents, directives, and regulations identified in the FCT Contract and FAA directives which are applicable and incorporated in whole or relevant part will be available (print or digital) at the FCT facility.

***NOTE−***

1. *FCTs may utilize the FAA online directives library to the extent consistent with FAA directives and the facility's existing telecommunications capabilities.*

1. *In addition to directives required by the FCT Contract, other FAA orders, directives or policies may contain additional pertinent information beneficial to operation of an FCT.*
2. *Copies of CFRs required by the FCT Contract are not required to be on site at FCTs, but will be maintained and/or accessible at contractor corporate offices.*
3. *Guidance contained in FAA Order JO 7210.78, FAA Contract Tower (FCT) New Start and Replacement Tower Process, may be used to assist the FAA, airport sponsors, and others in meeting FCT minimum equipment requirements.*

# Chapter 12. National Programs

## Section 1. Terminal VFR Radar Services

### 12−1−1. PROGRAM INTENT

**a.** Basic Radar Service, TRSA Service, Class B Service, and Class C Service are the four types of VFR Radar Services designed to enhance safety by providing air traffic services to VFR aircraft. The services were designed to provide the maximum level of radar services possible with existing equipment. Additional resources (displays, workstations, communications, telco, space, etc.) must be justified by requirements other than the volume of radar service provided to VFR aircraft. Pilots should be encouraged to participate by all available methods. This is best accomplished through effective procedures and a clear understanding of the Terminal VFR Radar Services available.

**b.** VFR Radar Services may include military airports. Each case of military airport inclusion or establishment of TRSA/Class B/Class C airspace must be processed through appropriate military channels for thorough examination and individual justification.

**c.** There is no requirement for a radar facility to retain operational jurisdiction of the TRSA/Class B/Class C airspace in its entirety if another facility can more effectively manage a particular portion of the airspace.

***REFERENCE−***

*P/CG Term - Terminal VFR Radar Services.*

*FAA Order JO 7110.65, Chapter 7, Section 6, Basic Radar Service to VFR Aircraft.*

### 12−1−2. IMPLEMENTATION

**a.** Facilities unable to meet the following requirements must submit justification to the respective Service Area Director of Air Traffic Operations.

**1.** Newly commissioned terminal radar facilities must implement basic radar services to VFR aircraft, as prescribed in FAA Order JO 7110.65, Air Traffic Control, paragraph 7−6−1, Application, within 30 to 60 days after full IFR service is available.

**2.** All radar facilities must provide basic radar service at primary airport(s) and, where operationally feasible, at all other airports with an operating airport traffic control tower within their area of jurisdiction.

**b.** Advertising basic radar services:

**1.** A sufficient number of user group meetings must be held to publicize implementation of basic radar services to as many local pilots as practicable.

**2.** Disseminate a Letter to Airmen (LTA) explaining the program and including a drawing of the basic radar service area. The drawing should be on a cutout from the appropriate sectional chart, labeled “not for navigational use,” and should show the following:

**(a)** Lateral and vertical dimensions.

**(b)** Frequency for each sector.

**(c)** Initial VFR checkpoints indicated by flags.

3. The facility air traffic manager must seek the cooperation of the FSDO in informing aviation interests about their responsibilities while operating in a basic radar service environment. Special emphasis should be placed on such points as:
   **(a)** Pilot participation is urged, but it is not mandatory.
   **(b)** Pilots should be aware that aircraft sequencing and traffic advisories are based on aircraft complying with ATC instructions.
   **(c)** A pilot who cannot abide with an ATC instruction or clearance must notify ATC immediately.
4. Follow-up meetings ("HOW GOES IT" type) must be conducted.

## 12−1−3. TRSA

**a.** TRSAs are not officially designated by airspace action, and are established solely to define an area where, in addition to basic radar services, participating VFR aircraft will be separated from IFR aircraft and other participating VFR aircraft. Therefore, at all TRSA locations it is intended that facilities must provide the full extent of TRSA services throughout the entire advertised TRSA area. Although the TRSA area extends downward to the surface within the surface area of Class D airspace at the primary airport, a base should be established outside this surface area of Class D airspace to permit free movement of nonparticipating aircraft. The base of the TRSA must not be below the base of an associated Class E airspace.

***REFERENCE−***
*FAA Order JO 7110.65, Chapter 7, Section 7, Terminal Radar Service Area (TRSA)- Terminal.*

**b.** The size and shape of the TRSA will vary depending upon location-specific ATC operational and safety requirements. TRSA design must reflect the most efficient and reasonable configuration to contain large turbine-powered aircraft while achieving a higher level of overall safety.

**c.** All IFR procedures used by large turbine-powered aircraft arriving and departing designated airports must be fully contained in the TRSA. Each TRSA should be configured to ensure the most efficient use of airspace.

**d.** Arriving and departing large turbine-powered aircraft should enter/exit the TRSA through the ceiling. However, arriving aircraft at altitudes below the ceiling are not required to climb to achieve this objective, nor are departing aircraft filed at lower altitudes.

**e.** If a need exists, facilities may develop coded VFR departure routes for TRSA service. When such routes are established, the following provisions apply:
   1. Prior to implementing coded VFR departure routes, the ATM must coordinate with local user groups.
   2. An LTA must be issued advising pilots of the procedure.
   3. These routes must only be assigned to local users familiar with the procedure.

**f.** The ATM is responsible for submitting requests for establishment, revision, or withdrawal of TRSA airspace to the Service Area Director of Air Traffic Operations. The Service Area Director of Air Traffic Operations has approval authority for TRSA establishment, withdrawal, or modification. If TRSA actions are approved, the OSG will review and submit the TRSA airspace to AIS for publication. The following are the minimum pertinent factors for TRSA airspace action:

***REFERENCE−***
*FAA Order JO 7210.3, Para 4−1−6, Preliminary Environmental Review.*

1. TRSA Establishment or Withdrawal:
   **(a)** Safety record/NMAC analysis.
   **(b)** Airspace and operational efficiency.
   **(c)** Unique geographical features.
   **(d)** Hourly air carrier traffic density.
   **(e)** User input. (User meetings, while highly desirable, are not required for withdrawals.)
2. TRSA Revision:
   **(a)** Changes in TRSA configuration, frequencies, or primary airport status (name, elevation, closed, abandoned, etc.).
   **(b)** Additions or deletions to VFR checkpoints/NAVAIDs.
   **(c)** Typographical errors.
   **(d)** User input.

## 12−1−4. CLASS C AIRSPACE

Class C airspace must be officially designated by airspace action in 14 CFR part 71 and is established solely to define the airspace in which all aircraft are subject to operating rules and equipment requirements specified in 14 CFR part 91.

***NOTE−***
*While the regulatory nature of this airspace requires pilots to establish two-way communications with ATC prior to entering, aircraft should not be unnecessarily prohibited from entering Class C airspace.*

***REFERENCE−***
*FAA Order JO 7110.65, Chapter 7, Section 8, Class C Service- Terminal.*

**a.** Procedures for Class C airspace establishment, modification, or withdrawal are contained in FAA Order JO 7400.2, Procedures for Handling Airspace Matters.

**b.** The physical dimensions of the Class C airspace will normally be a 10 NM radius capped at 4,000 feet above the primary airport elevation. This airspace must extend no lower than 1,200 feet above the surface, except that an inner core with a 5 NM radius must extend down to the surface.

**c.** Encompassing each Class C airspace must be a site-specific Outer Area with a normal radius of 20 NM. The Outer Area must extend outward from the primary Class C airspace airport and extend from the lower limits of radar/radio coverage up to the ceiling of the approach control delegated airspace excluding the Class C airspace and other airspace as appropriate. The Class C Outer Area must be defined in a facility directive.

**d.** After issuance of the final rule designating a Class C airspace, user education meetings must be held to publicize implementation of Class C service to as many pilots as practicable.

**e.** Issue a letter to airmen explaining the program and including a drawing of the Class C airspace. The drawing should depict, as a minimum, the following:

1. The lateral and vertical dimensions of the Class C airspace and the associated Outer Area.
2. Any procedural exclusions when the Class C airspace overlaps an adjacent Class D airspace.
3. Initial VFR checkpoints located outside the Class C airspace.
4. Frequencies.

**f.** Followup meetings ("HOW GOES IT" type) must be conducted after implementation.

**g.** Exceptions to Class C services may be established within the Class C airspace for special activities; i.e., practice areas, banner tows, gliders, ultralights, etc., provided the procedures are outlined in a letter of agreement with the users.

**h.** Where the Class C airspace overlaps the Class D airspace of an adjacent airport, facility managers must include in a letter of agreement procedures defining responsibility for the control of aircraft in the overlapping area.

**i.** Procedures to accommodate VFR aircraft desiring to transit complex terminal areas, including Class C airspace, are contained in separate sections of this chapter.

***REFERENCE–***
*FAA Order JO 7210.3, Chapter 12, Section 4, Helicopter Route Chart Program.*
*FAA Order JO 7210.3, Chapter 12, Section 5, VFR Transition Route Program.*

## 12–1–5. CLASS B AIRSPACE

**a.** Class B airspace must be officially designated by airspace action in 14 CFR part 71 and is established solely to define the airspace in which all aircraft are subject to operating rules and pilot and equipment requirements specified in 14 CFR section 91.131.

***REFERENCE–***
*FAA Order JO 7110.65, Chapter 7, Section 9, Class B Service Area- Terminal.*

**b.** Procedures for Class B airspace establishment, modification or withdrawal are contained in FAA Order JO 7400.2, Procedures for Handling Airspace Matters. Class B airspace must reflect the most efficient and reasonable configuration to contain large turbine-powered aircraft while achieving a higher level of overall safety.

**c.** Arriving and departing large turbine-powered aircraft should enter/exit the Class B airspace through the ceiling. However, arriving aircraft at altitudes below the ceiling are not required to climb to achieve this objective, nor are departing aircraft filed at lower altitudes.

**d.** Procedures to accommodate VFR aircraft desiring to transit Class B airspace are contained in separate sections of this chapter. If VFR corridors are published, recommend the establishment of frequency 122.750 for pilots to exchange position information when transiting the associated Class B airspace VFR corridor.

***REFERENCE–***
*FAA Order JO 7210.3, Chapter 12, Section 3, VFR Flyway Planning Chart Program.*
*FAA Order JO 7210.3, Chapter 12, Section 4, Helicopter Route Chart Program.*
*FAA Order JO 7210.3, Chapter 12, Section 5, VFR Transition Route Program.*

# Section 2. Data Recording and Retention

## 12−2−1. DATA RECORDING

**a.** Type or write the date on the console printout at the start of each operational day or as specified in a facility directive. The facility directive must require the time that the date must be entered daily.

***NOTE−***
*The operational day for a 24-hour facility begins at 0000 local time. The operational day at a part time facility begins with the first operational shift in each calendar day.*

**b.** As a minimum, record on the console failure/error messages regarding Data Acquisition Subsystem (DAS), Data Entry and Display Subsystem (DEDS), and Interfacility (IF).

***NOTE−***
*When a failure is known to exist, that particular failure printout may be inhibited to minimize its impact on the system.*

**c.** Facilities having continuous data recording capabilities must extract and record on tape or disc:

**1.** Tracking messages, target reports, and sector time.
**2.** Automatic functions and keyboard input data.
**3.** Interfacility messages.
**4.** MSAW and CA warning message data. Other data available in the extraction routine may be extracted.

**d.** Air traffic facilities using a teletype emulator (TTYE) in lieu of a console printout (TTY) must store and retain data in accordance with paragraphs 12−2−1, Data Recording, and 12−2−2, Data Retention. However, the data may be retained on a disc or hard drive as specified in a facility directive.

## 12−2−2. DATA RETENTION

**a.** Write on each data extraction tape/disc:

**1.** The tape/disc drive number.
**2.** The date.
**3.** The times (UTC) the extraction started and ended.
**4.** The items listed in subparagraph 12−2−1c not extracted.
**5.** The data extracted in addition to that required by subparagraph 12−2−1c.
**6.** The initials of the person changing the recording.

**b.** Retain data extraction recordings for 45 days except:

**1.** Accidents: Retain data extraction recordings in accordance with FAA Order JO 8020.16, Air Traffic Organization Aircraft Accident and Incident Notification, Investigation, and Reporting.
**2.** Incidents: Retain data extraction recordings in accordance with FAA Order JO 8020.16.

3. Tarmac Delay: When a facility is notified that an aircraft has or may have exceeded the "Three/Four-Hour Tarmac Rule," retain data recordings relevant to the event for 1 year.

**c.** If a request is received to retain data information following an accident or incident, the printout of the relative data will suffice. The tape/disc may then be returned to service through the normal established rotational program. The printout data are considered a permanent record and must be retained in accordance with aircraft accident/incident retention requirements. Reduction of the extracted data to hard-copy format will be made at the earliest time convenient to the facility involved without derogation of the ATC function and without prematurely taking the computer out of service. Do not make these data and printouts a part of the accident/incident package.

**d.** If a request is received to retain a specific data recording and the data are available and contained on tape, the tape must be retained in its entirety. If the data are contained on disc, the facility may transfer all pertinent data to magnetic tape and label the tape a *Duplicate Original.* After successful transfer, the disc pack may be returned to service through the normal rotational cycle. However, if a specific request is received to retain the disc, the disc pack must be retained in its entirety.

**e.** Treat data extraction recordings pertaining to hijack aircraft the same as voice recorder audio files.

***REFERENCE−***
*FAA Order JO 7210.3, Para 3−4−4, Audio Data Retention.*

## 12−2−3. FAULT LOG

**a.** Whenever the computer fails during normal operations, all pertinent data must be recorded on the Fault Log. However, if the computer failure is the first of a particular nature and an operational requirement exists to resume normal computer operation as soon as possible, a Fault Log need not be recorded.

**b.** When you anticipate the need for assistance from the National Field Support Group (NFSG), record the entire contents of memory before restarting the operational program.

**c.** Retain the Fault Log and the memory dump until the cause of the fault has been determined or NFSG requests them.

# Section 3. VFR Flyway Planning Chart Program

## 12−3−1. POLICY

**a.** VFR Flyway Planning Charts are developed to assist pilots operating VFR near or under Class B airspace. VFR Flyways are general flight paths that are not defined with specific course or altitude criteria. VFR Flyways must avoid airspace and routes that require ATC contact and/or an ATC clearance. Where available, VFR Flyway Planning Charts are published on the reverse side of the Terminal Area Chart.

**b.** Pilot adherence to VFR Flyways and recommended altitudes associated with them is voluntary. VFR Flyway Planning Charts may include recommended altitudes, suggested direction of flight, prominent VFR checkpoints/waypoints, reference ground objects that can be readily identified from the air, and other pertinent information. An ATC clearance is NOT required to fly these routes.

## 12−3−2. CRITERIA

Use the following criteria to establish VFR Flyway Planning Charts:

**a.** VFR Flyway Path: To the maximum extent practicable, the recommended flight paths used to describe VFR Flyways must reference ground objects that can be readily identified from the air. If necessary, and if an operational benefit can be derived, NAVAID or VFR checkpoint/waypoint references may be used.

**b.** VFR Flyway Altitudes: Each segment of a VFR Flyway should contain recommended altitudes.

**1.** Recommended altitudes must avoid airspace requiring prior authorization or clearance to enter.

**2.** Care should be exercised to avoid recommending altitudes which could cause the aircraft on a VFR Flyway to encounter inflight wake turbulence generated by large, heavy, or super aircraft.

**3.** When altitude changes are required, they should be based on a descent rate of 250-350 feet per nautical mile.

**c.** Altitude Compression: VFR Flyways established under the floors of Class B airspace require careful evaluation to avoid compression of the airspace and the altitudes available for VFR operations.

**d.** Military Considerations: Avoid establishing VFR Flyways which would conflict with military ground control radar approach paths. When charting VFR Flyways which cross or are in proximity to an MTR, include communications instructions for pilots to determine the status of the MTR.

## 12−3−3. RESPONSIBILITIES

**a.** VFR Flyway Planning Chart Development: The ATM determines the need to develop or revise a VFR Flyway Planning Chart.

**1.** Initial Action: The requesting ATM must establish a task force of local air traffic, FSDO, military, and local aviation interests, as appropriate, to recommend where VFR Flyways should be located.

2. Justification: As a minimum, the ATM must address in writing:
   **(a)** Background information pertaining to the development of the chart, such as the composition of the task group.
   **(b)** The major areas examined.
   **(c)** Special VFR procedures.
   **(d)** Recommendations by the task group.
   **(e)** Reasons supporting the establishment of a VFR Flyway Planning Chart for the area.
3. Charts and Description: A narrative description of the VFR Flyway and the appropriate VFR Terminal Area Chart or a drawing must depict the following data:
   **(a)** VFR Flyway flight paths with VFR checkpoint/waypoint references or NAVAID magnetic radials, and altitudes;
   **(b)** Any large turbine-powered aircraft arrival/departure routes and associated altitudes that impact VFR Flyways;
   **(c)** Procedural notes positioned on the drawing or the VFR TAC; and
   **(d)** The communication frequencies if frequencies are recommended for advisories. Indicate the flyway segment/s associated with each frequency.

**b.** VFR Flyway Planning Chart Approval and Publication: The ATM will send the proposed or revised chart to the Service Area Director of Air Traffic Operations for approval. The approved chart must be forwarded to the OSG for review and submission to Aeronautical Information Services (AIS) for publication.

***REFERENCE−***
*FAA Order JO 7210.3, Para 4−1−6, Preliminary Environmental Review.*

**c.** Annual Review: The ATM is responsible for reviewing VFR Flyway Planning Charts on an annual basis.

**d.** Revisions to VFR Flyway Planning Charts: The ATM initiates revisions to VFR Flyway charts and should propose changes to the established task force for collaboration. The following are considered sufficient justification to warrant revision:

1. Changes, additions, or deletions to VFR flyways or altitudes, frequencies, procedural notes, or changes to airport status; i.e., name, closed, abandoned, etc.
2. Changes in large turbine-powered aircraft arrival/departure routes and/or altitudes.
3. Additions or deletions to VFR checkpoint/waypoint references or NAVAIDs.

**e.** Publicity: The ATM must seek the cooperation of the local FSDO in informing aviation interests about the VFR Flyway Planning Chart Program. Special emphasis should be placed on:

1. Pilot adherence to VFR Flyways and recommended altitudes is voluntary.
2. Flyways are not devoid of other traffic. They represent flight paths that are believed to have the least IFR or military activity. VFR Flyway suggested altitudes may not necessarily provide ATC-required wake turbulence separation.
3. A “see and avoid” environment must be maintained and emphasized.

# Section 4. Helicopter Route Chart Program

## 12−4−1. POLICY

**a.** Helicopter/Powered-Lift Route Charts are graphic portrayals of discrete and/or common use routes and/or operating zones located in high-density traffic areas. Their purpose is to facilitate helicopter and powered-lift aircraft pilot access into, egress from, or operation within charted areas. They may include altitude information to facilitate traffic avoidance. The charts provide an expanded, and in some cases unique, ground reference symbology to improve visual navigation.

**b.** Routes developed under the Helicopter/Powered-Lift Route Chart Program may be designated for use exclusively for helicopters, exclusively for powered-lift aircraft, or may be shared by both aircraft types.

**c.** Pilot adherence to charted helicopter routes and the recommended altitudes or flight ceilings associated with them will normally be voluntary. However, controllers may assign charted routes with altitude restrictions and expect pilot compliance.

**d.** ATMs must retain all records of chart establishment/revision for a minimum of 5 years.

## 12−4−2. CRITERIA

Use the following criteria when developing a new or revised Helicopter/Powered-Lift Route Chart:

**a.** Routes:

**1.** All routes depicted on a Helicopter/Powered-Lift Route Chart must reference ground objects that can be readily identified from the air under day and night visual meteorological conditions (VMC).

**2.** Routes within Class B, Class C, or TRSA airspace must provide the required lateral minima or target resolution from IFR arrival and departure corridors. Where helicopter/powered-lift routes cross an arrival or departure corridor, the chart must specify altitudes that provide separation or provide checkpoints that can be assigned to assist with obtaining required separation minima.

**3.** Routes within Class D airspace must be designed to avoid conflict with arrival and departure corridors.

**4.** The chart must indicate if a route is helicopter only, powered-lift only, or helicopter/powered-lift.

**b.** Operating Zones: Airspace encompassed by a chart must, when necessary and required by the operation, be divided into enough operating zones or sectors to permit local law enforcement agencies to operate exclusively within a specific zone.

**c.** Altitudes and Flight Ceilings/Floors: Each segment of a helicopter/powered-lift route may contain recommended altitudes or flight ceilings/floors.

**1.** All published altitudes must be designated as recommended in the route description or chart note.

**2.** To assist with wake turbulence avoidance, large, heavy, or super aircraft flight paths must be considered when developing routes and any altitudes.

***NOTE-***
*When altitude changes are charted, a climb/descent rate of 250-350 feet per nautical mile should be assumed.*

**d.** Geographical features and/or obstructions within the chart area should be considered when designing routes and associated altitude(s).

**e.** Communications Information: Each Helicopter/Powered-Lift Route Chart must include sufficient radio communications information to ensure pilot compliance with all regulatory requirements and facilitate the acquisition and dissemination of air traffic information.

**f.** Military Considerations: Avoid establishing routes or operating zones that conflict with military ground control radar approach paths. When a charted route crosses or is located in close proximity to a Military Training Route (MTR) or Special Activity Airspace (SAA), include communications information of the controlling agency for pilots to determine the status of the MTR or SAA.

**g.** Route Descriptions and Chart Notes must:

**1.** Not contain blanket approval to enter Class B airspace. Clearance to enter Class B airspace must be verbally issued by ATC.

**2.** Include a note that contains the following: "Caution, routes depicted and associated altitudes do not necessarily provide obstacle clearance protection. Pilots are responsible for seeing and avoiding terrain and obstacles. Route and altitude assignments do not relieve pilots from their duty to comply with 14 CFR sections 91.119 and 135.203(b). Pilots are expected to request alternate ATC instructions if necessary for compliance."

## 12−4−3. RESPONSIBILITIES

**a.** ATMs must review Helicopter/Powered-Lift Charts annually. The review must include occurrence reports, Aviation Safety Reporting System (ASRS) data, Air Traffic Safety Action Program (ATSAP) reports, and user feedback, including reports received from AJV-A's Aeronautical Inquiries webpage. If no changes are needed, document the findings of the review and the continued utility of the routes and forward these results to the Air Traffic Service Area Director for approval.

**b.** If changes are required, the ATM must convene a local development team composed of representatives from local air traffic, the OSG, the AJV-A Aeronautical Charting Group, the FSDO, military and/or law enforcement agencies (if applicable), and helicopter and/or powered-lift operators.

**c.** The development team must provide recommendations to the ATM that include:

**1.** Helicopter/powered-lift routes suitable for publication.

**2.** Visual landmarks, obstacles, and checkpoints suitable for publication.

**3.** Recommended altitudes where helicopter/powered-lift routes cross arrival and departure corridors in Class B, Class C, or TRSA airspace.

**4.** The narrative route descriptions and chart notes to be included on the chart.

**5.** Frequencies and ATC facility names suitable for publication.

## 12−4−4. HELICOPTER/POWERED-LIFT CHART PUBLICITY AND FEEDBACK

**a.** ATMs must work with FSDO personnel to inform local aviation stakeholders about the helicopter/powered-lift route chart program. Emphasis should be placed on:

**1.** Routes, altitudes, and procedural notes;

**2.** The importance of chart use for operational safety and IFR traffic avoidance; and

**3.** The "see and avoid" nature of VFR operations in the chart area, as published routes and recommended or ATC-assigned altitudes do not provide terrain and obstruction clearance.

***REFERENCE-***
*FAA Order JO 7210.3, Para 4–2–4, Coordination of ATC Procedures.*

**b.** Feedback on or suggestions for Helicopter/Powered-Lift Charts must be directed to AIS's Aeronautical Inquiries webpage (https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Aeronautical_Inquiries/). AJV-A will act on editorial corrections and forward helicopter/powered-lift route suggestions to the facility ATM.

# Section 5. VFR Transition Route Program

## 12−5−1. POLICY

**a.** VFR Transition Routes are developed to assist pilots transitioning terminal airspace and associated terminal airports. The VFR Transition Route Program encompasses arrival, departure, or transition procedures intended for VFR flight. Communication with ATC where the route transitions Class B, Class C, and/or Class D airspace is required. In addition to communication requirements, a clearance is required to operate in Class B airspace.

**b.** VFR Transition Routes are specific flight courses depicted on Terminal Area Charts (TACs) and/or VFR Flyway Planning Charts described by NAVAID and/or prominent visual landmarks for optional use by pilots to transition Class B, Class C, and/or Class D airspace. VFR Transition Routes may include specific altitudes for the route or altitudes to expect with ATC assignment of the route. VFR Transition Routes are intended to assist pilots in positioning aircraft in an optimal location for assignment or request of a specific route. VFR Transition Routes may also be used to provide arrival/departure instructions to/from secondary airports in complex terminal areas.

**c.** Pilot adherence to VFR Transition Route altitudes as published, or assigned ATC altitudes is expected. Per 14 CFR section 91.123, pilot compliance with the assigned route as charted or published is required unless otherwise assigned by ATC.

## 12−5−2. CRITERIA

Use the following criteria for establishing VFR Transition Routes:

**a.** Routes:

**1.** Routes should avoid the flow of IFR traffic.

**2.** Routes must, to the maximum extent practicable, reference prominent landmarks that can be readily identified from the air in VMC.

**3.** The course must be described by magnetic compass headings and/or latitude/longitude. Radio aids to navigation and/or VFR checkpoint/waypoint references may be used as supplemental course guidance when feasible.

**b.** Altitudes: Each segment of a route must indicate the route altitude, route minimum/maximum altitudes, or the route altitude will be assigned by ATC.

**1.** Altitudes must be in accordance with VFR cruising altitudes to the maximum extent possible.

**2.** Altitudes must avoid areas of expected wake turbulence generated by large, heavy, or super aircraft.

**3.** Altitude changes should be based on climb/descent rate of 250-350 feet per nautical mile.

**4.** Altitudes beneath the floors of Class B and Class C airspace require careful evaluation to avoid compression of uncontrolled traffic.

**c.** Military Considerations: Avoid establishing routes which conflict with military ground control radar approach paths.

## 12−5−3. RESPONSIBILITIES

**a.** VFR Transition Route Development: The ATM is responsible for determining the need for VFR Transition Routes.

**1.** Initial Action: The requesting ATM must establish a task force of local air traffic, FSDO, military, and local aviation interests, as appropriate, to recommend where VFR Transition Routes should be located.

**2.** Justification: Recommendations for routes must include as a minimum:

**(a)** Background information including composition of the task group.

**(b)** Airspace areas, proposed routes, recommended altitudes, and other pertinent considerations.

**3.** The task force must develop descriptions of the routes, which must include as a minimum:

**(a)** Route entry and exit points for transitioning Class B, Class C, and/or Class D airspace. Reference to geographical locations is preferred.

**(b)** Arrival/departure airports, if applicable.

**(c)** Any requirements for ATC to issue the route, e.g., time of day, ceiling requirements, visibility requirements, airport arrival/departure configuration.

**(d)** Altitudes for each route segment and flight status: i.e., level, climbing, or descending.

**(e)** Frequency needed to contact ATC where the route transitions Class B, Class C, and/or Class D airspace. In addition to communication requirements, a clearance is required to operate in Class B airspace.

**(f)** References to geographical waypoints, NAVAID information, or VFR checkpoints/waypoints that comprise the route.

**b.** VFR Transition Route Approval and Publication: The ATM will send the proposed or revised VFR Transition Routes to the Service Area Director of Air Traffic Operations for approval. The approved VFR Transition Routes must be forwarded to the OSG for review and submission to Aeronautical Information Services (AIS) for publication.

***REFERENCE−***
*FAA Order JO 7210.3, Para 4−1−6, Preliminary Environmental Review.*

**c.** Annual Review: The ATM is responsible for reviewing VFR Transition Routes on an annual basis.

**d.** VFR Transition Route Revisions: The ATM initiates revisions to VFR Transition Routes and should propose changes to the established task force for collaboration on chart revisions. The following are considered sufficient justification to warrant revision:

**1.** Changes, additions, or deletions to VFR Transition Routes or altitudes, frequencies, procedural notes, or changes to airport status (name, closed, abandoned, etc.).

**2.** Changes in large turbine-powered aircraft arrival/departure routes and/or altitudes.

**3.** Changes to lateral or vertical confines of Class B, Class C, and/or Class D airspace the route transitions through.

**4.** Additions or deletions to VFR ground references, VFR checkpoints/waypoints, and/or NAVAIDs.

**e.** Publicity: The ATM must seek the cooperation of the FSDO in informing aviation interests about the VFR Transition Route Program. Special emphasis should be placed on:

1. VFR Transition Routes may include published altitudes or ATC-assigned altitudes. Per 14 CFR section 91.123, pilot compliance is expected for all route and altitude restrictions as published or assigned by ATC.
2. Flyways are not devoid of IFR or other VFR aircraft operating within Class B, Class C, and/or Class D airspace the VFR Transition Route penetrates or the airport the route arrives to or departs from. VFR Transition Routes represent flight paths that are designed to be the most effective for VFR aircraft to enter/exit or transition terminal airspace.
3. Assignment of these routes is on a workload-permitting basis of the controlling ATC facility and is considered an additional service to VFR aircraft.

# Section 6. Standard Terminal Automation Replacement System (STARS)

## 12−6−1. OPERATIONAL USE

**a.** Do not use STARS data when the system is released to Technical Operations Services.

**b.** Verify the operational status of all STARS components daily.

**c.** Advise affected facilities when STARS equipment will not be operational at normal startup time, when it fails, is shut down, resumes operation, or when interfacility mode is lost/regained.

## 12−6−2. DATA ENTRIES

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

## 12−6−3. DISPLAY DATA

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

**b.** Display Mode C on untracked (unassociated) targets within each controller's area of responsibility by setting the altitude filters to encompass all altitudes within the controller's jurisdiction. Set the upper limits no lower than 1,000 feet above the highest altitude for which the controller is responsible. In those stratified positions, set the upper and lower limit to encompass at least 1,000 feet above and below the altitudes for which the controller is responsible. When the position's area of responsibility includes down to an airport field elevation, the facility will normally set the lower altitude filter limit to encompass the field elevation, so that provisions of FAA Order JO 7110.65, Air Traffic Control, paragraph 2−1−6, Safety Alert, and subparagraph 5−2−14a2, Validation of Mode C Readout, may be applied. Air traffic managers may authorize the temporary suspension of this requirement when target clutter is excessive.

***REFERENCE−***
*FAA Order JO 7110.65, Para 5−2−21, Altitude Filters.*

## 12−6−4. USE OF STARS QUICK LOOK FUNCTIONS

**a.** When operational benefits are gained by using the QUICK LOOK function, specify the following in a facility directive or an LOA:

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

**2.** Communications changeover points.

3. Transfer of control points.
4. Hours or conditions under which facility policy prohibits use of these functions.
5. The responsibility of the local control position to determine whether use of QUICK LOOK function is satisfactory or some other mode of data transfer is to be used; e.g., voice call or computer handoff.

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

## 12−6−5. AUTOMATION PROGRAM CHANGES

The air traffic manager of STARS facilities must:

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

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

1. Issue a facility directive describing the functional change/s and any resulting procedural change/s.
2. Coordinate any functional, procedural, and airspace change/s with the ARTCC providing automation interface.

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

***EXAMPLE−***

*“National operating system suitability testing completed, acceptable.”*

## 12−6−6. AUTOMATIC ACQUISITION/TERMINATION AREAS

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

1. Establish automatic acquisition areas for arrivals and overflights at ranges permitting auto-acquisition of targets prior to the ARTCC/ STARS-to-STARS automatic handoff area.
2. Coordinate with the adjacent automated facilities to ensure that computer handoffs willonly be initiated after the aircraft is within their facility's automatic acquisition area. Where this is not feasible due to airspace assignment, facility directives must require the use of an appropriate procedure specified in FAA Order JO 7110.65, Air Traffic Control, to confirm the identity of all aircraft handed off prior to auto-acquisition.
3. Establish automatic acquisition areas for departing aircraft 1 mile or less from the runway end.
4. Establish automatic termination areas for arriving aircraft 1 mile or less from the runway threshold or, at satellite airports, the minimum radar coverage range/altitude whichever is greater.

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

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

**b.** The appropriate Service Area Director of Air Traffic Operations, may authorize a distance greater than specified in subparagraphs 3 and 4 above, where the operational conditions dictate.

## 12−6−7. MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA)

**a.** Facility air traffic managers may temporarily inhibit the MSAW, the Approach Path Monitor portion of MSAW, and/or the CA functions when their continued use would adversely impact operational priorities. Inform the appropriate Service Area Director of Air Traffic Operations when equipment or site adaptation problems preclude these functions from being used.

**b.** Facility air traffic managers are authorized to inhibit CA at specific operating positions if an operational advantage is gained.

**c.** MSAW General Terrain Maps (GTMs) must be kept current.

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

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

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

**2.** MSAW parameters are modified, as appropriate, to minimize the extent of inhibit areas as specified in the Standards and Guidelines for STARS.

**3.** An aural test of the MSAW speakers located in the operational quarters is included as part of the equipment checklist required during each watch. The purpose of this test is to ensure the aural alarm is functioning and audible to the appropriate operational personnel.

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

**5.** Tower aural alarm areas are identified.

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

## 12−6−8. APPROACH RUNWAY VERIFICATION (ARV)

ARV is a feature within STARS that provides visual and audible alerting for aircraft that may be aligned with the wrong surface, a closed runway, or the wrong airport.

***NOTE–***
*ARV processing/alerting is not available when TDWs are operating in direct sensor mode.*

**a.** ATMs may temporarily inhibit ARV when its continued use would adversely impact operational priorities.

**1.** A facility ATM may inhibit ARV at all or select STARS Terminal Controller Workstations (TCWs)/Tower Display Workstations (TDWs).

**2.** The ATM must notify the Service Area Director of Air Traffic Operations when a facility inhibits ARV, and the rationale for the decision.

**b.** Unless ARV is inhibited, audible alerting must not be disabled for any TDW.

**c.** Where adapted and enabled, ATMs must specify in a facility directive whether TRACON controllers are responsible for coordinating ARV alerts with towers that have a TDW.

**d.** Where adapted and enabled, ATMs must ensure a facility directive requires the overlying TRACON to coordinate ARV alerts with the appropriate tower under their jurisdiction that:

**1.** is not equipped with a TDW, or

**2.** is equipped with a TDW, but the TDW is not operational.

## 12−6−9. MAGNETIC VARIATION AT STARS FACILITIES

Air traffic managers must ensure that the magnetic variation of MSAW GTMs, and radar site settings coincide. The magnetic variation must be verified annually and a change of 3 degrees or more requires a recompiling of the affected map or maps.

***NOTE–***
*The adapted radar site settings are the primary reference for maintaining radar antenna alignment.*

***REFERENCE–***
*FAA Order JO 7210.3, Para 12−6−7, Minimum Safe Altitude Warning (MSAW) and Conflict Alert (CA).*
*FAA Order JO 7210.3, Para 12−6−10, MSAW GTM Cartographic Certification, Updates, and Recompilation.*

## 12−6−10. MSAW GTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION

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

**b.** The MSAW GTM must be recompiled by the AJV-A2 if:

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

**2.** The magnetic variation of the site changes by 3 degrees or more.

***NOTE–***
*Requests for new or recompiled MSAW GTMs are routed to AJV-A2. AJV-A2 can take up to eight weeks to build and deliver a GTM, particularly for mountainous terrain areas.*

## 12−6−11. DIGITAL MAP VERIFICATION

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

## 12−6−12. MODE C INTRUDER (MCI) ALERT PARAMETERS

**a.** Use the nominal value of parameters specified in the appropriate NAS Configuration Management Document and Site Program Bulletins for the MCI Alert functions, except for the base altitude parameter, as specified in subparagraphs b or c below. These parameters are set by the Operational Support Facility (OSF).

**b.** MCI Alert base altitude must be set at any value between ground level and 500 feet AGL at the discretion of the facility air traffic manager. Any instance of base altitudes above 500 feet AGL must be documented by the OSF.

**c.** Facility air traffic managers are authorized to temporarily adjust the MCI Alert base altitude at a sector(s)/position(s) when excessive MCI Alerts derogate the separation of IFR traffic. For the purpose of this section, temporary is considered to be of less than 4 hours duration, not necessarily continuous, during any calendar day. Log each occurrence on FAA Form 7230-4, when this procedure is being used, including the sector/position and temporary altitude.

**d.** Facility air traffic managers are authorized to inhibit the display of MCI Alert at specified sectors/position.

## 12−6−13. OPERATIONAL MODE TRANSITION PROCEDURES

**a.** Facilities must develop and maintain current detailed procedures for transition to and from the various automated and nonautomated modes of operation.

***NOTE−***
*The architecture of STARS allows for different operational modes during display component failures. For example, a system component failure could result in positions within the same facility operating in EASL, ESL, or FSL mode. Facilities are encouraged to take advantage of this capability to minimize the impact of display system outages.*

**b.** The transition plans must include as a minimum:

**1.** Transition decision authority; i.e., the individual responsible for making the transition decision.

**2.** Specific transition procedures.

**3.** Detailed checklists specifying the duties and the responsibilities for the OSIC and other appropriate positions. The checklist must include, as a minimum, the following information/procedures:

**(a)** Transition decision authority.

**(b)** Coordination/notification procedures (intra- and interfacility).

**(c)** Specific duties/responsibilities (including detection and resolution of potential conflicts).

***NOTE−***
*Whenever possible, coordination/notification procedures and duties/responsibilities should be listed in the sequence in which they are to be accomplished.*

## 12−6−14. RADAR SELECTION PROCEDURES

**a.** Facilities must develop and maintain current detailed procedures for selection of radar sites.

***NOTE−***
*The architecture of STARS allows for the selection of up to 16 different radars including short range and long-range radars at each display. This could result in positions within the same facility working and receiving radar information from different radars. Facilities are encouraged to take advantage of this capability to minimize the impact of radar outages, blind areas, limited radar coverage, etc.*

**b.** The selection plans must include as a minimum:

**1.** Radar selection decision authority; i.e., the individual responsible for making the radar selection decision.

**2.** Specific radar selection procedures.

**3.** Detailed checklists specifying the duties and the responsibilities for the OSIC and other appropriate positions. The checklist must include, as a minimum, the following information/procedures:

**(a)** Radar selection decision authority.

**(b)** Coordination/notification procedures (intra- and interfacility).

**(c)** Specific duties/responsibilities (including detection and resolution of potential conflicts).

***NOTE−***
*Whenever possible, coordination/notification procedures and duties/responsibilities should be listed in the sequence in which they are to be accomplished.*

## 12−6−15. MULTI-SENSOR RADAR OPERATIONS

**a.** Facilities must develop and maintain current detailed procedures for selection and use of multi-sensor radar operations.

***NOTE−***
*The architecture of STARS allows for the use of multi-sensor radar coverage. This could result in positions within the same facility working in both single sensor slant range mode and multi-sensor mode. Facilities are encouraged to take advantage of this capability to minimize the impact of radar outages, blind areas, limited radar coverage, etc.*

**b.** The plans must include as a minimum:

**1.** Decision authority to use multi-sensor coverage; i.e., the individual responsible for making the decision.

**2.** Specific multi-sensor radar procedures.

**3.** Detailed checklists specifying the duties and the responsibilities for the OSIC and other appropriate positions. The checklist must include, as a minimum, the following information/procedures:

**(a)** Decision authority to use multi-sensor radar coverage.

**(b)** Coordination/notification procedures (intra- and interfacility).

**(c)** Specific duties/responsibilities (including detection and resolution of potential conflicts).

***NOTE−***
*Whenever possible, coordination/notification procedures and duties/responsibilities should be listed in the sequence in which they are to be accomplished.*

# Section 7. Safety Logic Systems Operations Supervisor/CIC Procedures

## 12−7−1. ASDE SYSTEM OPERATION

**a.** Safety logic systems are software enhancements to the ASDE systems (ASDE-3, ASDE-X and ASSC) that predict the path of aircraft landing and/or departing, and/or vehicular movements on runways. Visual and aural alerts are activated when the safety logic projects a potential collision.

**b.** The safety logic system must be operated in a full core alert runway configuration. (In ASDE-X/ASSC, when rain configuration is selected, it includes full core alerting capabilities.)

**c.** In the event of a simultaneous loss of Multilateration (MLAT) and ADS-B data, or an ADS-B data loss when MLAT is not present, ASDE-X/ASSC will remain operational. In this case, ASDE-X/ASSC will operate in radar-only mode. The system automatically transitions to radar-only mode when it senses a simultaneous MLAT and ADS-B data loss, or an ADS-B data loss when MLAT is not present.

**d.** When ASDE-3 and/or AMASS is in maintenance mode, AMASS data must be considered invalid and the system must be taken offline. The OS/CIC must validate, upon resuming normal AMASS operations, that runway configurations and other user settings are adequate for operational use.

***NOTE−***
*Action to change AMASS online/offline status is a technical operations function. ASDE-X/ASSC safety logic will automatically be disabled when the system is in maintenance mode.*

**e.** When a runway becomes unavailable for aircraft operations for an extended period of time, the runway should be entered as “closed” in the safety logic system. Facility procedures should be developed to address using the safety logic system in this capacity.

**f.** Construction projects in the vicinity of runways may cause nuisance or false alerts. It is the responsibility of air traffic facility management to mitigate alerts.

1. Air traffic facilities must use the ASDE-X/ASSC “Inhibit Area” map feature to manage construction related alerts when possible.
2. National Airway Systems Engineering (NAS Engineering) is able to assist facilities that do not have access to the ASDE-X/ASSC “Inhibit Area” map feature to manage construction related alerts. Facilities must contact NAS Engineering for assistance 30 to 45 days before construction via email at 9-AMC-ATOW-ASDES@faa.gov.

**g.** Changes to the airport movement areas which require updated ASDE-X/ASSC Maps can be provided by NAS Engineering. Facilities must contact NAS Engineering for assistance 30 to 45 days before construction via email at 9-AMC-ATOW-ASDES@faa.gov.

**h.** ASDE-X/ASSC false targets may be temporarily track dropped after positive verification has been done by pilot/vehicle operator position report or controller visual observation. When a false target is temporarily dropped, it must be noted on FAA Form 7230-4, Daily Record of Facility Operation.

***REFERENCE−***
*FAA Order JO 7110.65, Para 3−6−2, Identification.*

**i.** The air traffic manager may authorize a real target to be inhibited from safety logic processing when the target will likely generate a nuisance alert.

## 12−7−2. ENSURE STATUS

**a.** The OS/CIC is responsible for ensuring that the Safety Logic System is set for the correct runway configuration.

**b.** The OS/CIC must ensure that the operational status of the Safety Logic System is known to all operational personnel.

**c.** When a status change is made to the Safety Logic System all personnel assigned an operational position must be notified verbally.

**d.** When any status change is made to the Safety Logic System it must be noted on FAA Form 7230-4, Daily Record of Facility Operation. Such status must be shown in the facility Status Information Area (SIA). The OS/CIC must ensure that all outages are carried over on applicable logs.

## 12−7−3. MONITOR ALERTS AND ENSURE CORRECTIVE ACTION

**a.** The OS/CIC must ensure that the Safety Logic System is monitored and all alerts are complied with.

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

***REFERENCE−***
*Pilot/Controller Glossary Term- Safety Logic System Alerts.*
*FAA Order JO 7210.632, Chapter 2, Reporting Requirements.*
*FAA Order JO 7210.632, Appendix A, Mandatory Occurrence Report Criteria.*

## 12−7−4. RAIN CONFIGURATION

**a.** Due to the required sensitivity of surface movement radars, numerous false targets may be generated by moderate to extreme precipitation. During these periods the ASDE Safety Logic Systems should be operated in rain configuration. Should precipitation of this magnitude occur or be imminent, rain configuration may be applied to avoid the likelihood of false alerts.

**b.** When the event that led to placing the system into rain configuration is no longer a factor, the Safety Logic System must be reset to a normal configuration.

***NOTE−***
*When AMASS is in rain configuration all safety logic alerts with the exception of arrivals to a closed runway are inhibited and AMASS is not in full core alert status.*

## 12−7−5. LIMITED CONFIGURATION

**a.** Under certain circumstances, there may be a need to operate the Safety Logic System in limited configuration. The limited configuration must only be used to temporarily inhibit persistent false alerts. The term "persistent false alert" refers to frequent false alerts caused by continuous or repetitive circumstances. False alerts caused by random events or circumstances of short duration are not considered "persistent false alerts." The determination of "persistent false alerts" is at the discretion of each OS/CIC.

**b.** Due to the required sensitivity of surface movement radars, numerous false targets may be caused by precipitation of moderate or greater intensity. Should precipitation of this magnitude occur or be imminent at locations where ASDE does not have rain configuration availability, limited configuration may be applied to avoid the likelihood of false alerts.

**c.** When it is necessary to operate the ASDE-X/ASSC Safety Logic System in limited configuration due to "persistent false alerts," notify Technical Operations so that corrective action can be taken.

**d.** When an AMASS false alert is received, limited configuration must only be used until Technical Operations verifies that the system is functioning properly and that the data necessary to analyze the alert has been obtained. Analysis and resolution of the circumstances surrounding the false alert will be determined by Technical Operations at a later date.

**e.** When limited configuration is applied, it must be noted on FAA Form 7230-4, Daily Record of Facility Operation, including the reason for the configuration change. Ensure that all limited configurations are carried over on applicable logs.

***NOTE−***

1. *For AMASS, the limited configuration disables all alerts except arrivals to a closed runway and is not considered full-core alert status.*
2. *For ASDE-X/ASSC the limited configuration disables all alerts except arrivals to and departures on a closed runway and is not considered full-core alert status.*

## 12−7−6. WATCH CHECKLIST

The Safety Logic System status must be included in the facility watch checklist. At a minimum, the following items must be reviewed:

**a.** Operational status.

**b.** Runway configuration.

**c.** Presentation of the Safety Logic System data on all ASDE system displays.

**d.** When test button is activated, the aural alert is heard, and the speaker volume is adequate.

# Section 8. VFR Waypoint Chart Program

## 12−8−1. POLICY

**a.** The VFR Waypoint Chart Program was established to provide VFR pilots with a supplemental tool to assist with position awareness while navigating visually in aircraft equipped with area navigation (RNAV) receivers. The program's purpose is to enhance safety, reduce pilot deviations, and provide navigation aids for pilots unfamiliar with an area in or around Class B, Class C, Special Use Airspace (SUA), and commonly flown mountain passes. The use of VFR waypoints does not relieve the pilot of any responsibility to comply with the requirements of 14 CFR part 91.

**b.** This program contains the process for developing and submitting requests for inclusion of VFR waypoints on VFR navigational charts.

## 12−8−2. DEFINITION

A VFR waypoint is a predetermined geographical point depicted on a chart for transitioning and/or circumventing controlled airspace, SUA, and/or commonly flown mountain passes, that is defined relative to a visual reporting point or in terms of latitude/longitude coordinates.

## 12−8−3. CRITERIA

Use the following criteria for establishing VFR waypoints on VFR navigation charts. Establishment of VFR waypoints should be minimized to reduce chart clutter and complexity. RNAV and Global Positioning System aircraft will more accurately fly over a specific point and this should be considered when developing VFR waypoints. Avoid placement of VFR waypoints directly over heavily populated or sensitive structures or areas; e.g., hospitals, government buildings, schools, power plants, etc.

**a.** Applications.

**1.** Avoidance of specific airspace; e.g., Class B, SUA, etc. VFR waypoints must not be used to define airspace boundaries.

**2.** Support VFR flyway routes with entry and exit points, and, when necessary, intermediate waypoints.

***NOTE−***
*For VFR routes, refer to Section 5, VFR Transition Route Program.*

**3.** Assist in identifying VFR checkpoints (visual reporting points) where the associated landmark is difficult to discern.

***NOTE−***
*When a VFR waypoint is associated with a VFR checkpoint, the name of that checkpoint must be used in ATC communications.*

**4.** Identify natural entry points for commonly flown mountain passes charted on VFR navigational charts. VFR waypoints are not to be used to create mountain pass routes. VFR waypoints that denote the entry of a commonly flown mountain pass must:

**(a)** Be collocated with a VFR checkpoint at the start of the confined terrain leading to the mountain pass.

**(b)** Be located at least 1 statute mile laterally from rapidly rising terrain.

**(c)** Identify the lowest elevation feature in reasonably close proximity (i.e., a stream or river channel).

**(d)** Avoid placement near features that may be obscured by clouds.

**5.** VFR waypoints are not for use in ATC communications; therefore, the VFR waypoint names are not pronounceable. If it is desired that a VFR waypoint be used for communications, then a new VFR checkpoint must be established. VFR checkpoints can be established by submitting a request to Aeronautical Information Services, through the Service Area Operations Support Group (OSG) describing the checkpoint and providing the latitude/longitude location.

**6.** VFR waypoints must not be used for those navigational aids, airports, etc., which currently exist in the Aeronautical Information Services (AIS) database. When a VFR waypoint is desired where a fix already exists in the database, locate the VFR waypoint in the general vicinity considered the next most desired location.

**b.** VFR chart depiction:

**1.** VFR waypoint names (for computer-entry and flight plans) consist of five letters beginning with the letters "VP" and are retrievable from navigation databases.

**2.** VFR waypoints associated with VFR checkpoints will not have the waypoint symbology depicted; the Interagency Air Committee (IAC) checkpoint symbol will remain. Only the five-letter identifier will be charted next to the name of the checkpoint.

**3.** VFR waypoints will be illustrated using the IAC waypoint symbology.

**4.** The latitude/longitude for each waypoint will be published in and accessible through FAA Order JO 7350.9, Location Identifiers.

## 12−8−4. RESPONSIBILITIES

**a.** Proponent. Any interested party may recommend the addition of VFR waypoints to VFR navigation charts or helicopter charts via the appropriate air traffic facility.

**b.** Air traffic facilities must:

**1.** Prepare VFR waypoint recommendations. The most important task in preparing the recommendation is coordination with local aviation interests; i.e., Aircraft Owners and Pilots Association, FAA Safety Team (FAAST), Flight Service Station (FSS), military, law enforcement, etc. Flight Procedures and Airspace Group (AFS-420) concurrence is required in writing when establishing VFR waypoints associated with mountain passes.

***NOTE−***
*As FSSs play an integral part in the VFR flight planning process, they may serve as a valuable resource in identifying VFR waypoint recommendations.*

**2.** After consensus with all affected air traffic facilities and local aviation interests on the need and location of the proposed VFR waypoints, submit a package to the respective Service Area OSG containing:

**(a)** A new or revised VFR navigation chart depicting the location and five-letter name of each waypoint/checkpoint.

**(b)** A completed Appendix D, FAA Form 8260-2, Data Worksheet, in accordance with FAA Order 8260.19, Flight Procedures and Airspace. A list of available VFR waypoint five-letter names can be obtained from the Service Area OSG or from Aeronautical Information Services (AIS). Flight checks are not required.

**(c)** A textual description of each waypoint including the name and latitude/longitude.

**(d)** A graphic or satellite image with the precise point of the VFR waypoint depicted. It is critical that the depictions be easily readable by the Aeronautical Charting Group, En Route and Visual Charting Team in order to verify the position for accurate charting.

**(e)** Justification/supporting rationale, and Flight Procedures and Airspace Group (AFS-420) concurrence for VFR waypoints for mountain passes.

**c.** The Service Area OSG must:

**1.** Provide assistance to the air traffic facility, if requested, to prepare the textual description of each waypoint including the name and latitude/longitude and/or to depict the VFR waypoints on a satellite image.

**2.** Approve the VFR waypoint charting and ensure compliance with the prescribed criteria. If approval is granted, the Service Area OSG must forward the package to Aeronautical Information Services at least 12 weeks prior to the planned implementation date. The planned implementation date must coincide with a publication date of the respective VFR navigation chart.

**3.** Coordinate overall activity when multiple facilities are affected by the planned use of VFR waypoints such as numerous VFR waypoints on a VFR chart.

**4.** Maintain the VFR waypoint forms (FAA Form 8260-2, Radio Fix and Holding Data Record) to include corrections, changes, or modifications, as necessary.

**5.** Conduct annual reviews.

**d.** Aeronautical Information Services, Aeronautical Data Team (ADT) must:

**1.** Review the incoming VFR waypoint proposals for completeness.

**2.** Verify that the requested five-letter "VP" combinations are available for use.

**3.** Forward the package to Aeronautical Charting Group, Enroute and Visual Charting Team for verification of the geographic positions.

**4.** Upon verification, the Visual Charting Team must notify the Aeronautical Data Team prior to publication in the National Flight Data Digest (NFDD).

**5.** Maintain VFR waypoint forms (FAA Form 8260-2) to include corrections, changes, or modifications, as necessary.

**6.** After coordination, publish VFR waypoint geographic position in FAA Order JO 7350.9.

**e.** Visual Charting Team must:

**1.** Review the incoming VFR waypoint proposals for completeness.

**2.** Coordinate with the Aeronautical Data Team for the resolution of any geographic positions that require FAA Form 8260-2 revisions; provide the Aeronautical Data Team with verification that geographic positions are ready for publication in the checkpoints are published in the NFDD.

**3.** Coordinate with the Aeronautical Data Team to ensure that any new or revised VFR geographic positions are ready for publication in the checkpoints are published in the NFDD.

**4.** Publish VFR waypoint geographic positions on appropriate VFR charts.

# Section 9. Low Altitude Authorization Notification Capability

## 12−9−1. PROGRAM DESCRIPTION

**a.** LAANC is the term for the software used to automate small Unmanned Aircraft System(s) (sUAS) operator requests for access to controlled airspace at or below 400 feet AGL. LAANC handles authorization requests under 14 CFR § 107.41 (part 107) and 49 U.S.C. § 44809 (section 44809). LAANC's major elements include FAA data sources (e.g., Unmanned Aircraft System Facility Maps (UASFM), airspace restrictions, and airspace boundaries) for use in determining authorizations, and the ability for FAA-approved LAANC UAS Service Suppliers (USSs) to process authorization information and interface with sUAS pilots.

**b.** LAANC functions at the operational planning stage, identifying intended sUAS operations and managing the associated authorizations. Part 107 and section 44809 authorization requests within the UASFM can be approved automatically, in near real time. Part 107 authorization requests that fall above the UASFM and below 400 feet AGL require approval by the Air Traffic Manager (ATM). Part 107 operators may submit a request for access to airspace up to 90 days in advance. Section 44809, sUAS limited recreational operators' request for access above the UASFM will not be processed in LAANC.

## 12−9−2. UAS FACILITY MAPS (UASFM)

UASFMs have been developed by FAA facilities to establish the altitude at and below which sUAS may be granted automatic authorization. USSs will use current FAA approved UASFMs in conjunction with other required data sources and will operate within agreed LAANC USS operating rules.

## 12−9−3. SMALL UAS (SUAS) ATC AUTHORIZATIONS

Both part 107 and section 44809 require all sUAS operators to obtain airspace authorization from Air Traffic to fly in Class B, Class C, or Class D airspace or within the lateral boundaries of the surface area of Class E airspace designated for an airport. A request for authorization will contain data from an sUAS operator to a USS providing flight information about the area of the proposed operation. If the area of operation falls within a UASFM, LAANC will provide an automatic authorization and deliver this authorization to the ATM. The facility retains the ability to rescind any specific authorization(s) as needed, whether after automatic approval or approval through the further coordination process (see 12−9−4).

## 12−9−4. FURTHER COORDINATION

**a.** “Further coordination” is the term used when an authorization processed via LAANC cannot be automatically approved. An example would be if a part 107 authorization request is sent by an operator to a USS, and the planned operation is above a UASFM altitude. Further coordination is available only to part 107 operators. A safety justification may be submitted by the operator in conjunction with the airspace authorization request for consideration.

***NOTE−***
*This Safety Justification is a one-way transmittal from the part 107 operator that is for use with further coordination requests only. The Safety Justification is not precoordinated with the ATM and is optional information that the part 107 operator may choose to include to assist the ATM in determining whether to approve or deny the further coordination request.*

**b.** Further coordination requests in LAANC are not automatic and require the approval of the ATM. If a response is not provided, further coordination requests will expire 3 hours prior to the proposed operator's start time.

**c.** Facilities are not authorized to engage directly with operators to process further coordination requests.

***NOTE−***
*LAANC does not process Certificates of Waiver or Authorization (COAs). COAs are processed exclusively in DroneZone in collaboration with the governing Regional Service Center. Any attempt by an operator to submit mitigations or COAs through LAANC will not be accepted.*

## 12−9−5. FACILITY RESPONSIBILITIES

**a.** The ATM must:

**1.** Request access to LAANC by providing an email address and that of any authorized facility personnel to 9-AJT-LAANCPOC@faa.gov.

**2.** Use a web browser to access LAANC via https://laanc-atc.faa.gov.

**3.** Review the Facility Preferences page to ensure the Approval Facilities information is correct.

**4.** Ensure further coordination requests are reviewed for approval consideration. The only actions available for requests awaiting further coordination are to “APPROVE” or “DENY” the operation. When denying, the facility may choose to issue a reason for the denial from a prepopulated list to provide the proponent information for modifying the request. If denied, regardless of whether a reason is given, it is the responsibility of the proponent to submit a new request for approval consideration.

**b.** When receiving a part 107 authorization or approving a part 107 authorization above a UASFM altitude, the ATM or authorized facility personnel must use their best judgment to determine if the information needs to be disseminated to the controller. If it is determined that the controller should know, then it will be distributed to the appropriate position(s).

***NOTE−***
*LAANC will allow an operator to request an altitude above a UASFM altitude as long as the requested altitude is not above 400 ft AGL as per 14 CFR part 107.*

**c.** Any previously issued authorization(s) may be rescinded via LAANC. The operator must acknowledge the action before the previously issued authorization is canceled. If no acknowledgement is received and/or timeliness is a factor, the operator may be contacted via telephone.

# Section 10. UAS Facility Maps (UASFM)

## 12−10−1. POLICY

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

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

**1.** Airspace changes.

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

**3.** Changes in procedures.

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

**c.** If changes need to be made to the UASFM, forward your request to uasfm@faa.gov.

## 12−10−2. RESPONSIBILITY

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

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

## 12−10−3. ASSUMPTIONS

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

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

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

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

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

***NOTE−***
*Part 107 allows operators to fly 400 feet AGL and if within a 400-foot radius of a structure/obstacle, they can fly to the height of the structure plus 400 feet. However, the maps will only be evaluated to 400 feet AGL. For any request above 400 feet AGL, regardless of proximity to a structure/obstacle, headquarters will coordinate with the facility.*

**f.** All UAS operations that are requested at or below the altitude listed for the segment for where the flight will occur will be approved without facility coordination. However, the facility will receive a copy of the authorization.

**g.** Zero (0) altitude means no UA flights authorized without facility coordination.

**h.** For UAS flights that take place in two or more segments, the lowest published altitude will be used.

**i.** When a UA operation has been approved, the affected facilities will receive an email that will include the responsible person's contact information, location, altitude, time and date of UA operation.

**j.** In the event two facilities overlap the same segment, the lowest altitude will be used for both facilities.

**k.** Items to consider:

**1.** Part 107 operators must comply with all of the part 107 rule (i.e., part 107 operators must maintain a visual line of sight with their UA, they must yield right-of-way to all aircraft, they are solely responsible for not operating in prohibited or restricted areas without prior permission, they are solely responsible for not operating in temporary flight restricted airspace, and they are solely responsible for not operating over nonparticipating people).

**2.** Diverse vector areas (DVA) and aircraft performing minimum departure climbs at 200 feet per mile.

**3.** Obstructions already present (i.e., a segment with 60-foot trees would allow UA to operate safely at 50 feet).

**4.** Low altitude operations (i.e., helipads).

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

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

**a.** Each facility must review the assumptions section.

**b.** Each facility will work collaboratively with their workforce to develop the UA map. Each segment must be evaluated to determine the highest altitude a UA could operate without any coordination to the facility.

**c.** Facilities must evaluate all segments for the maximum altitude they will allow without further coordination within their area of jurisdiction for flights between 0-400 feet in 50-foot increments.

**d.** For partial segments, facilities only need to evaluate the area they have jurisdiction over but will show the altitude for the entire segment.

**e.** For segments outside your area of jurisdiction, leave the segments on the spreadsheet blank.

**f.** In areas where the overriding rule/law specifies no UAS operations (e.g., the DC FRZ), facilities are requested to complete the map as though operations could be permitted without the overriding regulations. There may be situations where law enforcement, DoD, etc., could ask for authorization under part 107 and have the ability to operate in the area.

**g.** Once you have finished the spreadsheets, email them to uasfm@faa.gov.

## 12−10−5. PROCEDURES TO CHANGE UAS FACILITY MAP (UASFM) ALTITUDES

Facilities must use one of the following methods when making/requesting changes to their UASFM grid values:

**a.** Changes made using the web-based tool https://uasfm.faa.gov are immediately reflected on the facility UASFM. The UAS Service Suppliers (USS) have up to 24 hours after the changes are submitted to update their database.

**1.** The UASFM web-based tool can only be accessed using Google Chrome or Microsoft Edge web browsers.

2. To obtain access, facilities must follow the instructions contained on the UASFM web-based tool homepage.

**b.** Coordinate changes through HQ AJV-A utilizing the following procedures:

1. Request files via the uasfm@faa.gov email address.
2. Complete the Excel spreadsheet, inputting information on sheet 1 only. Altitude values must be 0-400 in 50 foot increments.
3. Evaluate all segments that are fully or partially contained within the lateral boundary of your airspace.
4. Save completed worksheet as XXX.xls, in which XXX is the facility ID.
5. Return the completed spreadsheet to uasfm@faa.gov include the following information in the email:

**(a)** Use only your facility ID in the subject line.
**(b)** Attach the spreadsheet.
**(c)** List your Map POC(s) (name, email address, phone number).
**(d)** List your authorization POC(s) (name, email address, and phone number).
**(e)** Date UASFM completed.

## 12−10−6. PART 107 OPERATION APPROVALS

**a.** The ATM must appoint a primary and secondary facility UAS Authorization POC who will receive notification of the final authorization from Headquarters. Forward any changes to the facility UAS Authorization POC to 9-AJT-LAANCPOC@faa.gov.

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

**b.** If part 107 operations cannot be authorized using the UASFM, facilities will be contacted by Headquarters/Service Centers for coordination.

**c.** Facilities must evaluate the request for authorization for impact to the operation. Waivers that list any mitigations pending approval by Headquarters/Service Centers will be included with the authorization request.

**d.** If the facility deems the impact of the operation to be acceptable as proposed, the operation will be authorized.

**e.** If the facility deems the impact to be unacceptable as proposed, they may prescribe mitigations on the operation, which may include but are not limited to:

1. Limits on altitude.
2. Adjusting times and dates of operation.
3. Operator notification to the Facility (i.e., start, stop times).
4. Adjusting Location.

**f.** For operations on the airfield, procedures between the facility and the proponent are a prerequisite to obtaining an airspace authorization.

**g.** If the facility cannot agree to acceptable mitigations with the proponent, the operation must be denied.

# Section 11. UAS Operations at Towered Airports

## 12−11−1. SUAS OPERATIONS OVER NON-MOVEMENT/CLOSED MOVEMENT AREAS

**a.** sUAS operations on or in the vicinity of an airport may be approved in Class B, C, or D airspace or within the lateral boundaries of the surface area of Class E airspace designated for an airport at or below 400 feet above ground level (AGL) without any additional mitigations provided the following conditions are met:

**1.** Restricted to non-movement areas as defined by Airport Authority and Airport Traffic Control Tower LOA, or Airport Layout Plan (ALP), or

**2.** Restricted to movement areas as defined by Airport Authority and Airport Traffic Control Tower LOA, or ALP which have been closed by Airport Authority.

**3.** Limited to locations and altitudes that do not require services for the sUAS and do not interfere with traffic patterns or manned aircraft operations.

**4.** In the event of command-and-control link failure, the sUAS must remain within the area covered under the authorization and land as soon as practicable.

**b.** Operational requests outside of those covered under subparagraph a above, require additional safety analysis and may be restricted through additional conditions or mitigations. Safety analysis must be conducted in accordance with the Air Traffic Organization Safety Management System (SMS) Manual.

# Chapter 13. Facility Statistical Data, Reports, and Forms

## Section 1. General Information

### 13−1−1. GENERAL

Since the inception of ATC, there has been some method of recording the volume of air traffic activity. OPSNET is the official data reporting system as per FAA Order JO 7210.55, Operational Data Reporting Requirements. All air traffic facilities, except FSSs, must report traffic count information daily through OPSNET.

The FAA collects and analyzes these data to make decisions on, but not limited to, budgeting, forecasting, planning, programming new equipment, public dissemination, and historical analysis. Because of its broad application and national use, it is imperative the gathering of data be both standardized and accurate. Two basic requirements must be met for an operation count: the facility must be responsible for providing service to the aircraft, and the service provided must qualify using the guidelines established throughout the remainder of this chapter. Air traffic managers must ensure that the intent of the provisions in this chapter is fulfilled.

### 13−1−2. COUNTING METHODS

Traffic counts may be counted either manually or through the use of nationally deployed automated counting programs (i.e., CountOps). The accuracy of automated counts must be validated annually to be within plus/minus 3 percent of the actual traffic count. Annual validation of traffic counts for other purposes such as “classification” meets this requirement.

### 13−1−3. QUESTIONS OR CHANGES

Any questions as to how an operation should be counted or recommendations for changes to procedures should be forwarded to the appropriate service area for resolution. Service areas will forward their questions or recommendations to the appropriate service unit.

### 13−1−4. SUMMARY OF STATISTICAL REPORTS AND FORMS

The table below provides a quick reference for reporting requirements in this chapter. The OPSNET system provides the ability to input the required data as described below. (See TBL 13−1−1.)

*TBL 13−1−1*

**Reporting Requirements**

| Facility Type | Report |
|---|---|
| *Type 1 tower without radar*<br>*Type 3 combination radar approach control and tower with radar (tower portion)*<br>*Type 4 combination nonradar approach control and tower without radar (tower portion)*<br>*Type 5 nonapproach control tower*<br>*Type 6 combined control facility (tower portion)*<br>*Type 7 tower with radar*<br>*Type 11 Federal Contract Tower* | *Itinerant IFR arrivals and departures*<br>*Itinerant VFR arrivals and departures*<br>*Local operations*<br>*IFR overflights*<br>*VFR overflights* |
| *Type 2 terminal radar approach control (TRACON)*<br>*Type 3 combination radar approach control and tower with radar (TRACON portion)*<br>*Type 4 combination nonradar approach control and tower without radar (TRACON portion)*<br>*Type 6 combined control facility (TRACON portion)*<br>*Type 9 combined TRACON* | *Itinerant IFR arrivals and departures to all airports*<br>*Itinerant VFR arrivals and departures to all airports*<br>*IFR overflights*<br>*VFR overflights* |

## 13−1−5. CATEGORIES OF OPERATIONS

**a.** All itinerant and overflight operations are reported in the following categories:

**1.** Air Carrier: Operations by aircraft identified in Appendix 3, Air Carrier for Air Traffic Activity Operations Count, which use three-letter company designators.

**2.** Air Taxi: Operations by aircraft other than those identified in Appendix 3 which use three-letter company designators or the prefix “T" (TANGO) or “L" (MEDEVAC).

***NOTE−***
*Air Taxi operators who do not have an FAA-issued designator have been authorized to use the prefix “T” or “L”.*

**3.** Military: All classes of military operations.

**4.** General Aviation: Civil operations not classified as air carrier or air taxi.

**b.** All local operations are reported in the following categories:

**1.** Civil: All civilian operations, including local flights by air carrier and air taxi aircraft.

**2.** Military: All classes of military operations.

# Section 2. Itinerant Operations

## 13−2−1. TABULATION

**a.** Count IFR itinerant operations as follows:

**1.** One count for an aircraft on an IFR flight plan or a special visual flight rule (SVFR) clearance that:

**(a)** Takes off.

**(b)** Lands.

**2.** One count for aircraft on an IFR flight plan that executes a missed approach procedure.

**3.** One count for a VFR aircraft that requests to practice the published missed approach procedure when approved separation is provided by the tower and TRACON.

**4.** One count for a SVFR clearance operating wholly within the Class D or Class E surface area, e.g., local SVFR making a series of landings and takeoffs (towers).

***NOTE−***
*When an aircraft operates on a SVFR clearance for a series of VFR patterns and landings, only one instrument count must be taken for the SVFR clearance, while each takeoff and landing is tabulated as a local operation.*

**5.** One count for each aircraft practicing instrument procedures either on an IFR flight plan or VFR (if approved separation is provided) that:

**(a)** Takes off from a complete stop and practices an instrument departure.

**(b)** Practices an instrument approach procedure.

**b.** Count VFR itinerant operations as follows:

**1.** One count for an aircraft operating VFR that:

**(a)** Takes off.

**(b)** Lands.

**2.** Two counts for each low approach below traffic pattern altitude (one landing and one taking off), a stop and go operation, or touch-and-go operation.

***NOTE−***
*Consider operations of more than one aircraft operating in a formation as a single aircraft. If the formation breaks up into smaller formations, consider each additional formation as a separate aircraft.*

# Section 3. Local Operations

## 13−3−1. TABULATION

Count local operations as follows:

**a.** One count for an aircraft departing the airport area for a designated practice area and one count for the aircraft returning from the designated practice area.

**b.** Two counts for each low approach below traffic pattern altitude that is a stop and go or touch-and-go operation.

# Section 4. Overflight Operations

## 13−4−1. TABULATION

**a.** Count IFR overflight operations as follows: One count for each segment of flight when an aircraft on an IFR flight plan or SVFR clearance transits the airspace. A TRACON that hands an aircraft off to the tower and the aircraft returns to the TRACON, count the additional portion as a separate segment.

**b.** Count VFR overflight operations as follows:

One count for each segment when an aircraft operating VFR transits the airspace. A TRACON that hands an aircraft off to the tower and the aircraft returns to the TRACON, count the additional portion as a separate segment.

***NOTE−***
*Consider operations of more than one aircraft operating in a formation as a single aircraft. If the formation breaks up into smaller formations, consider each additional formation as a separate aircraft.*

# Section 5. Amending and Reviewing Data

## 13−5−1. AMENDED OPSNET DATA

Corrections must be entered into OPSNET no later than the 15th day of the following reporting month. Exceptions to this rule must be requested and approved through the Office of Performance Analysis, NAS Data and Integration.

## 13−5−2. ANALYSIS AND REVIEW

Data are available for analysis and review through the following website: https://aspm.faa.gov. Select the OPSNET link to view data. Use the ASPM website links for inquires about data or to request enhancements to the reporting system.

# Part 4. FLIGHT SERVICE STATIONS

# Chapter 14. Flight Service Operations and Services

## Section 1. General

### 14−1−1. OPERATING POSITION DESIGNATORS

**a.** The following designators may be used to identify operating positions in an FSS. (See TBL 14−1−1.)

*TBL 14−1−1*

**Operating Position Designators**

| | Designator | Position |
|---|---|---|
| 1. | FD | Flight Data |
| 2. | IF | Inflight |
| 3. | N | NOTAM |
| 4. | OM | Operations Manager |
| 5. | OS | Operations Supervisor* |
| 6. | PF | Preflight |
| 7. | WO | Weather Observer |

*The Operations Supervisor (OS) position may be staffed by an Operations Supervisor, a Controller-in-Charge (FAA) or Designated Lead Specialist (FCFSS).

**b.** Facility managers may use designators other than those listed to accommodate local situations.

### 14−1−2. TEMPORARY FSS

**a.** Employ temporary FSSs to assure that the aviation public is afforded adequate services. Temporary facilities may be established when requested by flying organizations, cities, and other political subdivisions to assist in the operation of fly-ins, air races, etc.

**b.** Each request for a detail of FAA personnel and/or equipment should be carefully considered with regard to the actual need for the service. When it is determined that the service is required and that the required personnel/equipment can be made available without jeopardizing FAA activities, Flight Services Operations Service Area Offices should accede to the request.

### 14−1−3. FLIGHT PLAN AREA

The Chart Supplement lists each public-use airport and its associated FSS. As changes occur, determine the flight plan area assignments as follows:

**a.** The Flight Service Safety and Operations Group must assign a new airport to the nearest FSS regardless of regional boundaries. This criterion must also be used as the determining factor for establishing flight plan areas or airport reassignments associated with FSS commissioning, decommissioning, or functional changes.

**b.** Make adjustments to the flight plan area assignment through interfacility coordination with Flight Services Safety and Operations Group approval.

**c.** Where databases are shared, facility managers may develop local procedures to facilitate the handling of flight data across flight plan area boundaries.

***EXAMPLE−***

*An aircraft departs Dillingham but activates a VFR flight plan with Kenai Radio. Since both facilities share a database, Kenai may activate the flight plan, providing local procedures have been developed.*

## 14−1−4. ICSS INTRODUCTORY ANNOUNCEMENT

**a.** FSS facilities using ICSS equipment must provide an introductory announcement to alert pilots they are accessing the ICSS system.

***EXAMPLE−***

*WELCOME TO THE (facility name) FLIGHT SERVICE STATION. FOR FLIGHTS OUTSIDE OF UNITED STATES CONTROLLED AIRSPACE, CHECK DATA AS SOON AS PRACTICAL AFTER ENTERING FOREIGN AIRSPACE, AS OUR INTERNATIONAL DATA MAY BE INACCURATE OR INCOMPLETE. ADVISE THE BRIEFER YOU HAVE THE INTERNATIONAL CAUTIONARY ADVISORY. TOUCH-TONE USERS MAY PRESS (appropriate code) FOR A BRIEFER OR (appropriate code) FOR THE MAIN MENU OF SERVICES. IF YOU ARE USING A PULSE OR ROTARY TELEPHONE, PLEASE REMAIN ON THE LINE AND YOUR CALL WILL BE SEQUENCED FOR THE NEXT AVAILABLE BRIEFER.*

**b.** Newly commissioned facilities may expand the introductory announcement to include additional access instructions until users become familiar with the system- for a period not to exceed 6 months from the date of system commissioning.

**c.** With Flight Service Safety and Operations Group approval, facilities may add additional menu instruction for special purpose requirements, for example, coastal routes.

# Section 2. Position/Service Information Binders

## 14−2−1. RESPONSIBILITY

**a.** The air traffic manager must provide position binders, or electronic equivalent, to include, but not be limited to, procedures for accomplishing position related duties and responsibilities as outlined below. Additionally, examples and formats must be included for seldom-used procedures. Cross-references to documents and lists contained in other publications may be used where applicable. The air traffic manager may assign those functions, detailed below, to the appropriate position(s) as facility needs dictate but must provide those items appropriate for each position in the binders.

**b.** The air traffic manager must retain one copy of the completed facility standard operating procedures directive in the operations area and distribute applicable sections to the positions to which they apply.

## 14−2−2. BOUNDARIES

Flight Plan Area: Provide a narrative and/or graphic depiction of the flight plan area. This includes areas covered when accepting flight plan responsibility for part-time facilities.

## 14−2−3. POSITIONS/SERVICES

**a.** Pilot Briefing:

**1.** List and/or specify preflight briefing display.

**2.** Specify flight plan handling procedures.

**b.** In-Flight:

**1.** Document aircraft contacts.

**2.** List control frequencies/dial code information.

**3.** Specify local airport advisory/remote airport information service (RAIS)/remote airport advisory (RAA) procedures.

**4.** Specify SVFR procedures.

**5.** Specify aircraft orientation/emergency procedures.

**6.** Specify PIREP handling procedures.

**7.** Specify procedures for altimeter check.

**c.** NOTAM Handling:

**1.** List authorized sources/telephone numbers. Data may be stored and displayed electronically, where available.

**2.** Specify NOTAM dissemination procedures.

**3.** Specify NOTAM currency/display procedures.

**d.** Flight Data:

**1.** Specify military flight plan handling/coordination procedures.

**2.** Specify notification procedures for military training activities, including MTRs and MOAs.

**3.** Specify IFR/Defense VFR (DVFR), ADIZ, Canadian, Mexican, and ICAO procedures with examples.

4. Specify customs notification procedures.
5. Specify search and rescue notification procedures.
6. List airport search/contact telephone numbers.

# Section 3. Operations

## 14−3−1. AIRPORT CONDITION FILE

Maintain a current file of all public use civil landing areas within the FSSs flight plan area. Post the latest available information regarding airport conditions and facilities on the current FAA Airport Master Record (FAA Form 5010-1). Review the National Flight Data Digest, and post changes not previously received.

## 14−3−2. LANDING AREA STATUS CHECKS

To the extent that their operational duties permit, FSS air traffic managers are encouraged to visit airports and to contact airport managers. Operational changes in airport conditions, facilities, or services that are observed by or reported to the FSS must be transmitted to System Operations Airspace and Aeronautical Information Services.

## 14−3−3. LIAISON VISITS

As practicable:

**a.** Visit attended landing areas at least once each year. Visit unattended fields at the discretion of the FSS air traffic manager. Rotate liaison visits among professional level specialists.

**b.** Make familiarization flights over the FSSs flight plan area and particularly the area within 100 miles of the station. This will enable specialists to acquire and maintain knowledge of the landmarks and the facilities used in aircraft orientation and pilot briefings. Combine familiarization flights and liaison visits as practicable.

## 14−3−4. DUTIES

Typical duties for liaison visits and familiarization flights include:

**a.** Acquiring knowledge of airports, facilities, and topography.

**b.** Becoming familiar with landmarks.

**c.** Becoming familiar with the operation of aircraft equipment and navigation procedures.

**d.** Discussing FAA services.

**e.** Checking arrangements for handling NOTAMs.

**f.** Checking arrangements for the search of airports for missing aircraft.

**g.** Checking arrangements for alerting airport emergency equipment.

**h.** Checking the listing of airports and other facilities in aeronautical publications and their depiction on aeronautical charts.

**i.** Collecting information for the Airport Condition File and the aircraft orientation board.

**j.** Ascertaining the number of based aircraft and/or itinerant operations for planning FX or other communications needs to the associated FSS.

**k.** Obtaining pilots' opinions of the services provided by the station.

**l.** Practicing aircraft orientation procedures.

## 14−3−5. TIE-IN NOTAM RESPONSIBILITY

Tie-in FSSs must make arrangements with other agencies and facilities (NWS, U.S. Army, control tower, etc.) for the proper exchange of NOTAM information.

## 14−3−6. REGULATORY NOTAMS FOR PRESIDENTIAL TFR, SPECIAL SECURITY INSTRUCTIONS, OR EMERGENCY AIR TRAFFIC RULES

**a.** Upon receipt of these messages, the watch supervisor, controller-in-charge (CIC), or designated lead specialist (DLS) at the designated FSS must ensure that the applicable NOTAM is received at each of the remaining facilities.

**b.** The watch supervisor, CIC, or DLS of the designated FSS must be responsible for:

**1.** Logging the Presidential TFR (14 CFR section 91.141), Special Security Instructions flight restriction (14 CFR section 99.7), or Emergency Air Traffic Rules (14 CFR section 91.139) regulatory NOTAM in the facility log.

**2.** Notifying the specialists on duty that a Presidential TFR, Special Security Instructions, or Emergency Air Traffic Rules regulatory NOTAM has been issued, if applicable.

**3.** Posting the applicable Presidential TFR, Special Security Instructions, or Emergency Air Traffic Rules regulatory NOTAM in the facility status information area.

**4.** As part of the FSS watch checklist, the watch supervisor, CIC, or DLS must check to ensure that every applicable Presidential TFR, Special Security Instructions flight restriction, or Emergency Air Traffic Rules regulatory NOTAM has been received in the facility.

***NOTE−***
*The purpose of this procedure is to ensure that all flight service specialists are aware of applicable regulatory NOTAMs for Presidential TFRs, Special Security Instructions flight restrictions, or Emergency Air Traffic Rules so that pilots are briefed appropriately.*

# Section 4. Services

## 14−4−1. PREFILED FLIGHT PLANS

When an aircraft operator regularly makes two or more identical flights per week and the FSS air traffic manager believes that a prefiled flight plan program would provide beneficial service, a LOA must be executed between the concerned FSS and the scheduled operator, preferably operators certificated under 14 CFR part 121 or 14 CFR part 135, or the military desiring to prefile flight plans. The following criteria must be used in coordinating and implementing the prefiled flight plan program:

**a.** The LOA must provide for but not be limited to:

**1.** Each operator will furnish the appropriate FSS with a specific contact for coordination including the name, address, and telephone number of the party to notify if an aircraft becomes overdue, day or night.

**2.** Prefiled flight plans must be furnished for each flight, and signed by an authorized representative of the company.

**3.** Immediate notification by the operator of permanent cancellation or change of prefiled flight plans. This permanent data change must be accepted any time prior to the activation of the flight plan.

**4.** Separate and complete flight plans must be required when the operator desires to deviate from the prefiled data.

**5.** The operator must request activation with the appropriate FSS not more than 24 hours or less than 1 hour in advance of the estimated time of departure for prefiled flight plans. Flight plans may be automatically activated if this is contained in a LOA.

**6.** Violations of these procedures by the operator will be grounds to terminate the program with the operator.

**b.** Only those prefiled flight plans for which the operator has requested activation must be transmitted. Prefiled flight plans which are known to be in error, not going to depart, or any other reason which will cause a cancellation or a resubmission must not be transmitted to a control facility.

**c.** An LOA is not required if automated capabilities are available for aircraft operators to meet the criteria in subparagraph 14−4−1a through self-managed accounts.

## 14−4−2. PRACTICE INSTRUMENT APPROACHES

At locations providing Local Airport Advisories (LAA) where either an ARTCC or an approach control facility provides IFR separation to VFR aircraft practicing instrument approaches, provisions for handling such aircraft must be included in a letter of agreement.

***REFERENCE−***
*FAA Order JO 7110.65, Para 4−8−11, Practice Instrument Approaches.*

## 14−4−3. OPERATION OF AIRPORT LIGHTS

**a.** When a FSS is located at an airport or at a part-time tower location, the FSS air traffic manager may, under the terms of a LOA with the airport manager and the tower, assume this responsibility provided that:

1. The controls are extended into the station and are located conveniently at the operating position.
2. The operating quarters afford a sufficient view to determine the operating status of the lights without the specialist having to leave his/her post of duty or an indicator is provided in the station quarters which will show the actual operating status.

**b.** FSS operating less than 24 hours a day which have lighting control responsibility must be guided by the instructions in Part 3., Chapter 10, Section 6, Airport Lighting.

## 14−4−4. RUNWAY EDGE LIGHTS ASSOCIATED WITH MEDIUM APPROACH LIGHT SYSTEM/RUNWAY ALIGNMENT INDICATOR LIGHTS

FSSs having responsibility for the control of MALS/RAIL brightness must comply with the instructions in paragraph 10−6−9, Runway Edge Lights Associated with Medium Approach Light System/Runway Alignment Indicator Lights.

## 14−4−5. LOCAL AIRPORT ADVISORY (LAA)/REMOTE AIRPORT ADVISORY (RAA)/ REMOTE AIRPORT INFORMATION SERVICE (RAIS)

**a.** Provide LAA at FSSs during the published service hours when:

1. Located on the airport.
2. There is no operating control tower on the airport.
3. The facility has a continuous display of the automated weather data or manual weather observations.
4. A discrete frequency or the tower frequency, when the tower is closed, is available.
5. The pilot says, “I have the automated weather.”

**b.** Provide RAA at FSSs during the published service hours when:

1. The airport authority or airport manager has requested the service and the facility has the resources available to provide the service.
2. The annual traffic density and employee productivity factor is high enough to justify the cost of providing the service. Published service times may be adjusted by the facility manager to accommodate anticipated or forecast traffic density changes.

***EXAMPLE−***

*Winter service hours may be longer than summer service hours at airports that service several popular ski resorts. Therefore, the manager may choose to reduce or suspend summer service to mitigate short-term productivity concerns.*

3. There is no operating control tower on the RAA airport.
4. The facility has a continuous display of the automated weather data or manual observations are reported to the facility.
5. There is a remote discrete frequency or the tower frequency is remoted to the FSS, when the tower is closed.

**6.** The airport has a traffic density of 25,000 or more aircraft operations per year.

***NOTE−***
*If a new airport fails to deliver 25,000 aircraft operations during the first year of service, RAA must be discontinued. After the first year is completed and yields 25,000 or more aircraft operations, the decision to continue services is evaluated on the anniversary date and based on a minimum of 25,000 aircraft operations at the target airport during any consecutive twelve months of the previous 3 years.*

**7.** The facility's productivity factor is determined by dividing the annual RAA service count by 16,000.

***NOTE−***
*The productivity factor is compared to the number of employees used to provide the service and must be equal to or greater than the number of employees needed to provide the service. Normally about 2.5 employees are factored annually to provide 10 hours of service per day. (The .5 factor ensures employee vacations, training periods, sick days, and daily break periods).*

**c.** Provide RAIS to support special events at airports during NOTAM D service hours when:

**1.** The airport authority has requested the service at least 30 days in advance and the facility has the resources available to provide the service.
**2.** There is no operating control tower at the airport.
**3.** The facility has discrete communications capability at the airport.
**4.** The RAIS airport has automated weather reporting for the pilots with voice capability.
**5.** The pilot says, “I have the automated weather.”
**6.** A NOTAM D has been issued at least 24 hours in advance.

## 14−4−6. AUTOMATIC FLIGHT INFORMATION SERVICE (AFIS) - ALASKA FSSS ONLY

**a.** AFIS provides a continuous broadcast of recorded non-control information at airports in Alaska where a FSS provides local airport advisory service. The AFIS broadcast automates the repetitive transmission of essential but routine information such as weather, wind, altimeter, favored runway, braking action, airport NOTAMs and other applicable information. The information is continuously broadcast over a discrete VHF radio frequency (usually the ASOS frequency). Pilots are urged to listen to AFIS when arriving, departing, and operating within the airport advisory area as it relieves frequency congestion on the local airport advisory frequency. AFIS is not used in terminal areas and does not contain approach information.

**b.** Before transmitting, the voice message must be reviewed to ensure content is complete and accurate. Ensure specialist speech rate does not exceed 100 words per minute, the enunciation is of the highest quality, and each part of the message is easily understood.

**c.** Keep messages as brief and as concise as practical.

**d.** ASOS must not be allowed to broadcast weather concurrent with AFIS.

**e.** During hours of non-operation of Alaska FSS AFIS, ASOS broadcast capability must allow the automated weather report to be broadcast on the ASOS frequency in the one minute update mode and include the following information:

**1.** The FSS hours of operation or in the case of a seasonal FSS, a statement that the FSS is closed for the season.

2. The appropriate common traffic advisory frequency (CTAF).
3. The frequency for operating pilot controlled lighting.
4. The FSS and frequency for additional information.

**f.** The FSS air traffic manager that has responsibility for a FSS utilizing AFIS equipment must ensure that ATCS personnel assigned to duty in that FSS are in compliance with the AFIS requirements and that they receive training to utilize AFIS equipment and are familiar with required procedures.

## 14−4−7. TRANSMISSION OF MESSAGES FROM AIRPORT INSPECTORS

Accept administrative messages from airport inspectors for transmission to AIS and other FAA offices as prescribed in Chapter 2 of FAA Order 5010.4, Airport Safety Data Program.

# Chapter 15. Aviation Meteorological Services and Equipment

## Section 1. General

### 15−1−1. FAA-NWS AGREEMENT

By interagency agreement, FAA and NWS cooperate in providing aviation meteorological services to the aviation public. This cooperation is designed to provide maximum service within the combined capabilities of the two agencies.

### 15−1−2. CERTIFICATES OF AUTHORITY

**a.** FSS personnel must obtain a certificate of authority from the FAA before performing the following functions:

**1.** Weather observing.

**2.** Pilot weather briefing.

***REFERENCE−***

*FAA Order JO 7220.4, FAA Certification of Pilot Weather Briefing.*

### 15−1−3. LIAISON WITH AVIATION INTERESTS

**a.** Because of their aviation service responsibilities, FSS supervisors should establish and maintain cordial relations with aviation interestswithin their flight plan areas. They should keep apprised of aviation users' weather and aeronautical information needs and assist them in making effective use of the available services. This liaison should include other FAA facilities, NWS facilities, airport management, airline and military operations offices, fixed base operators, pilot organizations, and Civil Air Patrol (CAP).

**b.** Some aviation operations (e.g., emergency medical flights) require time critical services. Immediate dispatch of the mission is imperative and delays in obtaining required weather and aeronautical information may be life endangering. FSS managers must cooperate to the fullest extent possible with organizations making requests for special arrangements to satisfy their requirement.

### 15−1−4. TELEPHONE LISTINGS

FSS air traffic managers must ensure that appropriate telephone numbers are properly listed in telephone directories (including yellow pages when applicable) and in the Chart Supplement. In Alaska, include Fast File in local directories where that service is available. Numbers should always be listed under the subheading Flight Service Station under United States Government, Department of Transportation, Federal Aviation Administration. When possible, list the primary pilot weather briefing number under the Frequently Requested Numbers section at the beginning of United States Government listings.

***EXAMPLE−***
*United States Government*
*Department of Transportation*
*Federal Aviation Administration*
*Flight Service Station*
*(Address)*
*Pilot Weather Briefing* [1]
*Fast File Flight Plan*
*Facility Supervisor*[2]
***/1/ Parent FSS number for part-time FSSs.***
***/2/ Administrative number.***

## 15−1−5. MINIMUM WEATHER EQUIPMENT

FSSs taking basic weather observations must have:

**a.** A ceilometer (balloons and ceiling lights are acceptable until replaced).

**b.** A hygrothermometer and a sling psychrometer for use in the event the hygrothermometer is inoperative.

**c.** A wind direction and speed system. (A gust recorder, if required, will be furnished by NWS.)

**d.** A standard 8-inch rain gauge (furnished by NWS if the station reports precipitation).

**e.** An altimeter setting indicator and a traceable pressure standard. (A barograph, if required, will be furnished by NWS.)

## 15−1−6. SUPPLY-SUPPORT

Equipment used exclusively for aviation observations will be procured, installed, operated, maintained, and supply-supported by FAA. Observational equipment; e.g., AWOS/ASOS systems, Stand Alone Weather Sensors (SAWS), etc., serving multiple NWS/FAA purposes will be procured, installed, maintained, and supply-supported by NWS unless otherwise agreed to. To the maximum extent possible, each agency should avail itself of the facilities offered by the other in contracting for, installing, maintaining, and supply-supporting observational equipment on a non-reimbursable basis where appropriate.

# Section 2. Pilot Weather Briefing

## 15−2−1. BRIEFING RESPONSIBILITY

FSSs are responsible for providing weather briefings to users of aviation weather information calling in person, by radio, or telephone. These briefings are fulfilled by direct application or interpretation of NWS guidance forecasts supplemented by the latest observations and pilot reports.

## 15−2−2. WEATHER CHART DISPLAY

Some of the more useful weather charts for pilot weather briefings are: surface and upper air analysis, freezing level analysis, stability index analysis, radar depiction, weather depiction, surface and upper air prognosis, significant weather (high and low level) prognosis, and maximum wind and wind shear analysis and prognosis. Weather chart displays should include but not necessarily be limited to these charts.

## 15−2−3. TELEVISION EQUIPMENT

Closed circuit television equipment (CCTV) is available in a number of high-activity FSSs. Facilities should use the equipment to display weather graphic information. Facilities that have additional television cameras available, after graphics requirements are met, may display alphanumeric data.

## 15−2−4. FLIGHT PLANNING DISPLAY

Maintain flight planning displays in FSSs and other locations, as appropriate, convenient for pilot use. Such displays include:

**a.** Aeronautical charts covering the flight plan area that depict military training routes.
**b.** A planning chart with a means for measuring distances and plotting courses.
**c.** Chart Supplement, NOTAM publication, and Aeronautical Information Manual.
**d.** Army Aviation Flight Information Bulletin.
**e.** DoD IFR En Route Supplement and DoD VFR Supplement.

***REFERENCE−***
*FAA Order JO 7210.3, Para 15−2−6, Military Training Activity.*

**f.** Drawing of the local airport.
**g.** Sunrise and sunset tables.
**h.** Aero computer.
**i.** Pilot chart working area.

## 15−2−5. FLIGHT PLANNING FORMS

FSS facility managers must assure FAA Form 7233-4, International Flight Plan, and/or Form 7233-1, Flight Plan, as needed, are available in the pilot briefing area for use by pilots. Maintain a sufficient supply to provide additional copies, as needed, to pilots, aviation companies, and organizations on request.

## 15−2−6. MILITARY TRAINING ACTIVITY

Ensure that the current DoD General Planning (GP), DoD Flight Information Publication (FLIP), Special Use Airspace (AP/1A), Military Training Route (AP/1B), and associated charts are readily available for preflight briefings to pilots:

**a.** Post the DoD FLIP chart, or that portion covering at least the flight plan area plus a 100 NM extension of the FSSs existing flight plan area.

**b.** Publicize new or revised MTRs and MOAs through letters to airmen, pilot meetings, and where practicable, “handouts” charting the routes/areas within the FSS flight plan area and the 100 NM extension of the existing flight plan area.

## 15−2−7. TRANSFER OF BRIEFERS

**a.** A pilot weather briefer transferring from one briefing assignment to another or returning to a pilot weather briefing position after a break of 3 months to 1 year in the performance of briefing duties is required to obtain a reorientation check before performing pilot weather briefing duties.

**b.** A pilot weather briefer returning to briefing duties after an absence of more than 1 year from briefing duties is required to be re-qualified by means of an oral examination by the FAA.

# Section 3. Broadcasts

## 15−3−1. STATION BROADCASTS

Facility air traffic managers must select the specific reports to be included in the Scheduled Weather Broadcast (SWB). Include a sufficient number of reports to serve the users' needs. The selection of the reports and any proposed changes must be coordinated with known users of the station broadcast. The reports should be broadcast in clockwise order, beginning with the report nearest to but east of true north from the broadcast station. Changes may be implemented immediately unless prior Flight Service Safety and Operations Group approval is required.

## 15−3−2. COMMERCIAL BROADCAST STATIONS

Requests to broadcast scheduled or transcribed weather broadcasts which may be useful to the aviation community may be approved on an individual basis provided:

**a.** Any such request is coordinated with the FAA and the NWS regional office before approval.

**b.** The radio station identifies the source of the information.

**c.** The broadcast is confined to within 1 hour of the time announced on the SWB.

**d.** If feasible, the broadcast is not identified or associated with a sponsor. The FAA and the NWS prefer such a program be carried as a public service feature of the standard broadcast station.

**e.** FAA personnel must not make direct or recorded broadcasts regularly over a standard broadcast station. A waiver to this policy must be approved by the respective Flight Service Safety and Operations Group and the Vice President of Flight Services.

# Chapter 16. Equipment
## Section 1. General

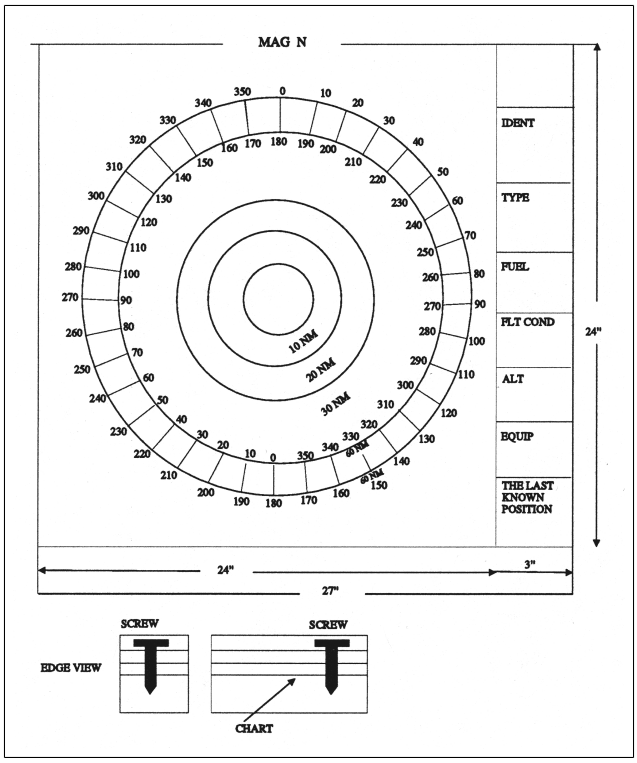
### 16−1−1. RESPONSIBILITY

FSS air traffic managers must identify requirements for new and replacement equipment and facilities by budget submission.

> ***NOTE−***
> *Not applicable to contract facilities.*

### 16−1−2. AIRCRAFT ORIENTATION PLOTTING BOARD

*FIG 16−1−1*
**Example of a Standard Aircraft Orientation Plotting Board**




Maintain an aircraft orientation plotting board (see FIG 16−1−1), parallel rulers, plotters, and fine-line china marking pencils for use in aircraft orientation. Record pertinent information directly on the board using the marking pencils. After the orientation is completed, transfer the information from the plotting board to official forms for record purposes.

### 16−1−3. LEASED EQUIPMENT SUPPLIES

OASIS. The vendor provides a basic quantity of consumable supplies on a yearly basis. The FAA must provide anything beyond this basic allotment.

# Section 2. Frequencies

## 16−2−1. VOR AND VORTAC VOICE CHANNELS

Provide control lines for air-ground communications and Category I monitoring on all VORs and VORTACs as follows:

**a.** Provide independent transmitting and receiving lines to the controlling FSS when a remote communications outlet is associated with the VOR or the VORTAC.

**b.** Provide one line when a remote communications outlet has only a 122.1 MHz receiver.

**c.** Control lines are not required if line costs considerably exceed normal costs and cannot be justified in a particular case.

# Chapter 17. Facility Statistical Data, Reports, and Forms (Alaska Only)

## Section 1. General Information

### 17−1−1. FORM USAGE

**a.** Flight Service Stations must use FAA Form 7230-13, or electronic equivalent, daily for recording in-flight, flight plan, and pilot briefing activity.

***REFERENCE−***
*FAA Order JO 7210.3, Para 17−5−2, Distribution and Amendment.*

***TBL 17−1−1***
**National Activity Summarization**

| | ***Required Breakdown*** | |
|---|---|---|
| ***Type of Activity*** | ***Type of Service Involved*** | ***Category of Use*** |
| Aircraft contacted | IFR/DVFR/SVFR (grouped) VFR | AC, AT, GA, MI |
| Flight plan count | IFR & DVFR (grouped) VFR | No breakdown required |
| Pilot briefs | | No breakdown required |

**b.** A minimum amount of information regarding FSS activity, suitably broken down, is required to determine manpower requirements and for budgetary and personnel matters. There is a need for national summarization monthly of the above activity: (See TBL 17−1−1.)

### 17−1−2. TOTAL FLIGHT SERVICES FORMULA

Total Flight Services have historically been and continue to be used as a measurement of the overall activity of individual FSSs. Total Flight Services are based on the following formula:

Total Flight Services equal two times pilot briefs plus two times flight plans originated plus aircraft contacted.

***NOTE−***
*Total Flight Services are not to be confused with the Flight Service Activity Factor, which is used for facility grade level determination and reclassification purposes. The present classification criteria and related formula for the Flight Service Activity Factor are contained in the GS-2152 position-classification standard issued by Civil Service Commission (CSC) (now Office of Personnel Management (OPM)) in June 1978.*

# Section 2. Aircraft Contacted

## 17−2−1. AIRCRAFT CONTACTED

**a.** Maintain data on the following categories of aircraft operations:

**1.** Air Carrier: Operations by aircraft identified in Appendix 3 which use three-letter company designators.

**2.** Air Taxi: Operations by aircraft other than those identified in Appendix 3 which use three-letter company designators or the prefix "TANGO."

***NOTE−***
*Air Taxi operators who do not have a FAA issued designator have been authorized to use the prefix "TANGO."*

**3.** Military: All classes of military operations.

**4.** General Aviation: Civil operations which are not classified under "air carrier" or "air taxi."

**b.** One count must be taken for each flight contacted regardless of the number of contacts made with the aircraft during the same flight.

***NOTE−***
*For aircraft contacted purposes, a flight is considered to be in progress from the time taxiing is begun until it has landed and parked.*

**c.** One aircraft contacted count must be taken when relaying IFR departure clearances or ATC instructions via telephone, "data communication circuits," or interphone. Subsequent radio communications must not be the basis for an additional aircraft contacted count.

## 17−2−2. LOCAL AIRPORT ADVISORY (LAA)/REMOTE AIRPORT ADVISORY (RAA)/ REMOTE AIRPORT INFORMATION SERVICE (RAIS)

In addition to the aircraft contacted count, airport advisory/remote advisory/remote information activity must be determined as follows:

**a.** One airport advisory/remote advisory/remote information service count must be taken for each separate inbound or outbound aircraft operation if the pilot acknowledges receiving the information.

**b.** Touch-and-go operations are considered to consist of a separate inbound and outbound phase. One count must be taken during the inbound phase, and an additional count must be taken for the outbound phase if LAA/RAA/RAIS is performed during each phase.

**c.** Although aircraft making practice instrument approaches do not normally land, they should be counted under the same criteria as touch-and-go operations.

## 17−2−3. RADIO CONTACTS

Count radio contacts in addition to numbers of aircraft contacted. A radio contact includes the initial radio call-up, a complete interchange of information, and a termination of the contact. A radio contact count must not be taken for a contact which is included in the LAA/RAA/RAIS count.

# Section 3. Flight Plan Count

## 17−3−1. FLIGHT PLAN COUNT

The first FAA station which receives a flight plan, a Special VFR clearance request, or a flight plan change en route (regardless of source: e.g., pilot or his/her representative, foreign location, military operations office, state aeronautical communications station, air carrier, etc.) must take one count for each one received except:

**a.** Do not count flight plans received from or relayed by means of an automatic or semi-automatic installation even though the station is the first FAA station to receive same.

**b.** Do not count minor changes, such as cancellations, closures, or amendments, that do not change the destination. The change must result in the transmission of a flight notification message to be countable.

**c.** Do not count prefiled flight plans unless the operator has requested activation.

## 17−3−2. ADDITIONAL ITEMS

Flight plans are to be counted without regard to the elapsed time or the distance of the flight or the fact that the flight terminates at the same place from which it departed.

## 17−3−3. FLIGHT PLAN CHANGE EN ROUTE

A flight plan change en route to be countable must be a plan which is substantially modified or extended, such as a route or destination change, and the aircraft continues on a flight plan. The change must result in the transmission of a flight notification message to be countable.

## 17−3−4. FLIGHT PLAN FORMS

Use FAA Forms 7233-1 (DoD only) or 7233-4, as appropriate, to record flight plans copied by specialists.

# Section 4. Pilot Briefing Count

## 17−4−1. PILOT BRIEFING COUNT

A pilot brief is the dissemination of meteorological and aeronautical data pertinent to the pilot's requirement for an intended flight. The intent is to give one count for each pilot briefed regardless of the length of time spent or of multiple routes or destinations. Take a briefing count for:

**a.** Delivery of an in-flight weather advisory (SIGMET, AIRMET) when the pilot states he/she has not previously received the information.

**b.** Significant information furnished which results in the pilot altering, diverting, or canceling his/her flight.

**c.** Each briefing as defined above and not counted under subparagraphs a or b.

***NOTE−***
*Do not take a count for a response to a request for a single item of information; e.g., surface weather report, airport conditions at a single location, or the status of a single NAVAID. Also, information not pertinent to the route of flight must not be volunteered to meet the criteria for a briefing count nor must information routinely given during radio contact with an aircraft be used for this purpose: e.g., altimeter setting, LAA information, etc.*

**d.** Instructions for recording pilot briefing count for FCFSS facilities are contained in contractor requirement documents.

## 17−4−2. RETENTION OF FORMS CONTAINING PILOT BRIEFING (“PB”) DATA

In non-automated FSSs, retain FAA Forms 7233-1, 7233-2, and 7233-5 containing “PB” data in a station's files for 15 days except when an incident or an accident occurs where a briefing may have a bearing. In this case, include the form as a part of the accident/incident report.

# Section 5. Other Reports and Information

## 17−5−1. COMPLETION OF MONTHLY ACTIVITY RECORD

**a.** This form is to be completed by all FSSs. All computerized, or automated versions of FAA Form 7230-13 must be pre-approved by the Office of Aviation Policy and Plans, Planning Analysis Division, Statistics and Forecast Branch, APO-110, prior to use.

**b.** Enter daily totals for each applicable category on the daily activity record. Leave sections that do not apply to an individual facility blank. Any time there is an equipment failure, and actual figures are unavailable, provide estimated figures where appropriate. Annotate such estimates in the "Reserved" column on side 2 of the form.

**c.** To facilitate automatic data processing, complete the header and the monthly total rows on both sides of the form. Follow the instructions below to complete the form:

**1.** Facility Name: Enter the facility name accessible through FAA Order JO 7350.9, Location Identifiers.

**2.** Location: Enter city and state.

**3.** Communications Equipment: Check as appropriate.

**4.** Facility Type: Check as appropriate.

**5.** Month: Enter the month using two digits (e.g., 01 - for month of January).

**6.** Year: Enter the year using the last two numerals of the calendar year (CY).

**7.** Location Identifiers: Enter the three-letter identifier accessible through FAA Order JO 7350.9.

**8.** Aircraft Contacted: Enter the number of aircraft contacted in accordance with paragraph 17−2−1, Aircraft Contacted.

**9.** Flight Plans Originated: Enter the number of flight plans in accordance with paragraph 17−3−1, Flight Plan Count.

**10.** Pilots Briefs: Enter the number of pilot briefings in accordance with paragraph 17−4−1, Pilot Briefing Count.

**11.** NOTAMs issued: Enter the total number of NOTAMs issued. Do not count NOTAM cancellations.

**12.** Calls to Briefers: Enter the total number of calls. Do not use decimals. Indicate the number of call as follows:

**(a)** Litton facilities enter the number of "calls offered" from the Gate 1 Report.

**(b)** Denro facilities enter the number of calls received ("#RCVD") from the Automatic Call Director (ACD) Call History -- Briefer Calls.

**13.** Calls Lost: All calls lost after zero (0) seconds delay must be counted.

**(a)** Litton facilities enter the "average speed answered" in whole seconds for calls to briefers from the Gate 1 Report.

**(b)** Denro facilities enter the average delay ("AVDLY") History--Briefer Calls.

**14.** Airport Advisories: Enter the number of airport advisories in accordance with paragraph 17−2−2, Local Airport Advisory (LAA)/Remote Airport Advisory (RAA)/Remote Airport Information Service (RAIS).

**15.** Radio Contacts: Enter the number of radio contacts in accordance with paragraph 17−2−3, Radio Contacts.

**d.** Instructions for recording monthly activity for FCFSS facilities are contained in contractor requirement documents.

## 17−5−2. DISTRIBUTION AND AMENDMENT

**a.** Distribute FAA Form 7230-13 (FSS Activity) as follows:

**1.** Forward the original form to the Flight Service Safety and Operations Group not later than the 2nd workday (Monday-Friday) of the following month.

**2.** Retain a copy of the form in the facility's files.

**b.** Correct any errors in the forms sent in prior months by completing a new form, circling the revised fields, and marking the form “AMENDED COPY.” Amended copies of the forms more than one month old will not be accepted unless approval has been obtained from the Statistics and Forecast Branch, APO-110, by the Flight Service Safety and Operations Group. Send amended copies, along with the current reporting month's forms, to the Flight Service Safety and Operations Group.

# Section 6. FSS Lists, Logs, and Tallies (OASIS)

## 17−6−1. RECORDING OF FLIGHT INFORMATION

OASIS provides a means in which flight information is recorded and retained electronically for 15 days. A compact flash card reader connected to each NT server records:

**a.** Additions, deletions and amendments to the Proposed and Inbound Lists.

**b.** Additions and deletions to the Suspense and SAR (Search and Rescue) Lists.

In the event of a flight information recorder software failure, an Interface Status List alarm will be generated at designated positions (normally supervisor/CIC). If it is determined that flight information is not being recorded, facilities must ensure that the Inbound, Proposed, Suspense and SAR Lists can be printed in the event of a system failure. Any printed lists must be retained for 15 days.

***NOTE−***
*Lists must be open before they can be printed. Open Lists can be minimized to increase work space in the Main Window.*

## 17−6−2. MANAGEMENT OF LISTS AND LOGS

Transactions involving list updates, flight plan logs, preflight briefing logs, and inflight contact logs must be retained for 15 days by electronic means. Printing is not required.

## 17−6−3. TALLIES PRINTING

OASIS provides a daily Facility Local Activity Report. This report must be retrieved and printed daily and retained for 15 days. Use this report to complete FAA Form 7230-13. The following types of data are contained in the Local Activity Report:

**a.** Non-Briefing Contacts.

**1.** Domestic.

**2.** ICAO.

**b.** Pilot Weather Briefing (PWB) Tally: Preflight Domestic, Preflight ICAO, Inflight Domestic, Inflight ICAO.

**1.** Single Item.

**2.** Multi-Leg.

**3.** PWB.

**c.** Inflight Position Aircraft Contact Tally: IFR, DVFR, VFR, ICAO IFR, ICAO VFR.

**1.** Air Carrier.

**2.** Air Taxi.

**3.** General Aviation.

**4.** Military.

**d.** Inflight Position Radio Contact Tally: IFR, DVFR, VFR, ICAO IFR, ICAO VFR.

**1.** Air Carrier.

**2.** Air Taxi.

**3.** General Aviation.
**4.** Military.

**e.** Flight Plan Tally: IFR Domestic, IFR ICAO, VFR Domestic, VFR ICAO, DVFR Domestic.
**1.** Filed.
**2.** Amended.
**3.** Canceled.
**4.** Closed.

**f.** NOTAM Tally.

**g.** PIREP Tally.

# Part 5. TRAFFIC MANAGEMENT SYSTEM

# Chapter 18. Traffic Management National, Center, and Terminal

## Section 1. Organizational Missions

### 18−1−1. TRAFFIC MANAGEMENT SYSTEM MISSION

The Traffic Management System mission is to balance air traffic demand with system capacity to ensure the maximum efficient utilization of the National Airspace System (NAS). A safe, orderly, and expeditious flow of traffic while minimizing delays, is fostered through continued analysis, coordination, and dynamic utilization of TM initiatives and programs.

### 18−1−2. DAVID J. HURLEY AIR TRAFFIC CONTROL SYSTEM COMMAND CENTER (ATCSCC)

The ATCSCC monitors and manages the flow of air traffic throughout the NAS, producing a safe, orderly, and expeditious flow of traffic while minimizing delays.

### 18−1−3. TRAFFIC MANAGEMENT UNIT (TMU) MISSION

TMUs monitor and balance traffic flows within their areas of responsibility in accordance with TM directives.

# Section 2. Organizational Responsibilities

## 18−2−1. AIR TRAFFIC TACTICAL OPERATIONS PROGRAM

System Operations must:

**a.** Develop national TM programs, prioritizing trajectory-based operations (TBO) strategies accordingly.

**b.** Staff/manage the ATCSCC.

**c.** Provide guidance and direction to the TM system concerning national TM programs and policies.

**d.** Coordinate Service Area office requests for special procedures with appropriate headquarters divisions/services.

**e.** Coordinate directly with designated Service Area office/facility TM representatives on plans, procedures, and operations that affect interfacility traffic flows.

**f.** Ensure that all appropriate coordination has been accomplished prior to implementation of any new national TM program.

**g.** Provide briefings to appropriate levels within the FAA and industry on current system status, present/future TM programs, etc.

**h.** Maintain a close liaison with appropriate Service Area office and other FAA service offices on all TM programs.

## 18−2−2. SERVICE CENTER OPERATIONS SUPPORT GROUP

The Operations Support Group (OSG) must:

**a.** Designate a support group TM representative(s) who must act as the focal point for other FAA offices and users on matters that pertain to TM.

**b.** Provide guidance and direction to field facilities in the development and implementation of support group office TM programs.

**c.** Periodically review and evaluate TM programs to assess their effectiveness and to ensure their compliance with support group office/national directives.

**d.** Mediate support group office interfacility TM conflicts.

**e.** Determine which terminal facilities should be considered for establishing TMUs and forward the justification and the staffing requirements to Director, System Operations for final determination.

## 18−2−3. ATCSCC

The ATCSCC has been delegated the authority to direct the operation of the TM system. All TMUs must assist the ATCSCC, as directed, to ensure system efficiency and effectiveness without compromising safety. The ATCSCC must, in conjunction with local TMUs, users, weather information providers, and Technical Operations (Tech Ops), as appropriate:

**a.** Implement national TM programs (time-based management (TBM) operations, required routes, GDP, CTOP, etc.).

**b.** Monitor and analyze system components and weather patterns for potential system impact.

**c.** Be the focal point for regulating the daily TM functions.

**d.** Determine when NAS capacity is or will likely be reduced to the extent that the implementation of a TM initiative is required.

**e.** Ensure space launch and reentry operations are safely and efficiently integrated into the NAS by approving, modifying, or denying airspace decisions directly related to launch and reentry activities, consistent with FAA policies and regulations.

**f.** Implement national traffic management initiatives (TMI) to maintain safe and efficient NAS operations.

**g.** Recommend and approve TM alternatives when national initiatives are not appropriate.

**h.** Monitor TM initiatives issued throughout the system for effectiveness; take action to cancel or modify where appropriate.

**i.** Be the final approving authority regarding all interfacility TM initiatives.

***NOTE–***
*Traffic Management Units continue to retain the latitude to tactically adjust the flow of traffic within their own facilities. These local actions include sector to sector mile-in-trail restrictions, local airport fix balancing, and other such adjustments required to balance flows within their area of responsibility.*

**j.** Evaluate proposed TM initiatives to ensure appropriateness.

## 18–2–4. FIELD FACILITIES

All actions initiated by the TMU must be in accordance with TBO objectives, standard operating procedures, applicable directives, and approved TM position descriptions. The TMU is delegated the authority to direct traffic flows and implement TBM operations and TM initiatives in conjunction with, or as directed by the ATCSCC.

**a.** Air traffic facilities must ensure that:

**1.** A TMU is established at ARTCCs and designated terminal facilities.

**2.** Delays are reported as specified in FAA Order JO 7210.55, Operational Data Reporting Requirements.

**3.** The ATCSCC is provided with all formal agreements and directives that relate to interfacility TM programs, initiatives, and procedures.

**4.** National and local TM programs are maintained within the guidelines set forth by this order.

**5.** Requests for special procedures are coordinated with Service Area offices, assuring 90 days of lead time for evaluation and processing.

**6.** The ATCSCC is advised by telephone or hotline coordination of all known component changes that could have a significant system impact (for example, route/airway closures, NAVAID/radar shutdowns, runway closures, TELCO outages, computer malfunctions or outages, and procedural changes affecting key terminals and/or centers).

***NOTE–***
*This information must be provided to the ATCSCC as soon as the facility becomes aware of any event that may have a possible impact on NAS capacity. Example: LRR outage, runway closure, ILS outage, etc.*

**7.** Actively coordinate and communicate traffic management actions with adjacent TMUs through the ATCSCC to optimize traffic flows throughout the NAS.

**8.** In conjunction with ATCSs, OSs, weather service providers, and the ATCSCC, develop, implement, monitor, and analyze TM programs, procedures, and initiatives that are specific to the facility's area of responsibility.

**9.** Standard traffic management unit procedures contained in this order must beapplied when weatheris scheduled to impact an active or scheduled SAA with the following additions/ changes:

**(a)** Facilities must conduct a telecon if weather is forecasted to impact a facility's traffic flow, which may potentially cause an aircraft to enter the protected airspace of an active SAA within their facility.

***NOTE−***
*If the facility has instantaneous recall of the SAA airspace, then a telecon is not required.*

**(b)** Participants must include, at a minimum, the using agency or scheduling agency and the controlling agency. If available, the Center Weather Service Unit (CWSU), Operations, and any other entities necessary to ensure a comprehensive look at the day ahead should be included.

**(c)** The intent of the telecon is to address any issues that may arise due to weather, the usage of SAA, civil traffic flow, and alternate plans. These calls will also serve as a venue in which the facility can determine the type of activity that will be occurring in the SAA.

**(d)** Unless it is clearly understood and agreed upon by the using or scheduling agency that the SAA will be available for civil traffic, facilities must not base their plan on using active military airspace.

**(e)** If the SAA will not be available for civil traffic, then Traffic Management Initiative(s) (TMI) must be put in place to ensure aircraft remain clear of the protected airspace of an active special use airspace that is impacted by weather.

***NOTE−***
*If the facility has instantaneous recall of the SAA airspace, then TMI(s)may not be required.*

**(f)** If a deviation due to forecasted weather occurs that causes an aircraft to enter into an active SAA:

**(1)** The Supervisor Traffic Management Coordinator (STMC) must immediately conduct an evaluation of TMI(s) in place with emphasis on adjusting the flow of traffic away from the SAA.

**(2)** The air traffic manager (ATM) must ensure the appropriate service review (i.e.; system service review or traffic management review) is completed in accordance with FAA Order JO 7210.634, Air Traffic Organization (ATO), Quality Control, Chapter 3.

**10.** A full description of all TM actions/initiatives (e.g., ground delay programs, miles-in-trail (MIT)) is entered in the TMU log, including, but not limited to, start and stop times, facilities/ operations affected, and justification.

**11.** As a minimum, the unit is operated during the hours necessary to encompass peak traffic periods and the associated time to complete the logging and the reporting requirements.

**b.** In ARTCC facilities TMUs must:

**1.** In conjunction with terminal TMUs, develop arrival strategies and deliver arrival aircraft to achieve the Airport Arrival Rate (AAR).

**2.** Actively utilize the Traffic Situation Display (TSD) and the monitor and alert function of the TFMS to adjust traffic flows on a proactive basis.

**3.** Periodically analyze and review procedures to ensure effectiveness and adherence to programs/initiatives, and, when necessary, make adjustments. Cancel TM initiatives promptly when no longer needed.

**4.** The facility manager must make provisions to ensure a Weather Coordinator (WC) is assigned on each shift by designating a TM representative to serve as the WC. During midnight operations or when no TM personnel are available, the WC position may be combined at the OMIC position. The manager must additionally ensure that personnel assigned WC duties receive prior training in the associated duties and responsibilities of the position and establish procedures.

***REFERENCE−***
*FAA Order JO 7210.3, Section 26, Weather Management.*

**5.** Establish an analysis function referred to in Chapter 18, Section 4, as amended.

**6.** Address approved local TM messages on TFMS to:

**(a)** The ATCSCC and the adjacent facilities concerned.

**(b)** Other ARTCCs whose terminals are expected to generate a significant amount of traffic for the affected area during the effective time of the message.

**(c)** Appropriate flight service stations (FSS).

**c.** In terminal facilities, TMUs must:

**1.** Balance the arrival flow and the tower en route flow by coordinating with the appropriate ARTCC TMUs and/or adjoining terminal facility(s) to ensure that demand does not exceed current capabilities.

**2.** Through coordination with the tower and TRACON, establish AAR and assist the ARTCC and adjacent terminal facility(s) in the development of strategies to achieve the AAR.

**3.** Oversee departure fix balancing to ensure sector efficiency into the next facility's airspace.

**4.** Implement gate hold procedures as required to reduce airport surface congestion.

**5.** Coordinate with airport officials to ensure closures of runways, taxiways, and other airport facilities minimize operational impact.

**6.** Ensure optimum airspace/runway configurations.

**7.** Periodically analyze and review TM procedures to ensure effectiveness and adherence to programs/initiatives and, when necessary, make adjustments. Cancel TM initiatives promptly when no longer needed.

**8.** Notify the appropriate facilities concerning local TM initiatives.

***NOTE−***
*The appropriate ARTCC TMU must be the focal point for any interface concerning TM related issues, as well as the mediator between terminal facilities. The ARTCC TMU will then coordinate with the ATCSCC on behalf of the TRACON or the tower. Because of the unique situation of the New York TRACON having three centers, the New York TRACON must coordinate directly with the ATCSCC and have the ATCSCC conference the appropriate ARTCCs. In those instances where the ARTCC TMU is unable to resolve disputes between multiple terminal facilities, the ATCSCC must have the final decision making authority.*

# Section 3. Line of Authority

## 18−3−1. ATCSCC

**a.** Each national operations manager (NOM) is under the general supervision of the Manager of the ATCSCC. Each national traffic management officer (NTMO) is under the general supervision of the NOM. Each national traffic management specialist (NTMS) is under the general supervision of the NTMO.

**b.** In the absence of the NTMO, there will be designated a national traffic management specialist-in-charge (NTMSIC) that performs these duties in accordance with management direction.

## 18−3−2. ARTCC

The TM Coordinator at ARTCC facilities (TMC) is under the general supervision of the supervisory TM coordinator (STMC). The STMC is under the general supervision of the Traffic Management Officer (TMO). In the absence of the STMC the STMCIC is under the general supervision of the TMO. In the absence of the TMO the STMC/STMCIC is under the general supervision of the air traffic manager.

## 18−3−3. TERMINAL

**a.** The TM coordinator (TMC) at terminal facilities works under the general supervision of the STMC or TMCIC. Each STMC is under the general supervision of the Traffic Management Officer (TMO). In the absence of a STMC, and when more than one TMC is assigned to a shift, there will be a designated TMCIC. The TMCIC will perform these duties in accordance with management direction.

**b.** In the TMCs absence or at those TRACONs and/or towers where TMCs are not authorized, the individual(s) designated to perform TM functions is the operations supervisor-in-charge (OSIC).

# Section 4. Supplemental Duties

## 18−4−1. TELEPHONE CONFERENCES

**a.** The ATCSCC is involved in several daily telephone conferences (TELCONs). TELCONs are initiated and hosted by the ATCSCC for field facilities, the appropriate Vice Presidents, and the Chief Operating Officer. Supplemental conference capability is available through the FAA's Remote Transmitter Site and the Washington Operations Center.

**b.** TMUs/TMCs utilize TELCONs when the need arises to discuss, evaluate, or problem solve any issues. These conference calls should include the appropriate ARTCC TMU, adjacent terminal facilities/towers, the ATCSCC, and the service area TM branch or Service Area office office responsible for TM.

**c.** TMUs/TMCs should actively participate in facility briefings and user meetings in order to promote, educate, and inform all concerned about the function, role, and responsibilities of TM.

**d.** TELCONs are also used to maintain operational “Hotlines.” The objective of Hotlines is to provide rapid communications between FAA facilities, customers and other aviation interests when complex air traffic and airspace issues are being managed. Hotlines allow many participants the capability to problem-solve complicated issues and reduces the amount of coordination needed to implement collaborated strategies. Hotlines may be initiated at the request of both the FAA and other aviation entities that substantiate its use. The operational Hotlines are authorized for customer attendance; however, they may be limited to listen-only capability.

**1.** The ATCSCC administers, facilitates, and manages operational Hotlines.

**2.** Hotlines are used to communicate:

**(a)** Airport and airspace capacity issues.

**(b)** Constraint/capacity mitigation strategies.

**(c)** Route availability information and route alternatives.

**(d)** Weather information.

**(e)** Equipment Outages.

**(f)** Customer preferences for initiatives and alternatives.

**(g)** Special circumstances, contingency requirements and emergency events.

**(h)** All required coordination and information sharing necessary in regard to the event.

**(i)** Coordination that can be accomplished quickly and precisely with all parties. If an item requires extensive coordination, other communication sources will be used.

**(j)** Items that are not considered sensitive or classified in nature.

***NOTE−***
*Examples of sensitive or classified items include VIP movement and military requirements or exercises.*

**e.** TMOs are responsible for ensuring that ARTCC and TRACON TMUs participate in the “Plan, Execute, Review, Train, Improve" (PERTI) Webinar each day at 2:30 p.m. eastern time.

## 18−4−2. SPECIAL INTEREST FLIGHTS

ATCSCC, ARTCC, and CCF: Follow procedures in FAA Order JO 7610.14, Non-Sensitive Procedures and Requirements for Special Operations, Chapter 7, Miscellaneous Military and Civil Flight Activities, Section 4, Special Interest Flights, regarding special interest flights from State Department designated special interest countries. Forward all issues concerning special interest flights to the DEN ATSC for relay to the appropriate authorities.

## 18−4−3. ANALYSIS

**a.** The TMU analysis function or individuals assigned analysis functions must be responsible for the collection and analysis of all available data as it pertains to traffic capacity, traffic flows, points of congestion, peak hours, etc. Specific areas of consideration include, but are not limited to:

**1.** Sector demand (by hours).
**2.** Sector flows (route/altitudes).
**3.** Sector loading points.
**4.** Sector traffic breakdown by category of user.
**5.** Normal initiatives necessary to prevent sector saturation.
**6.** Alternatives to prevent saturation and relieve congestion/conflicts.

***NOTE−***
*Alternatives must take into consideration other facility/sector capabilities.*

**7.** Total facility traffic count and potential user demand.
**8.** Sector staffing required to support potential user demand.
**9.** Location of delays (by sector and airport).

**b.** Coordination with user organizations must be effected, when appropriate.

## 18−4−4. OPERATIONS MANAGER (OM) SUPPORT

Facility TMUs must maintain a working knowledge of the major related fields of air traffic operations/responsibilities to effectively support the STMCIC in dealing with special situations that may arise on a daily basis. Reference sources that identify these related areas are listed below.

**a.** Emergency plan: Numerous interfacility letters of agreement are normally located at the STMCIC complex concerning plans which have been established to provide continuity in the event of a disaster or emergency conditions that would limit air traffic service. Additionally, in these binders are instructions concerning security control of air traffic and air navigation aids, defense readiness, and physical security plans.

**b.** Accident procedures/bomb threats/search and rescue procedures:

**1.** FAA Order JO 8020.16, Air Traffic Organization Aircraft Accident and Incident Notification, Investigation, and Reporting.
**2.** Bomb threats.
**3.** National Search and Rescue Manual.
**4.** FAA Order 1270.1, Freedom of Information Act Program.

**c.** EA activity: FAA Order JO 7610.4, Sensitive Procedures and Requirements for Special Operations.

**d.** Hijack situations:

**1.** FAA Order JO 7610.4, Sensitive Procedures and Requirements for Special Operations.

**2.** FAA Order JO 7110.65, Air Traffic Control.

**e.** Suspect Aircraft: FAA Order JO 7110.67, Air Traffic Management Security Services for Special Operations.

**f.** Special flight operations: FAA Order JO 7110.65, Chapter 9, Special Flights.

***NOTE–***
*In order to provide the maximum TM services, TM personnel should be utilized to perform non-TM functions only as a last resort.*

## 18–4–5. DIVERSION RECOVERY

**a.** A diversion is a flight that is required to land at other than its original destination for reasons beyond the control of the pilot/company, e.g., periods of significant weather.Diversion recovery is an initiative orchestrated by the ATCSCC and system users to minimize the impact of system disruption. Diversion recovery will be utilized during and after periods of significant weather or other phenomena that has adversely impacted the system resulting in flight diversions. The goal of the diversion recovery initiative is to ensure that flights which have already been penalized by having to divert to another airport, do not receive additional penalties or delays. Flights identified for diversion recovery must receive priority handling over other flights from their point of departure.

**b.** Diversion flights are identified by having “DVRSN” in the Remarks section of the flight plan, or the user inputs the information into the Diversion Recovery Tool (DRT). The following protocols will be utilized in diversion recovery procedures:

**1.** A flight on the DRT, as listed in TBL 18–4–1, is requesting priority. FAA facilities must ensure the auto-detect feature is not activated on their DRT. FAA facilities must view the “general aviation” and “comments” columns when utilizing the DRT.

**2.** “High” priority indicates the user's preference within one company.

**3.** “Yes” priority indicates that special handling is requested for the flight.

**4.** The user submitted preferred priorities may be modified where necessary to maintain the efficiency of the system.

**c.** The ATCSCC must:

**1.** Implement diversion recovery.

**2.** Transmit an advisory to inform both field facilities and users that a diversion recovery initiative has been implemented and the DRT has been activated.

**3.** Adjust the initiative as necessary to meet changing conditions.

**4.** Transmit an advisory when the DRT has been deactivated.

**d.** The ARTCCs must:

**1.** Implement diversion recovery as directed by the ATCSCC.

**2.** Notify the ATCSCC if they do not intend to use the DRT. In such cases, the ATCSCC must send the Center a general message with the information as stated in TBL 18–4–1, every 60 minutes until diversion recovery is no longer in effect.

3. Provide expeditious handling in returning to the system those flights identified by the ATCSCC/DRT as diversion flights.
4. Forward user diversion recovery requests to towers and TRACONs. (See TBL 18−4−1).

***NOTE−***
*DVRSN will be placed in the remarks section of the flight plan by the user.*

**e.** Towers and TRACONs must:

1. Provide expeditious handling in returning to the system those flights identified by the ARTCC/DRT as diversion flights.
2. Notify the overlying ARTCC TMU if they will utilize the DRT.

***TBL 18−4−1***

**User Recovery Priority Request Format**

| The following flights are requesting priority handling to their original destination. Please advise the appropriate FAA facilities of this request. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ACID | Diverted To | ETD | CTD | DEST | DCNTR | ACNTR | PRIORITY | COMMENTS |
| ZZZ111 | MDW | 2210Z | - | ORD | ZAU | ZAU | - | - |
| ZZZ222 | PIT | 2200Z | - | ORD | ZOB | ZAU | HIGH | - |
| ZZZ555 | ATL | 2300Z | 2320Z | IAD | ZTL | ZDC | - | - |
| Note: ***ETD=Proposed Wheels-up Time.** | | | | | | | | |

## 18−4−6. VOLCANIC ASH

**a.** Upon receipt of a validated report of volcanic activity and/or ash cloud movement, the ARTCC TMU whose geographic area of responsibility is impacted by such activity must:

1. Assess areas of potential or actual ash cloud location.
2. Notify the ATCSCC and the other facilities in their area of jurisdiction that may be affected. Provide as much information as possible, including PIREPS and other pertinent information that has been received.

**b.** Upon receipt of a Volcanic Ash Advisory (VAA), Volcanic Ash SIGMET, or ARTCC notification, the ATCSCC must:

1. Retransmit the VAA received from the Washington or Anchorage VAACs to air traffic control facilities and stakeholders via a numbered ATCSCC advisory. The VAA will also be displayed on the ATCSCC website in the advisories database.
2. Conduct, as needed, conference calls to assess constraints and TMIs associated with the volcanic ash.

***NOTE−***
*The FAA does not have the capability to predict or depict volcano eruptions or ash cloud density and movements. It is not the responsibility of the FAA to provide separation between aircraft and volcanic activity or ash clouds.*

## 18−4−7. SPACE LAUNCH OR REENTRY MISHAPS

**a.** A debris-generating space launch or reentry vehicle mishap is an emergency situation in the NAS. All efforts should be made to safely mitigate aircraft exposure to falling debris.

**b.** Upon notification of a debris-generating space launch or reentry vehicle mishap, or the activation of a debris response area (DRA), the ARTCC/Terminal TMU whose geographic area of responsibility is impacted must, to the extent possible, take actions to help mitigate aircraft exposure to falling debris.

**c.** The facility must ensure participation in hotlines hosted by ATO Space Operations (AJR-1800) for tactical space operations with potential impact to their airspace. The roles and responsibilities must be defined in a facility directive.

***REFERENCE−***
*FAA Order JO 7210.3, Para 4−3−6, Space LOAs.*
*FAA Order JO 7400.2, Para 31–3–1, Responsibilities, Subpara b.*

**d.** Facility reporting for mishaps should include playback data (CDR, FALCON, NVR, etc.) covering the affected area/airspace during the period when debris was reported falling.

***REFERENCE−***
*FAA Order JO 7110.65, Para 10–5–2 Debris-Generating Space Launch or Reentry Vehicle Mishaps.*
*FAA Order JO 7210.632 Air Traffic Organization Occurrence Reporting, Appendix A.*

# Section 5. Coordination

## 18−5−1. COORDINATION

Coordinate through verbal and automated methods. At times, it may be required to utilize both methods to ensure complete communication and situational awareness.

## 18−5−2. COMMUNICATION

When time permits, utilize communication techniques that emphasize collaboration and consensus decision-making. Use tools that provide for common situational awareness to the extent possible.

## 18−5−3. DOCUMENTATION

The National Traffic Management Log (NTML) is utilized to record TM activities in the facility. It does not replace the facility log; however it may be utilized as the facility log when documented in a facility directive. Facilities with the NTML are required to make data entries. At non-NTML facilities, the first facility overlying the non-NTML facility is responsible for entering the NTML entries. This enables all facilities to be knowledgeable of conditions throughout the NAS.

## 18−5−4. RESPONSIBILITIES

**a.** All facilities must:

**1.** Communicate and coordinate:

**(a)** Events that have an adverse impact on the NAS.

**(b)** TBM operations.

**(c)** Traffic management initiatives (TMI).

**2.** Use the NTML to document events, TBM operations, and traffic management initiatives (TMI).

**b.** The ATCSCC must:

**1.** Provide an FAA ATCSCC data entry web page for facilities identified in TBL 18−5−1, Aviation System Performance Metrics Airport Traffic Control Towers.

**2.** Transmit these data to other FAA offices for analysis.

**3.** Provide the NTML to all ARTCC TMUs and designated terminals.

**4.** Communicate directly with facility and service area representatives for a critique of operations and future plans for TM.

**5.** Coordinate directly with service area representatives on plans, procedures, and operations that affect interfacility traffic flows.

**6.** Consult with weather information providers to ensure the receipt of timely weather forecasts (including the collaborative convective forecast), observed terminal weather sequences, and any weather data that may have a significant impact on the NAS.

**7.** Coordinate with the TMUs in the day-to-day operations of the NAS and resolve operational TM disagreements between facilities.

**8.** Conference affected ARTCC TMUs as needed when contacted by a terminal facility.

**9.** Initiate telecons and Hotlines with customers and facilities, as necessary, to obtain input and to provide operational information, as well as other significant events affecting the NAS.

**10.** Subscribe to the NTML entries pertinent to its position of operation.

**11.** Indicate the implementation or termination of extended flight plan drop times, when notified by field facilities, via numbered ATCSCC advisory.

**c.** ARTCC TMUs and designated terminals must:

**1.** Advise the ATCSCC of situations and conditions that may require implementation of TMIs or are of national interest including but not limited to: equipment, staffing, hurricane preparedness, forest fires, unexpected runway closure, outage, NAS capacity impacts, or status of TBM operations.

**2.** Present unresolved conflicts between adjacent TMUs to the ATCSCC for resolution.

**3.** Notify the ATCSCC if a significant change in capacity is expected or has occurred.

**4.** Be the contact for their underlying facilities about coordinating any TM issues, TBM operations, initiatives, programs, or information. Data received from underlying facilities must be forwarded to the ATCSCC in a timely manner.

**5.** Advise the ATCSCC if an operational Hotline is requested including:

**(a)** Facility participation required.

**(b)** Requested customer participation and assist the ATCSCC in determining if the Hotline will be limited to "listen-only" customer capability.

**(c)** Other aviation/airport resources requested.

**6.** Advise the ATCSCC when extended flight plan drop times have been implemented or terminated.

**d.** Terminal facilities must:

**1.** Coordinate with the appropriate ARTCC TMU and ensure it is kept aware of situations and conditions that may require the implementation or adjustment of TM initiatives or change in status to TBM operations.

**2.** Report to the ARTCC TMU any significant change in capacity that is expected or has occurred.

**3.** Present TM conflicts to the ARTCC TMU.

**4.** Consult with the ATCSCC, the affected ARTCC TMU, terminals, and customer organizations about the development and implementation of procedures, when appropriate.

**e.** Terminal facilities listed in TBL 18−5−1 must:

**1.** Enter the runway configurations (specifying runway numbers) and their associated AAR and ADR using the NTML.

***NOTE−***
*Local procedures must be established to determine whether the tower or TRACON is responsible for these entries.*

**2.** Enter the hourly arrival and departure counts starting at 0700 and ending at 2259 local using the ATCSCC-supplied web page.

***NOTE−***
*These counts must include IFR/VFR arrivals and departures that are fixed wing itinerants. Helicopter and local operations must not be included in the traffic count.*

**3.** Investigate and resolve issues about their web page.

4. Forward suggestions for NTML improvement to the District TMO. The TMO will consult with the ATCSCC.

**f.** The information for subparagraph e above applies to any airport in a ground delay program.

**g.** Field facility specialists with the NTML must:

1. Enter sign on/off times and initials.
2. Mark entries for equipment (E) when they cause a TMI or result in a TMI.
3. Enter TBM operations and TMIs initiated by your facility.
4. Enter constraints in your area of responsibility that may impact the NAS and forward them to the ATCSCC.
5. Enter arrival, departure, and en route delay status, as appropriate.
6. Enter deicing status (in/out).

***NOTE–***
*Facilities with the NTML are required to make the above data entries. At non-NTML facilities, the first facility overlying the non-NTML facility is responsible for entering data into the NTML. Facility personnel must enter data in a timely manner on the appropriate template. Timely is construed to mean that it would be useful to someone looking at the data in current time. If workload conditions or the situation prohibits entering the data in a timely manner, the information should be recorded by a subsequent or delayed entry.*

*TBL 18–5–1*

**TBL 18–5–1**

| AVIATION SYSTEM PERFORMANCE METRICS<br>AIRPORT TRAFFIC CONTROL TOWERS | | | | |
|---|---|---|---|---|
| ABQ | CMH | ISP | OGG | SDF |
| ANC | CVG | JAX | OMA | SEA |
| APA | DAL | JFK | ONT | SFO |
| ASE | DAY | LAS | ORD | SJC |
| ATL | DCA | LAX | OXR | SJU |
| AUS | DEN | LGA | PBI | SLC |
| BDL | DFW | LGB | PDX | SMF |
| BHM | DTW | MCI | PHL | SNA |
| BJC | EWR | MCO | PHX | STL |
| BNA | FLL | MDW | PIT | SWF |
| BOI | GYY | MEM | PSP | TEB |
| BOS | HNL | MHT | PVD | TPA |
| BUF | HOU | MIA | RDU | TUS |
| BUR | HPN | MKE | RFD | VNY |
| BWI | IAD | MSP | RSW | |
| CLE | IAH | MSY | SAN | |
| CLT | IND | OAK | SAT | |

## 18−5−5. STATIC COORDINATION

**a.** The ATCSCC must collect and manage updates for ASPM facilities' static data, currently depicted in the NTML and on the Operational Information System (OIS) under the associated ARTCC tabs in the East and West Directories.

**b.** The TMO or overlying TMO, in conjunction with their ASPM facilities, must provide the following static data to their appropriate Deputy Director of System Operations (DDSO) and ensure the accuracy of the information:

**1.** For NTML airport information: All normal runway configurations and their associated AARs/ADRs by April 30, August 31, and December 31 of each year.

***NOTE−***
*AARs are required for the following four categories: Visual meteorological conditions (VMC), low visual meteorological conditions (LVMC), instrument meteorological conditions (IMC), and low instrument meteorological conditions (LIMC).*

**2.** For OIS airport information: Monthly changes to the following ASPM airport data no later than the last day of the month:

**(a)** Normal runway configuration and associated AARs/ADRs.
**(b)** Suggested program rate.
**(c)** Pertinent notes.
**(d)** Holding capacities.
**(e)** Arrival flows.
**(f)** Category minimums.

**3.** Changes to TM Tips by the first of every month:

**(a)** Configuration instructions/planning.
**(b)** Airport operational challenges.
**(c)** Seasonal traffic information.
**(d)** Gate hold information.
**(e)** Special arrival instructions.
**(f)** Other pertinent information related to airspace, procedures, weather operations, local traffic management initiatives, taxiway information, and any other items that impact traffic flows or runway arrival/configuration.

**c.** The DDSO must provide:

**1.** All normal runway configurations and the associated AARs/ADRs for their underlying ASPM facilities to the ATCSCC Facility Automation Office by May 15 and November 15 each year.

**2.** Changes to additional supporting AAR data and TM tips for their underlying ASPM facilities to the ATCSCC Facility Automation Office by the 10th of each month.

## 18−5−6. EN ROUTE INTRAFACILITY COORDINATION

**a.** The STMC must ensure that an operational briefing is conducted at least once during the day and evening shifts. Participants must include, at a minimum, operational supervisors and other interested personnel designated by the facility management. Discussion at this meeting should include:

1. Planning TELCON checklist.
2. Operations Plan.
3. Topics pertinent to the facility.

**b.** Coordination between the TMU and Operations Supervisor (OS): In some facilities, the TM function may be performed by the OS or as designated by the air traffic manager. Timely coordination between the OS and TMU is paramount in TBM operations and when implementing and evaluating TM initiatives.

## 18−5−7. TERMINAL INTERFACILITY COORDINATION

**a.** Coordination between tower and TRACON TMUs: Towers that are not collocated with a TRACON TMU must coordinate with the appropriate TMU where the TM function has been established. If the TM function has not been established, then the tower must coordinate with the appropriate en route TMU.

**b.** Coordination between the TMU and ATCSCC NTMSs: Unusual circumstances or significant issues do not preclude the terminal TMU from contacting the ATCSCC directly.

**c.** Coordination between the TMU and the local NWS or CWSU must be completed as soon as practical at the beginning of each shift, and, as necessary, the TMU must obtain a weather briefing from the NWS.

**d.** Coordination between the TMU and the adjacent terminal: Timely coordination is imperative in order to manage the efficiency of the tower en route control (TEC) environment. TBM operations or TM initiatives imposed between two (2) or more adjacent terminals that could have an impact on the capacity of any airport, sector, or ARTCC must be coordinated with the appropriate ARTCC TMU.

## 18−5−8. NATIONAL TRAFFIC MANAGEMENT LOG (NTML)

**a.** Facility personnel must enter data in a timely manner on the appropriate template and verbally coordinated when required. Timely is construed to mean that it would be useful to someone looking at the data in current time. If workload conditions or the situation prohibits entering the data in a timely manner, the information should be recorded by a subsequent or delayed entry or on the appropriate form. Substantive changes in the contents or remarks or additional explanatory information should be accomplished by a subsequent or delayed entry.

**b.** The data in NTML will be subject to FAA security provisions for Internet technology. Facilities must use the NTML in preference to other methods. The NTML is an automated FAA Form 7230-4, Daily Record of Facility Operation, and will record the operating initials and facility for all log entries. Operating initials are removed at the end of six months in accordance with FAA Order 1350.14, Records Management.

**c.** The NTML automatically closes and reopens a new log each day; it automatically records the operating initials of the person previously signed on. Carryover items may be entered by the specialist or automatically be entered by the software based on the end/date/time group. Closing and opening logs are concurrent with each local day; however, the entries are made utilizing Coordinated Universal Time.

**d.** When it is necessary to amend a previous entry, the original entry may be corrected through normal computer entries; however, the database will be automatically marked and the information must be retrievable by the system administrator.

## 18−5−9. NTML FACILITY CONFIGURATION REQUIREMENTS

At least one TMU position in each facility must:

**a.** Subscribe to DCC for information affecting your facility.

**b.** Subscribe to underlying facilities for the following information:

**1.** Runway configurations.

**2.** Delays.

**3.** Deicing.

**4.** Other.

**c.** Enable notification of proposed restrictions.

## 18−5−10. NTML PROCEDURES

**a.** Facilities must enter, review, and respond to data in the NTML, as appropriate.

**b.** TBM operations and TMI data must be entered using the appropriate template and coordinated with the appropriate facility. Appropriate template means the one best suited for the type of event, such as a ground stop, delays, etc. The "Miscellaneous" templates must not be used if another template is appropriate. The Justification, Remarks, and Text fields must not contain any information that can be entered in other fields on the template.

***NOTE−***
*Causal information entered in the "Restriction" template is disseminated to many other software programs for monitoring the status of the NAS.*

**c.** Facilities must verbally contact other facilities when necessary to accomplish a task if electronic coordination has not been completed or is inappropriate to the situation, e.g., emergencies, classified information.

## 18−5−11. PROCESSING REQUESTS FOR REROUTES AND RESTRICTIONS FOR FACILITIES WITH NTML

**a.** Restrictions/modifications that require ATCSCC review and approval:

**1.** Requesting facility must enter the restriction/modification in NTML.

**2.** Providing facilities should review and respond using NTML within 15 minutes.

***NOTE−***
*The restriction/modification, if not responded to, will be placed in conference status 15 minutes after it has been entered by the requesting facility.*

**3.** If all providing facilities accept the restriction/modification using the NTML software, the ATCSCC must approve or deny the restriction/modification as appropriate. The ATCSCC may deny/amend a restriction at anytime; however, it must call the requesting facility and explain the reason for the denial/amendment. For automation purposes, the ATCSCC should not approve a restriction until all field providers have accepted it; however, if the ATCSCC elects to override the automation and approves a restriction/modification before all provider(s) accept, it must coordinate this action with the affected provider(s).

4. When a restriction is in conference status, the requestor must initiate a conference through the ATCSCC with providers. If an amendment is necessary, the ATCSCC amends and approves the restriction while on the conference.

***NOTE−***
*Any party may initiate a conference when deemed appropriate.*

**b.** Restrictions/modifications that do not require ATCSCC review and approval:

1. Requesting facility must enter the restriction/modification in NTML.
2. Providing facilities should review and respond using NTML within 15 minutes.
3. If all providing facilities accept the restriction/modification using the NTML software, it must be considered coordinated/approved.
4. If a providing facility does not respond using the NTML within 15 minutes, the requesting facility must contact the providing facility/facilities to verbally coordinate the restriction/modification.

***NOTE−***
*In the event that no one at the providing facility is available to accept a restriction in NTML, the requesting facility does have the ability to force the restriction into its log so it can be used internally. This must only be done after the verbal coordination mentioned in subparagraph 18−5−11b4 is complete.*

**c.** Restrictions/modifications associated with reroutes coordinated through the ATCSCC:

1. Restrictions/modifications that have been approved/coordinated will be discussed during the development of the reroute.
2. Any facility requiring a restriction in conjunction with a reroute that has been coordinated through the ATCSCC must enter the initiative into the RSTN template with the SVR WX RERTE button enabled. NTML processes these restrictions as approved and no further coordination is required.

## 18−5−12. DELAY REPORTING

**a.** Verbally notify the ATCSCC through the appropriate protocol, of any arrival, departure, or en route delay reaching or expected to reach 15 minutes except for Expect Departure Clearance Time (EDCT) delays created by Ground Delay Programs (GDP), Airspace Flow Programs (AFP), Collaborative Trajectory Option Programs (CTOP), or Ground Stops (GS) issued by the ATCSCC.

**b.** Facilities must update their delay status through the NTML. Facilities that do not have NTML must verbally report the delay increments in 15-minute increments to the overlying facility. The first facility with NTML must enter the delay information.

**c.** When notified that a facility is in a 15-minute delay situation, the ATCSCC and all impacted facilities, must subscribe to the delay report through the NTML until the facility verbally notifies the ATCSCC/impacted facilities that they are no longer in delays of 15 minutes or more.

**d.** Facilities must verbally notify the ATCSCC, through the appropriate protocol, when delays reach or are anticipated to reach 90 minutes, except for EDCT delays as a result of a GDP, AFP or CTOP. Facilities must document in their NTML, or daily log if the facility does not have NTML, that the verbal notification was completed. The ATCSCC must document in

their NTML that the 90-minute verbal notification was received. The facility manager must be notified when delays reach 90 minutes, except for delays as a result of a GDP, AFP or CTOP.

**e.** Facilities must notify the TMO of the overlying ARTCC, by whatever means available, of delays that reach 45 minutes or greater, except for EDCT delays as a result of a GDP, AFP, or CTOP. TMOs must then notify the Deputy Director Systems Operations (DDSO) and General Manager.

## 18−5−13. ELECTRONIC SYSTEM IMPACT REPORTS

AT facilities must coordinate with their TMU or overlying TMU for developing an electronic system impact report (SIR) for all planned outages/projects/events that could cause a significant system impact, reduction in service, or reduction in capacity (for example, air shows, major sporting events, space launch/reentry operations, business conventions, runway closures, and procedural changes affecting terminals and/or ARTCCs). Technical Operations is responsible for reporting all unplanned outages that pertain to FAA equipment.

***NOTE−***
*Planned events/outages are construed to mean that the event or outage is scheduled in advance of the occurrence.*

**a.** The TMU must coordinate the operational impact the outage/project/event will cause with the DDSO or designee, through their TMO. This includes, but is not limited to, reduction in AAR/ADR, anticipated use of TBM operations, anticipated TMIs, alternate missed approach procedures, and anticipated delays or any other significant impacts within the NAS.

**b.** To ensure the ATCSCC receives all planned events and outages that could have a significant impact on the NAS, the DDSO/designee or the OSG must enter the impact data on the Strategic Events Coordination website at http://sec.faa.gov.

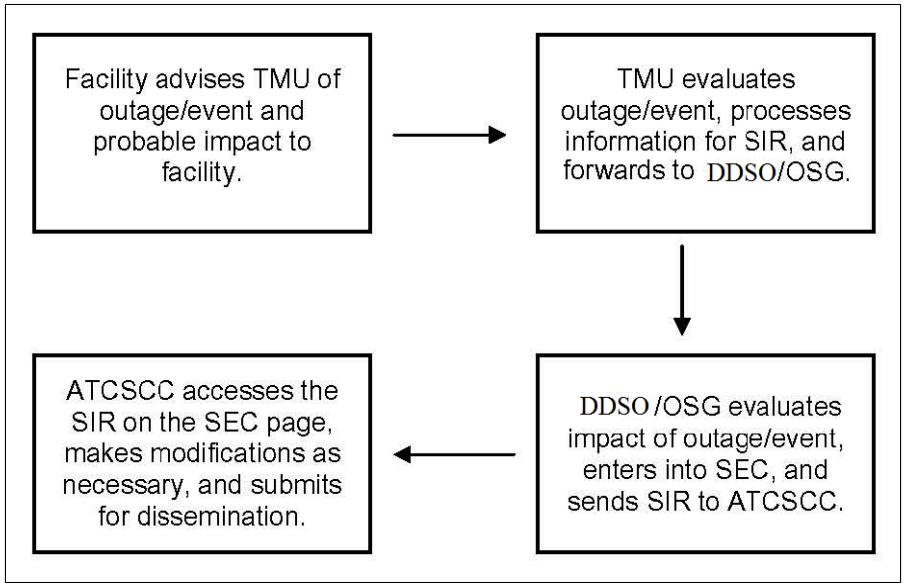
**c.** The electronic SIR must contain the following information:

**1.** Airport/facility identifier.
**2.** Overlying ARTCC.
**3.** Scheduled dates/times.
**4.** Description of outage/project/event.
**5.** Operational impact.
**6.** Facility recall.
**7.** Flight check requirements.
**8.** Anticipated delays.
**9.** Anticipated TMIs.
**10.** Customer coordination.
**11.** General information.
**12.** Contact information.
**13.** Date/time of scheduled telecons.

**14.** TBM operational impact.

***NOTE−***
*SIRs cannot be viewed on the OIS by facilities or our customers until the ATCSCC has approved the content. Instructions for entering items in detail are provided on the website at http://sec.faa.gov.*

*FIG 18−5−1*
**Electronic SIR Process**




**d.** The ATCSCC will access the SIRs on the SEC page, make modifications as necessary, and submit the SIR for dissemination. Once the ATCSCC has submitted the SIR, the information can be viewed on the intranet at http://www.atcscc.faa.gov/ois/ on the OIS page under “System Impact Reports."

**e.** Field facilities, TMUs, TMOs, DDSOs, the service center OSG, and the ATCSCC must ensure that SIRs:

**1.** Are coordinated, developed, and submitted with as much advance notice as possible before the planned event/outage.

***NOTE−***
*Providing the SIR in a timely manner allows our customers to more effectively plan their operation and reduce the impact to the extent practicable.*

**2.** Do not contain sensitive security information.

## 18−5−14. TARMAC DELAY OPERATIONS

**a.** Facility Procedures. The ATCSCC, en route facilities, and affected terminal facilities must develop procedures for handling requests related to tarmac delays for arriving or departing aircraft. ATMs must ensure that those procedures are in a facility directive and briefed annually. Issues to consider when developing local procedures should include:

**1.** What constitutes a "significant disruption" of service at that location in order to accommodate a tarmac delay aircraft. These issues vary by location and may include but are not limited to:

**(a)** Accommodating a tarmac delay aircraft would require airborne holding that would result in delays of 15 minutes or more.

**(b)** Use of an active runway to taxi a tarmac delay aircraft that would preclude the use of that runway for arrivals or departures and result in arrival/departure delays of 15 minutes or more.

**(c)** Taxi of tarmac delay aircraft would result in placing other aircraft in jeopardy of violating the "Three/Four-Hour Tarmac Rule."

**(d)** Taxi of tarmac delay aircraft would displace departure aircraft already in a reportable delay status and result in delays in excess of an additional 15 minutes.

**(e)** The taxi of a tarmac delay aircraft to the ramp, gate, or alternate deplaning area would result in a diversion or the airborne holding of more than three aircraft.

**2.** Operational complexity, surface operations, other arrival/departure runways, taxi routes, ramp areas, and low visibility operations.

**3.** Security and/or Customs concerns.

**4.** Local safety considerations, such as multiple runway crossings.

**5.** Location of alternate deplanement areas, if applicable.

**6.** Taxiway/runway closures and/or airport construction.

**7.** Notification, coordination, and investigation requirements.

**b.** Requirements.

**1.** When a tarmac delay taxi request/deplanement request is received, primarily from the pilot in command:

**(a)** An aircraft requesting taxi clearance for tarmac delay reasons should be issued clearance as soon as operationally practical, unless a significant disruption of airport operations or a compromise of safety or security would result.

**(b)** Tower-only and tower/TRACON facilities must verbally notify the overlying facility and document the incident with pertinent information on FAA Form 7230-4 in CEDAR when:

**(1)** The facility is informed of a tarmac delay request or taxi for deplanement related to the "Three/Four-Hour Tarmac Rule."

**(2)** The facility becomes aware of an aircraft that has or may have exceeded the "Three/Four–Hour Tarmac Rule."

**(c)** TRACONs must verbally notify the overlying ARTCC TMU and document the incident with pertinent information on FAA Form 7230-4 in CEDAR when:

**(1)** An airport within their geographic jurisdiction has received a tarmac delay request or taxi for deplanement related to the "Three/Four-Hour Tarmac Rule."

**(2)** The facility becomes aware of an aircraft that has or may have exceeded the "Three/Four-Hour Tarmac Rule."

**(d)** ARTCCs must verbally notify the ATCSCC and document the incident with pertinent information on FAA Form 7230-4 in CEDAR when:

**(1)** An airport within their geographic jurisdiction has received a tarmac delay request or taxi for deplanement related to the "Three/Four-Hour Tarmac Rule."

**(2)** The facility becomes aware of an aircraft that has or may have exceeded the “Three/Four-Hour Tarmac Rule."

**(e)** Facilities equipped with NTML should utilize the program to forward the information to the TRACON/ARTCC/ATCSCC.

***NOTE−***
*The FAA Form 7230-4 entry in CEDAR should be comprehensive and include pertinent information such as date, time, location of the occurrence, the identification of the aircraft involved, the time a tarmac delay taxi request was made, and other known information concerning movement of the aircraft. Data used during the review may include ASDE data, flight progress strips, voice replay, etc.*

**2.** When an ARTCC is notified that an aircraft has or may have exceeded the “Three/Four-Hour Tarmac Rule,” they must notify the ROC as soon as possible; the ROC must then notify the WOC as soon as possible. Notification should include the date, time, and location of the occurrence, as well as the identification of the aircraft involved.

**3.** When a facility is notified that an aircraft has or may have exceeded the “Three/Four-Hour Tarmac Rule,” all available records pertinent to that event will be retained in accordance with FAA Order JO 8020.16.

**4.** Consumer complaints are to be handled as follows:

**(a)** Refer the complainant to the appropriate airline.

**(b)** Do not engage in discussion with the consumer.

# Section 6. Trajectory-Based Operations (TBO)

## 18−6−1. TRAJECTORY-BASED OPERATIONS (TBO) MISSION

Trajectory-based operations (TBO) is an air traffic management (ATM) method for strategically planning, and managing flights throughout the operation by using time-based management (TBM), information exchanged between air and ground systems, and the aircraft's ability to fly trajectories in time and space. Aircraft trajectory is defined in four dimensions—latitude, longitude, altitude, and time.

TBO will increase airspace and airport throughput, flight efficiency, flexibility and predictability through TBM, PBN procedures, and increased collaboration with NAS users regarding preferred trajectories and priorities. TBM operations include, but are not limited to, arrival metering, surface metering, terminal metering, and departure scheduling.

## 18−6−2. TBO POLICY

TBO objectives must be prioritized when developing and executing the traffic management mission. TBO objectives include continuous and collaborative strategic planning, use of TBM, and use of PBN procedures when possible.

## 18−6−3. TIME-BASED MANAGEMENT (TBM)

TBM is a methodology for managing the flow of air traffic through the assignment of crossing times at specific points along an aircraft's trajectory. TBM applies time to mitigate demand/capacity imbalances while enhancing efficiency and predictability of the NAS. TBM techniques/tools will be used even during periods when demand does not exceed capacity. This sustains operational predictability and regional/national strategic plan. TBM utilizes capabilities within TFMS, TBFM, and TFDM designed to achieve a specified interval between aircraft.

## 18−6−4. POLICY

To maintain the integrity of the air traffic system, facility TM personnel must prioritize TBM when evaluating traffic flow management options.

## 18−6−5. TYPES OF TBM

**a.** Time-based flow management (TBFM). (See Chapter 18, Section 25, Time-Based Flow Management (TBFM).)

**b.** Traffic flow management system (TFMS) programs.

**1.** Ground delay programs. (See Chapter 18, Section 10, Ground Delay Programs.)

**2.** Airspace flow programs. (See Chapter 18, Section 11, Airspace Flow Programs (AFP).)

**3.** Collaborative trajectory options program (CTOP). (See Chapter 18, Section 12, Collaborative Trajectory Options Program (CTOP).)

**c.** Terminal flight data manager (TFDM). (See Terminal Flight Data Manager (TFDM) Order JO 7210.637.)

## 18−6−6. EXCEPTION

The above list is not all-inclusive and does not preclude the innovation and application of other procedures that will result in improved customer service.

## 18−6−7. TBM DATA

The efficiency of the NAS is enhanced when all participants have access to the same data. Utilization of shared technology, e.g., TBFM data, trajectory options set (TOS), TFDM data, Flow Constrained Area (FCA)/Flow Evaluation Area (FEA) enhances the coordination process and is critical to the success of trajectory-based operations (TBO).

## 18−6−8. TBM APPROVAL AUTHORITY

The ATCSCC is the approval authority for all interfacility TBM operations. While each facility retains authority for the implementation of TBM operations in its airspace, the ATCSCC will be the final authority on how those operations are carried out and the priorities they are assigned in order to best support the objectives and overall efficiency of the NAS.

## 18−6−9. FIELD FACILITY RESPONSIBILITIES FOR TBM

**a.** Evaluate capacity, demand, and efficiency of the operation. The assessment must include the evaluation of sufficient data required to make an informed decision. The data may include load graphs from TBFM, Flow Evaluation Areas (FEA)/Flow Constrained Areas (FCA), traffic counts and lists from the traffic flow management system (TFMS).

**b.** When interfacility TBM operations are appropriate, coordinate with the ATCSCC and provide the following information:

**1.** A detailed and specific identification of the operation.

**2.** Identification of potential system impacts.

## 18−6−10. ATCSCC RESPONSIBILITIES FOR TBM

**a.** Advise facilities of potential system impacts. The impacts will be determined by conferencing with impacted facilities, as necessary, and may require sharing FEAs/FCAs, traffic counts and lists from the traffic flow management system (TFMS), or TBFM information. If a TBM operation is modified while on the conference, the ATCSCC will request the facility to modify the NTML entry.

**b.** Issue advisories, as appropriate.

**c.** Monitor TBM operations pertinent to the position of operation.

**d.** Maintain a database of TBM operations for historical and statistical analysis.

## 18−6−11. TBM WITHIN ARTCC AREA OF JURISDICTION

Facilities must:

**a.** Coordinate TBM with all impacted facilities within their jurisdiction.

**b.** Contact the ATCSCC at any time TBM may result in reportable delays, have an adverse effect on other national initiatives, or result in the implementation of additional initiatives.

**c.** Enter all applicable information in the NTML.

# Section 7. Traffic Management Initiatives

## 18−7−1. GENERAL

Traffic Management Initiatives (TMIs) are techniques used to manage demand with capacity in the NAS.

**a.** Properly coordinated and implemented TMIs are an important tool in the air traffic system. These initiatives contribute to the safe and orderly movement of air traffic.

**b.** Any TMI creates an impact on customers. It is imperative to consider this impact and implement only those initiatives necessary to maintain system integrity.

## 18−7−2. BACKGROUND

TM personnel utilize a variety of tools and NAS performance information to implement TMIs that are carried out by air traffic controllers and flight operators to ensure a safe and efficient operation.

> ***NOTE−***
> *TMIs do not include controller coordinated actions. See FAA Order JO 7110.65, subparagraph 5−4−5e. Comply with restrictions issued by the receiving controller unless otherwise coordinated.*

## 18−7−3. POLICY

To maintain the integrity of the air traffic system, facility TM personnel must employ the least restrictive methods available to minimize delays.

## 18−7−4. TYPES OF TMIS

**a.** Altitude: used to separate different flows of traffic or flights flying in close proximity to each other.

**1.** Tunneling- Term to indicate aircraft will be descended prior to the normal descent point to avoid airspace or traffic constraints.

**2.** Capping- Term to indicate aircraft will be cleared to an altitude lower than their requested altitude until they are clear of a particular airspace. Capping may apply to the initial segment of the flight or for the entire flight.

**3.** Low Altitude Arrival/Departure Routing (LAADR). A set of routings with altitude expectations for usage in times of capacity constraints in the NAS. LAADR may apply to the departure or the arrival phase of flight. LAADR requires a written agreement with the customers prior to implementing.

**b.** Miles-in-trail (MIT). The number of miles required between aircraft that meet specific criteria. The criteria may be airport, fix, altitude, sector, or route specific. MIT are used to apportion traffic into manageable flows, as well as, provide space for additional traffic (merging or departing) to enter the flow of traffic.

**c.** Minutes-in-trail (MINIT). The number of minutes required between successive aircraft. It is normally used in a nonradar environment, or when transitioning to a nonradar environment, or additional spacing is required due to aircraft deviating around weather.

**d.** Fix balancing. Assigning an aircraft a fix other than in the filed flight plan in the arrival or departure phase of flight to equitably distribute demand.

**e.** Airborne holding. Planned holding of aircraft may be utilized. This is normally done when the operating environment supports holding and the weather conditions are expected to improve shortly; this ensures aircraft are available to fill the capacity at the airport.

**f.** Departure Sequencing Program (DSP)- Assigns a departure time to achieve a constant flow of traffic over a common point. Normally, this involves departures from multiple airports.

**g.** TFMS Programs.

**1.** Ground delay programs. (See Chapter 18, Section 10, Ground Delay Programs.)

**2.** Airspace flow programs. (See Chapter 18, Section 11, Airspace Flow Programs (AFP).)

**3.** Collaborative trajectory options program (CTOP). (See Chapter 18, Section 12, Collaborative Trajectory Options Program (CTOP).)

**h.** Reroutes:

**1.** Reroutes are ATC routings other than the filed flight plan. They are issued to:

**(a)** Ensure aircraft operate with the "flow" of traffic.

**(b)** Remain clear of special use airspace.

**(c)** Avoid congested airspace.

**(d)** Avoid areas of known weather or where aircraft are deviating or refusing to fly.

**2.** Operators should amend flight plans when they are more than 45 minutes from departure.

**3.** Sources for route information:

**(a)** Chart Supplement.

**(b)** Preferential Route Information in facilities.

**(c)** Route Management Tool.

**(d)** North American Route Notice.

**(e)** Federal Air Regulations.

**(f)** Notices to Airmen.

**(g)** Advisories issued by ATCSCC. (These are listed on the Operational Information System.)

**4.** Pre-departure reroute (PDRR) is a capability within TFMS that enables ATC to quickly amend and execute revised departure clearances to mitigate en route constraints or balance en route traffic flows. This capability is especially beneficial during periods of severe weather when departure routes are rapidly opening and closing.

**5.** Airborne reroute (ABRR) is a capability within TFMS that is used for tactical reroutes for airborne aircraft. The ARTCC TMC uses TFMS route amendment dialog (RAD) to define a set of aircraft-specific reroutes that address a certain traffic flow problem and then electronically transmits them to ERAM for execution by the appropriate sector controllers.

**6.** Trajectory options set (TOS) – A message sent by participating flight operators to TFMS defining a prioritized group of options. These preferences are defined through a combination of routes and/or altitudes and/or speeds with each trajectory being weighted through the use of flight operator submitted preferences. (See Chapter 18, Section 12, Collaborative Trajectory Options Program (CTOP), and Pilot/Controller Glossary.)

**7.** More information on routes is contained in Chapter 18, Section 19, Coded Departure Routes, Section 20, Route Advisories, and Section 22, National Playbook.

**i.** Ground Stops. (See Chapter 18, Section 13, Ground Stop(s).)

## 18−7−5. EXCEPTION

The above list is not all-inclusive and does not preclude the innovation and application of other procedures or traffic flow management strategies that will result in improved customer service.

## 18−7−6. TMI DATA

The efficiency of the NAS is enhanced when all participants have access to the same data. Utilization of shared technology, e.g., Flow Constrained Area (FCA)/Flow Evaluation Area (FEA) enhances the coordination process.

## 18−7−7. TMI APPROVAL AUTHORITY

**a.** The ATCSCC is the approval authority for all en route and designated terminals interfacility TMIs, except as identified in subparagraph (b) below and MIT restrictions of ten (10) miles or less. TMIs that are expected to result in reportable delays must be coordinated through the ATCSCC. Reportable delays are delays of 15-minutes or more as defined in FAA Order JO 7210.55, Operational Data Reporting Requirements.

***NOTE−***
*New York TRACON is a designated terminal and others may be included at the direction of System Operations.*

**b.** The Center/TRACON is responsible for TMI within their area of jurisdiction (underlying terminals) that do not cause reportable delays.

## 18−7−8. PROCESSING TMI

**a.** The initiating facility must identify the need for a TMI, explore alternatives, and prepare a justification.

**b.** The initiating facility must be prepared to discuss the proposal at the request of the ATCSCC and/or the receiving facility prior to implementation during the joint review process.

**c.** Facilities must continuously monitor and evaluate the TMI, and make adjustments as necessary, including cancellation.

**d.** Facilities must conduct post event analysis on the TMI, and document any known negative impacts/feedback.

## 18−7−9. FIELD FACILITY RESPONSIBILITIES FOR TMIS

**a.** Evaluate capacity, demand, and efficiency of the operation. The assessment must include the evaluation of all data required to make an informed decision. The data may include time-based management (TBM), Flow Evaluation Areas (FEA)/Flow Constrained Areas (FCA), traffic counts and lists from the enhanced traffic management system, and coordination with impacted facilities.

**b.** Consider internal options prior to requesting interfacility TMIs.

**c.** When interfacility TMIs are appropriate, coordinate with the ATCSCC and provide the following information:

**1.** A detailed and specific identification of the operation or NAS constraint.

**2.** Intrafacility actions taken/considered.

**3.** A detailed explanation of the assistance required, including options available.

4. Identification of potential system impacts.

**d.** Document the TMI in the NTML. Severe weather MIT coordinated through the ATCSCC must be entered in the NTML utilizing the "severe weather" feature by the facility requesting the MIT.

***REFERENCE−***
*For ARTCC to ARTCC and ARTCC to N90 MIT responsibilities and coordination, refer to paragraph 18−8−5.*

## 18−7−10. ATCSCC RESPONSIBILITIES FOR TMI

**a.** Advise facilities of system impacts. The impacts will be determined by conferencing impacted facilities, as necessary, and may require sharing FEAs/FCAs.

1. If a MIT restriction is modified while on the conference, the ATCSCC will modify the restriction in the NTML while on the conference.
2. Once the restriction is coordinated, the restriction or modified restriction will be approved and sent to all relevant facilities.

**b.** Issue a decision regarding the request. For negative responses, document the rationale in disapproving the request.

**c.** Issue advisories, as appropriate.

**d.** Monitor TMI pertinent to the position of operation.

**e.** Maintain a database of MIT TMI for historical and statistical analysis.

## 18−7−11. TMIS WITHIN ARTCC AREA OF JURISDICTION

Facilities must:

**a.** Coordinate TMIs with all impacted facilities within their jurisdiction.

**b.** Contact the ATCSCC at any time internal restrictions may result in reportable delays; have an adverse affect on other national initiatives; or result in the implementation of additional initiatives.

**c.** Enter all applicable information in the NTML.

## 18−7−12. TMIS OF 10 MIT OR LESS

TMIs must be coordinated consistent with the following procedures:

**a.** The requesting facility notifies the providing facility in a timely manner.

**b.** The TMI must not exceed four (4) hours.

**c.** The TMI is documented in the NTML, including justification and any negative impacts associated with the TMI.

**d.** If the facilities cannot reach agreement, the restriction request is forwarded to the ATCSCC for resolution.

**e.** The ATCSCC may suspend these procedures at any time by notifying the impacted facilities.

## 18−7−13. TMIS OF 25 MIT OR GREATER

**a.** All FAA TMUs requesting initiatives of 25 MIT or greater must:

**1.** Create an FEA that:

**(a)** Adequately represents the constrained area.

**(b)** Captures the flights affected by the requested initiative.

**2.** Share the FEA with the ATCSCC.

**3.** Enter the name of the FEA in the remarks section of the NTML Restrictions tab and coordinate justification for the restriction.

***NOTE−***

*1. TMUs are exempt from creating FEAs for situations that cannot be represented due to filtering limitations in the FEA tool.*

*2. Flights to specific runways, flights using specific departure procedures, flights that may be offloaded to alternative routing are examples of items that cannot be represented.*

**b.** If an extension to a 25 MIT or greater restriction is necessary, the TMU must:

**1.** Amend the shared FEA end time to cover the revised time period.

**2.** Coordinate the extension request with the ATCSCC.

**c.** The ATCSCC may suspend the requirements for facilities to develop FEAs associated with MIT restrictions at any time.

**d.** Any MIT request of 40 MIT or greater requires a conference with the ATCSCC and the requesting facility must advise their General Manager the reason for the restriction request.

## 18−7−14. CAPPING AND TUNNELING

**a.** ARTCCs must:

**1.** Provide a basic capping and tunneling plan in coordination with affected TRACON for all airports listed in the Operational Evolution Partnership, as a minimum.

**2.** Develop, maintain, coordinate, and modify all capping and tunneling plans with the TMU, the ATCSCC, and affected facilities within or adjacent to their area of jurisdiction.

**3.** Complete capping and tunneling plans by March 1, 2009, and update their plans biannually, no later than May 1 and November 1 of each calendar year.

**4.** Include in the plan:

**(a)** A description of planned capping and tunneling procedures that may be used within the departure ARTCC airspace.

**(b)** Directions of use (for example, North Plan, South Plan, etc.).

**(c)** Altitudes, including expected start and/or end points of capping and tunneling actions.

**(d)** Routes and distances of expected use.

**(e)** Information concerning how and when the plan affects arrivals, departures, terminal or en route airspace.

**(f)** All facilities impacted.

**b.** ARTCC TMUs must:

**1.** Submit facility capping and tunneling plans to the ATCSCC Automation Office for inclusion in the Operational Information System by May 15 and November 15 of each calendar year.

This will allow facilities and customers to evaluate the impact of these plans and any possible strategic and tactical options to them.

2. Coordinate capping and tunneling plans through the ATCSCC before implementation.
3. Coordinate issues, alternate initiatives, and exit strategies with the ATCSCC and affected facilities.

***NOTE−***
*Capping and tunneling can provide a rapid solution to some situations; however, consideration needs to be given to potential weather constraints, such as turbulence and icing, and the effects of fuel and flight time for the aircraft included.*

4. Provide local information to aid the ATCSCC with developing alternative, successful reroute options for customers to consider, as needed.
5. Implement tactical initiatives and update as necessary, for example, MIT/MINIT.
6. Coordinate changes or cancellation of capping and tunneling plans with the ATCSCC and affected facilities.

**c.** The ATCSCC must:

1. Respond to requests for the implementation of the capping and tunneling plan and evaluate possible alternatives.
2. Notify affected facilities and customers of capping and tunneling implementation and the airports, routes, and/or airspace that will be impacted.
3. Transmit planned advisories before implementation of capping and tunneling, when applicable. Provide details regarding distance and altitude information, when available.
4. Transmit required advisories to implement capping and tunneling plans. This advisory should specify airports included, alternate routes and options as able, expected duration, transition points (route or altitude), reason for implementation, and modifications to the plan.
5. Evaluate and advise affected facilities and customers of cancellation of capping and tunneling initiatives, as appropriate.

# Section 8. Flow Evaluation Area (FEA), Flow Constrained Area (FCA), and Integrated Collaborative Rerouting (ICR)

## 18−8−1. GENERAL

FEAs and FCAs support common situational awareness and provide customers increased flexibility in responding to conditions in the (NAS) by providing a graphical description of a constraint and an associated list of flights that traverse the area identified. FEAs and FCAs provide reroutes which are published through a reroute advisory with an optional flight list attached. Stakeholders can monitor FEAs and FCAs through the reroute monitor in the traffic situation display (TSD), the Web situation display (WSD), or the collaborative constraint situation display (CCSD).

## 18−8−2. DEFINITIONS

**a.** Default route: A route published by the ATCSCC in conjunction with user preferred trajectory (UPT) for facilities to assign any aircraft that remain on the dynamic list.

**b.** Dynamic list: A list of flights captured in an FEA/FCA that is continually updated as changes occur to the aircraft's route of flight.

**c.** Early Intent (EI): Customer route preference submitted to the Traffic Flow Management System (TFMS). EI routes identify routing preferences or remove the flight from the constrained area. Customers are expected to file their flight plans in accordance with EI unless otherwise coordinated with the ATCSCC.

**d.** EI Window: Time period when customers can submit EI or file out of the FEA.

**e.** FCA: The defined region of airspace, flight filters, and time interval used to identify flights subject to a constraint. System stakeholders may be required to take action to mitigate the constraint identified by the FCA.

**f.** FEA: The defined region of airspace, flight filters, and time interval used to identify flights. An FEA should be used by system stakeholders to evaluate and/or mitigate potential or existing constraints.

**g.** FEA/FCA flight list: Aircraft that penetrate the FEA/FCA during the specified valid time.

**h.** ICR: Strategic process for stakeholders to define and structure TMIs to mitigate constraints identified by an FEA or FCA.

**i.** Route guidance: Suggested reroutes, issued in an advisory that suggest or provide examples of routing possibilities away from a defined constraint associated with an FEA/FCA. This guidance may not provide routes for all flights captured in the FEA/FCA.

## 18−8−3. FEA/FCA RESPONSIBILITIES

Customers are expected to:

**a.** Enter the FCA name in the remarks section when filing the flight plan.

**b.** Review advisories and examine their affected flights.

**c.** Use EI capability as needed, considering FAA route guidance. Early filing of a flight plan may be used in lieu of this requirement.

**d.** Examine their affected flights and submit decisions for routing in accordance with the FEA/FCA. If unable, coordinate with the ATCSCC Tactical Customer Advocate.

**e.** Consider using private FEAs to monitor a situation and evaluate an area of concern.

**f.** Evaluate and select routes that meet their objectives.

> ***NOTE−***
> *Customers may identify available routes via the Route Options Generation (ROG).*

## 18−8−4. FEA/FCA PROCEDURES

**a.** The FAA TMU must:

**1.** Remain cognizant of operational areas of interest and use FEAs to evaluate those areas.

**2.** When naming FEAs that will be shared, ensure the name is descriptive to the constraint or airspace captured. Ensure FEAs do not contain FCA in the name and do not begin with a number or special character.

**3.** Share FEAs with the ATCSCC that may require implementation of TMIs (i.e., reroutes, miles-in-trail, ground stops, etc.) If requesting a reroute in conjunction with a shared FEA, notify the ATCSCC via the NTML of the FEA and the proposed reroute.

**4.** Contact the ATCSCC to coordinate a public FEA or an FCA.

**5.** Coordinate public FEAs and FCAs with facilities within their area of jurisdiction.

**6.** Monitor the FCA dynamic list. Based on information provided in the FCA advisory, appropriate action must be taken in regard to flights that remain on the list.

**7.** Monitor the system impact of the routes and contact the ATCSCC if these routes will cause a local flow issue.

**8.** Coordinate with the ATCSCC if it becomes necessary to issue an FCA.

**9.** Monitor the public FEA or FCA and, as required, coordinate modifications to the initiatives with the ATCSCC.

**10.** When an FCA is used to manage a constraint; review the advisory issued by the ATCSCC and comply with the provisions of the advisory.

**11.** When TMIs that impact other stakeholders will be required to resolve a situation:

**(a)** Coordinate with the ATCSCC.

**(b)** Provide local information which aids the ATCSCC with developing successful reroute options for customers to consider.

**(c)** Monitor impacts of customer preferences.

**(d)** Take tactical action as necessary.

**12.** Assign default routes to flights that are not routed around the constraint as directed in reroute advisories.

**b.** The ATCSCC must:

**1.** Issue public FEAs and issue an advisory, as necessary. Public FEAs must have a descriptive name that is pertinent to the event.

**2.** Issue FCAs and, issue an advisory, as necessary. Include in the advisory any actions required by customers and field facilities.

**3.** Create FEAs that define the geographical area of concern with appropriate altitude and time limits, plus any other relevant filters to select affected traffic.

**4.** Monitor the NTML and respond to field facility requests for reroutes associated with shared FEAs. Evaluate reroute requests and, if applicable, conference the appropriate stakeholders to coordinate the reroute.

5. Issue any associated routes via the “Create Reroute” tool.
6. Ensure the FCA or public FEA expires at the end of the published valid time unless coordination is accomplished and an advisory issued that cancels the initiative.
7. Provide FAA facilities with guidance on the use of default routes and when they may be discontinued.

## 18−8−5. ARTCC TO ARTCC FEA/FCA COORDINATION

These procedures must be utilized in the development and coordination of ARTCC to ARTCC and ARTCC to N90 MIT.

## 18−8−6. RESPONSIBILITIES

ARTCC TMU must follow guidelines for the FEA naming convention as follows:

**a.** For Airport MIT:
[Requester]_[Provider]_[Airport]

***EXAMPLE−***

1. *ZDC_ZJX_EWR*
2. *ZTL_ZID_ATL*

**b.** For Airway/Route:
[Requester]_[Provider]_[Airway]

***EXAMPLE−***

1. *ZDC_ZJX_J55*
2. *ZNY_N90_PARKE*

## 18−8−7. PROCEDURES

The ARTCC TMU must:

**a.** Draw the FEA at the common ARTCC or ARTCC/N90 boundary.
**b.** Draw the FEA per route.
**c.** Filter the FEA for single airport destinations, except where MITs are requested for multiple destinations in an `as one' restriction; in which case, the FEA must be filtered to reflect that information.
**d.** Review the total number of aircraft as presented in the 15-minute FEA/FCA timeline bar.
**e.** Select and review the FEA/FCA Dynamic List for restrictions needed based on distance between aircraft, making sure the “ENTRY” column is set to display aircraft in chronological order of times as they enter the FEA.

1. An accepted distance consideration for the en route environment is 7 miles per minute of flight time.

***EXAMPLE−***
*Two aircraft passing through an FEA 3 MINITs should be considered to be 21 MITs of one another.*

**2.** An accepted distance consideration for N90 TMIs is 5 miles per minute of flight time.

**f.** Complete electronic coordination and share the FEA with the ATCSCC as required.

**g.** Continually evaluate and assess MIT for effectiveness and cancel the restriction at the earliest opportunity.

## 18−8−8. INTEGRATED COLLABORATIVE REROUTING (ICR)

**a.** Customers are expected to:

**1.** Examine their affected flights and, when practical, enter early intent (EI) and/or file a flight plan that will route the aircraft away from the affected area. When acceptable options are not available, contact the ATCSCC Tactical Customer Advocate.

**2.** Enter “NRP” in the remarks section of the flight plan.

**b.** The FAA traffic management unit (TMU) must:

**1.** Coordinate with the Air Traffic Control System Command Center (ATCSCC).

**2.** Provide assistance in developing flow constrained areas (FCA), reroute options, and associated restrictions for the impacted area.

**c.** The ATCSCC must:

**1.** Issue an ICR FCA that defines the geographical area of concern with appropriate altitude and time limits, plus any other relevant filters to select affected traffic.

**2.** Conference the affected stakeholders and communicate the objectives for the flights captured in the FCA.

**3.** Send a numbered advisory that provides route guidance, if deemed necessary.

**4.** Issue an advisory in the Create Reroute tool. Preferential routes, recommended routes, and constraint avoidance may be suggested.

***NOTE−***
*Required reroutes may not be necessary if the response taken by customers alleviates the need for this initiative or the reason for initiating the ICR process changes (weather does not materialize, significant volume reductions, etc.).*

**5.** The FCA expires at the end of the published valid time unless it is coordinated and an advisory is issued that extends or cancels the initiative.

# Section 9. Monitor Alert Parameter

## 18−9−1. PURPOSE

The Monitor Alert Parameter (MAP) establishes a numerical trigger value to provide notification to facility personnel, through the MA function of the TFMS, that sector/airport efficiency may be degraded during specific periods of time. The efficiency of a functional position or airport in providing air traffic services is a shared responsibility of the TM team. That team consists of the ATCS(s), OS(s), and the TMU. These entities must monitor, assess and act on sector/airport loading issues to ensure that these NAS elements operate efficiently. The ability of a functional position or airport to provide air traffic services may be affected by a variety of factors (i.e., NAVAIDs, meteorological conditions, communications capabilities, etc.); therefore MAP is a dynamic value which will be adjusted to reflect the capabilities of the functional position or airport.

## 18−9−2. IMPLEMENTATION PROCEDURES

Baseline MAP values are established utilizing a workload-based model collaboratively developed at the national level and any adjustments made to those values using the ARTCC's collaborative process. These values will be reflected in the TFMS NAS Monitor.

**a.** Baseline MAP value adjustments require concurrence of representatives of the TMU and area of specialization. Adjustments to the baseline values will be documented, including rationale, and maintained by the TMU.

**b.** The MAP value may be dynamically adjusted to reflect the ability of the functional position to provide air traffic service. Examples of situations that may require an adjustment include convective weather, turbulence, NAVAID outages, or other scenarios that have a negative or positive impact on the ability to safely and efficiently work air traffic at a level consistent with the MAP. Any adjustments made to the MAP value must be communicated to the ATCSCC.

## 18−9−3. RESPONSIBILITIES

Facility TMUs must:

**a.** Monitor all adapted sectors and airports within their area of jurisdiction for alerts generated by the MA function of the TFMS.

**b.** Maintain communications with areas of specialization to determine functional position constraints and adjust MAP values to indicate the functional position capabilities.

**c.** Set the MA look ahead value at least one hour into the future with 1.5 hours to 2.5 hours being the recommended time frame.

***NOTE−***
*The recommendation to set the look ahead value to between 1.5 and 2.5 hours is for pre-planning purposes. Action taken to address an alert should take place approximately 1 hour prior to the alerted time frame. This activity will allow for a further review and evaluation of the TFMS data. A key in the analysis process is the determination of the duration of the alert. TM initiatives should be primarily for those time frames when the MAP value will be equaled or exceeded for a sustained period of time (usually greater than 5 minutes).*

**d.** Respond to alerts by:

**1.** Analyzing data for the alerted time frame to develop expected impact and recommendations to address the alert.

**2.** For red alerts - notify the affected area of the alert, indicating the expected impact and recommended action.

**3.** For yellow alerts - notify the affected area of the alert when analysis indicates that the ability of the sector to provide efficient air traffic services will be degraded due to abnormal operations.

**e.** Maintain an operational log of red alerts and retain for 45 days the following information:

**1.** Date and time of alert.

**2.** Results of analysis including expected impact and recommendation to address.

**3.** Time area notified.

**4.** Action, if any, to be taken.

**5.** Functional position configuration (i.e., sector combine status, staffing).

**6.** The time period(s), by facility, during which an alert notification(s) has/have been suspended.

## 18−9−4. ANALYSIS REQUIREMENTS

**a.** Facilities will produce, utilizing the Off Line Aircraft Management Program or equivalent program, a 15 minute summary sector activity report for each red alert and each yellow alert conforming to subparagraph 18−9−3d3.

**b.** Alerts generated by the MA function of the TFMS will be further evaluated by post event analysis. The focus of this analysis will be towards assessing the effectiveness and impact, both to the sector and the user, of action taken or not taken as a result of a documented alert. A one minute sector summary report will be utilized to assist in the impact analysis of the alerted time frame.

**c.** When a pattern of alerts is established (i.e., same sector, same time frame, on a daily basis or requirement for additional resources to manage on a routine basis) which requires recurring TM initiatives for resolution, additional analysis will be conducted. The analysis should result in recommendations to address the identified constraint and may include sector design adjustment, flow dispersion, or user operations adjustment. Should the local facility not be able to implement resolution recommendations due to external factors (i.e., lack of equipment, non-concurrence from other facilities), the local facility will elevate the issue to the responsible Service Area office.

## 18−9−5. RESOLVING RECURRING SECTOR LOADING ISSUES

The elevation of a recurring sector loading issue to the regional level indicates that the local facility requires additional assistance in resolving the issue. The appropriate Service Area office will allocate necessary resources to address the sector loading issue and will ensure that:

**a.** The local facility forwards a staff study to the Service Area office outlining activities taken to resolve the recurring sector loading problem, solutions explored, and recommendations for resolution. The report will also contain specific initiatives the facility is employing to currently manage the sector.

**b.** The originating facility Service Area office will develop an action plan to address the identified problem and will:

**1.** Notify ATCSCC of any continuing TM initiatives being implemented to resolve the sector loading problem.

**2.** Dedicate resources within the division to evaluate the facility's findings.

**3.** Serve as the focal point for coordinating interfacility activity as appropriate.

**4.** Coordinate with appropriate FAA Headquarters service units for assistance as necessary.

**5.** Forward to the manager ATCSCC, within 60 days of receiving the facility's report, a copy of the draft action plan and associated milestones.

# Section 10. Ground Delay Programs

## 18−10−1. POLICY

Ground Delay Programs (GDP) must be applied to all aircraft departing airports in the contiguous U.S., as well as, from select Canadian airports. Aircraft that have been assigned an EDCT in a GDP should not be subject to additional delay. Exceptions to this policy are miles-in-trail and departure/ en route spacing initiatives that have been approved by the ATCSCC. GDP procedures do not apply to facilities in Alaska.

## 18−10−2. GENERAL

A GDP is a TM process administered by the ATCSCC; when aircraft are held on the ground in order to manage capacity and demand at a specific location, by assigning arrival slots. The purpose of the program is to support the TM mission and limit airborne holding. It is a flexible program and may be implemented in various forms depending upon the needs of the air traffic system. The EDCT is calculated based on the estimated time en route and the arrival slot. It is important for aircraft to depart as close as possible to the EDCT to ensure accurate delivery of aircraft to the impacted location. GDPs provide for equitable assignment of delays to all system users.

## 18−10−3. BACKGROUND

The Flight Schedule Monitor (FSM) was developed through the collaborative decision making (CDM) process with system users to provide a dynamic method of implementing and managing GDPs. System users submit schedule changes to FSM, which keeps a current up-to-the-minute schedule of flights. The Flight Schedule Analyzer (FSA) is used to monitor and review the effectiveness of GDPs.

## 18−10−4. DEFINITIONS

**a.** GDP Parameters. Aircraft departing within a defined geographical area are initially assigned delay in the GDP. This area is developed using the FSM, and may consist of one or more ARTCCs and one or more Canadian airports. All departure aircraft will receive an EDCT to the GDP airport.

**b.** Delay Assignment (DAS). A method for assigning delays to aircraft based on the GDP parameters. The delay assignment is calculated in 15-minute increments and appears as a table in TFMS.

**c.** General Aviation Airport Program (GAAP). A method for assigning delays to aircraft based on arrival slot availability at the airport.

**d.** Unified Ground Delay Program (UDP). A preferred method that addresses the mix of scheduled and unscheduled (i.e., pop-ups) demand based on the following parameters: number of reserved pop-ups, target delay multiplier, and delay limit.

## 18−10−5. VARIABLES IN GDPS

GDPs may be modified and affected due to changing conditions.

**a.** GDP Adjustments. The ATCSCC may make revisions and compressions to the GDP as conditions at the airport or within the airspace change.

**b.** User Options. Users are permitted to exchange and substitute Controlled Times of Arrival (CTA) congruent with CDM agreements concerning substitutions.

## 18−10−6. ATCSCC PROCEDURES

Upon receipt of information that traffic flows have been or are expected to be impacted and that significant delays will result, the ATCSCC must:

**a.** Conference affected facilities and system users, as appropriate, to determine AARs and program rates, and review system demand and other known or anticipated factors.

**b.** Determine when implementation of a GDP is appropriate and the program rate to be used. Consideration will be given to the impact on other air traffic control facilities and user groups.

**c.** Transmit an ATCSCC advisory providing information to air traffic control facilities and user groups about the implementation, revision, compression, and cancellation of a GDP. Except for the cancellation of a GDP, the ATCSCC advisory must include the following items:

**1.** Airport.
**2.** Delay Assignment Mode.
**3.** Aggregate Demand List (ADL) Time.
**4.** Program Type. (Optional)
**5.** Arrivals Estimated For.
**6.** Program Rate.
**7.** Flights Included.
**8.** Scope.
**9.** Additional Facilities Included.
**10.** Exempt Facilities.
**11.** Canadian Airports Included. (When applicable.)
**12.** Delay Assignment Table Applies To. (Optional.)
**13.** Maximum Delay or Delay Limit. (As appropriate).
**14.** Average Delay. (Optional).
**15.** Impacting Condition.
**16.** Comments.

**d.** Transmit the DAS table to ARTCC TMUs via TFMS and the NADIN circuits, if appropriate.

**e.** Transmit EDCTs to ARTCCs and linked system users.

***NOTE−***
*A CT message is automatically transferred to the ARTCC's computers by the ETMS and appears on flight progress strips as an EDCT. In the event of a communication failure between the ETMS and the NAS computer, the CT message can be manually entered by the ARTCC TMC with ATCSCC approval.*

**f.** Input ATCSCC coordinated modifications to EDCT into FSM.

***NOTE−***
*Modifications may be made through TFMS.*

**g.** Continually monitor, adjust, and cancel GDPs, as appropriate, and transmit an ATCSCC advisory as necessary.

**h.** Provide an EDCT or DAS when requested by an ARTCC.

**i.** Coordinate with affected facilities to ensure the GDP is adequately managing the demand.

**j.** Utilize the TSD and FSM to monitor traffic flow patterns, obtain estimated arrival counts, or obtain airborne delay estimates.

**k.** When appropriate and workload permitting, utilize FSA to monitor the GDP.

## 18−10−7. ARTCC PROCEDURES

The ARTCC TMU must:

**a.** Issue a General Information message (GI) to all towers and FSSs advising of the GDP. In some instances, verbal notification, in addition to a GI, may enhance the dissemination of information.

**b.** Issue EDCT information to non-FDEP/FDIO equipped towers and other users in sufficient time for proper planning and control actions. This does not include non-FDEP towers that are satellites of TRACON/RAPCON facilities. The TRACON/RAPCON is responsible for satellite EDCTs.

**c.** Evaluate the Delay Assignment Mode and assign EDCTs, as appropriate.

**1.** For DAS, assign an EDCT using the DAS table to aircraft that do not receive an EDCT and are destined to an affected airport within their ARTCC boundaries. Contact the ATCSCC for aircraft destined to an airport outside their ARTCC boundaries.

**2.** For GAAP, contact the ATCSCC for an EDCT for aircraft that do not receive an EDCT.

**d.** Keep the ATCSCC apprised of cancellations and diversions to or from the affected airport.

**e.** Relay information to the ATCSCC when advised by a terminal facility about EDCT issues.

**f.** Request a revised EDCT from the ATCSCC when notified by the terminal facility that a flight will be unable to depart within EDCT parameters as defined in FAA Order JO 7110.65, Air Traffic Control.

**g.** Advise the appropriate terminal facility or controller after receiving a revised EDCT from the ATCSCC.

**h.** Utilize FSM to obtain information about the GDP, and may utilize FSA to monitor the GDP.

## 18−10−8. TERMINAL PROCEDURES

The Terminal TMU must:

**a.** Utilize FSM, if available, to obtain EDCT information.

**b.** Obtain from the ARTCC TMU and apply the appropriate delay to:

**1.** Airfile aircraft destined to the affected airport.

**2.** Any other flight not assigned an EDCT.

**c.** Ensure that internal flight plans are entered into the EAS computer in order to receive an equitable delay.

**d.** Ensure the EDCT is included in the flight clearance when a GDP is in effect. If an EDCT is not received and a GDP is in effect, contact the ARTCC TMU for an EDCT.

**e.** Issue EDCT information to non-FDEP/FDIO equipped towers and other users in sufficient time for proper planning and control actions.

**f.** To the extent possible, plan ground movement of aircraft destined to the affected airport so that flights will meet the parameters in FAA Order JO 7110.65, Air Traffic Control. If unable, advise the ATCSCC, through the appropriate protocol.

**g.** Ensure aircraft with an EDCT that are in a Ground Stop are not released without the approval of the issuing authority for the Ground Stop.

**h.** When a GDP is in effect for the local airport,forward the total number of hourly arrivals and departures to the ATCSCC, through the appropriate protocol, as soon as possible after each hour in order that timely GDP adjustments may be made.

**i.** Coordinate closely with the appropriate ARTCC TMU on conditions affecting current or projected arrival rates.

***NOTE−***
*Terminal facilities may utilize FSM to obtain information concerning the GDP, including EDCTs, and may utilize FSA to monitor the GDP.*

## 18−10−9. AMENDING EDCTS

**a.** All requests to amend EDCTs earlier than the current EDCT must be coordinated with the ATCSCC.

**b.** Facilities without FSM should contact their overlying facility to request a new EDCT.

**c.** Modifications to EDCTs for a time later than the current EDCT must be processed in accordance with the following guidelines:

**1.** The pilot/operator must be in contact with ATC.

**2.** Facilities with FSM may utilize the EDCT Change Request (ECR) tool to assign a new EDCT utilizing the Slot Credit Substitution (SCS) method, followed by the unlimited delay option, when available.

**3.** If the time generated by ECR is not acceptable (normally two hours of additional delay or longer), the facility must contact the ATCSCC through the appropriate protocol, for a new EDCT.

**d.** All EDCTs amendments not obtained using the ECR tool must be coordinated via the appropriate protocol.

## 18−10−10. CANCELLATION PROCEDURES

**a.** When conditions no longer warrant ground delays, the ATCSCC must:

**1.** Conference all affected facilities and system users, as appropriate, to develop an operational plan for release of ground delayed traffic into the system.

**2.** Transmit an ATCSCC advisory stating the GDP has been cancelled. The advisory must include the following items:

**(a)** Airport.

**(b)** ADL Time.

**(c)** Comments.

**3.** Purge flights from the TFMS.

**b.** The ARTCC TMU and the Terminal TMU must:

**1.** Issue cancellation information to underlying facilities, using normal communication methods, in sufficient time for proper planning and control actions.

**2.** Notify facility personnel, as appropriate, of the cancellation.

## 18−10−11. DOCUMENTATION

**a.** The ATCSCC must document all pertinent information related to the GDP in their position logs, including, but not limited to, the start and stop times and the reason for the GDP.

**b.** The ARTCC TMU and the Terminal TMU must document all pertinent information related to the GDP.

## 18−10−12. USER OPTIONS

When a GDP is in effect, system users may exercise options other than ground delays. Users must coordinate options directly with the ATCSCC.

**a.** Intermediate landing. The flight should land at the intermediate airport to provide the delay necessary for the flight to arrive at the CTA. An intermediate landing airport within the arrival ARTCC should not be accepted without coordination and approval from the ATCSCC.

**b.** Substitution of flights.

**1.** Users are permitted to exchange and substitute CTAs congruent with CDM agreements concerning substitutions. The ATCSCC may deny substitution requests when:

**(a)** AARs are varying rapidly.

**(b)** Workload necessitates.

**(c)** Deemed appropriate by the NOM/NTMO.

**2.** The ATCSCC must:

**(a)** Ensure that when flights are traded, the delay factor is equal to the original delay factor after the trade/substitution has been completed.

**(b)** Document substitutions.

**(c)** Transmit an ATCSCC advisory when substitutions are suspended and include an estimated time when substitutions will resume.

## 18−10−13. VFR FLIGHTS

**a.** VFR flights requesting an IFR clearance to a GDP airport should be handled as follows:

**1.** DAS. Assign a delay from the DAS table.

**2.** GAAP. Call the ATCSCC for a time.

**b.** Aircraft requesting to remain VFR will be at the discretion of the terminal facility with the GDP, if they can be accommodated without additional delay to IFR aircraft, except in unusual circumstances; for example, emergency, MEDEVAC.

# Section 11. Airspace Flow Programs (AFP)

## 18−11−1. GENERAL

The FSM was developed to provide a dynamic method of implementing and managing ground delay programs. The creation and publication of FEAs and FCAs serve to identify areas of limited capacity to system customers that require a reduction in demand through rerouting flights (voluntary or mandatory). An alternative to managing airspace congestion is to merge these two technologies and create AFPs. An AFP is a traffic management tool that assigns specific arrival slots and corresponding EDCTs to manage capacity and demand for a specific area identified by the FCA. It is important for aircraft to depart as close as possible to the EDCT to ensure accurate delivery of aircraft to the impacted area.

## 18−11−2. POLICY

AFPs may be applied to all aircraft departing airports in the contiguous United States and from select Canadian airports. Aircraft that have been assigned an EDCT in an AFP should not be subject to additional delay. Exceptions to this policy are miles-in-trail and departure/en route spacing initiatives that have been approved by the ATCSCC. AFP procedures do not apply to facilities in Alaska.

## 18−11−3. RESPONSIBILITIES

Facilities must:

**a.** Develop and share FEAs that may require AFP consideration.

**b.** Comply with AFP-generated EDCTs.

## 18−11−4. PROCEDURES

Upon receipt of information that traffic flows have been impacted, or are expected to be impacted, and that significant delays may result:

**a.** The ATCSCC must:

**1.** Identify the constraint and potential AFP.

**2.** Implement, monitor, and cancel AFPs as appropriate.

**3.** Issue an FCA and tag as FSM-eligible.

**4.** For the potential AFP, model program rates, scope, and duration.

**5.** Transmit a proposed advisory unless immediate implementation is necessary.

**6.** Conference affected facilities and customers to review system demand, other known or anticipated factors, program rates, scope, and duration.

**7.** If it is determined that an AFP is the most appropriate TMI:

**(a)** Send the AFP using the FSM and transmit an advisory.

**(b)** Coordinate with affected facilities to ensure the AFP is adequately managing demand.

**(c)** Use the TSD and FSM to monitor traffic flow patterns.

**(d)** Manage AFPs with revisions, extensions, and compressions, as appropriate, and transmit advisories.

**(e)** Provide EDCT information when requested.

**b.** The ARTCC TMU must:

**1.** Issue a GI message to all towers, sectors and flight service stations advising of the AFP. In some instances, verbal notification, in addition to a GI, may enhance the dissemination of information.

**2.** Monitor the effectiveness of the AFP and notify the ATCSCC with requests for adjustments and/or revisions as necessary.

**3.** Issue EDCT information to non FDEP/FDIO-equipped towers and other customers in sufficient time for proper planning and control actions. This does not include non-FDEP towers that are satellites of TRACON facilities. The TRACON is responsible for issuing these EDCTs to satellite towers.

**4.** Evaluate the DAS mode and assign EDCTs, as appropriate.

**(a)** Acquire an EDCT from the ATCSCC for aircraft that do not receive an EDCT.

**(b)** For aircraft not assigned an EDCT, the TMU must advise the ARTCC area supervisor of the appropriate DAS delay. If requested, the TMU should provide reroute information to avoid the AFP.

**5.** Keep the ATCSCC apprised of cancellations and diversions.

**6.** Relay information to the ATCSCC about EDCT issues (i.e., flights requiring a revision because of mechanical or flight crew duty issues.)

**7.** Use FSM to obtain information about the AFP (flights captured, EDCTs, route changes, etc.)

**8.** Provide EDCT information, when requested, for flights departing underlying non-towered airports. If a flight departing a non-towered airport is airborne and not in compliance with an AFP EDCT, coordinate with the ATCSCC for the appropriate course of action.

**9.** Ensure compliance with EDCTs issued for aircraft departing non-towered airports.

**c.** The ARTCC must, when advised of a VFR aircraft requesting an IFR clearance through an area under an AFP:

**1.** The ATCS will advise his/her supervisor/controller-in-charge when an unscheduled flight occurs needing an EDCT.

**2.** The supervisor will coordinate the appropriate DAS delay with the TMU and advise the ATCS.

**3.** The ATCS will advise the pilot of the DAS delay and take the necessary action such as airborne holding, reroute, etc.

**d.** The TRACON/ATCT must:

**1.** Use FSM or TFMS, if available, to obtain EDCT information.

**2.** Ensure the EDCT is included in the flight clearance when an AFP is in effect.

**3.** Issue EDCT information to non-FDEP/FDIO-equipped towers and other customers in sufficient time for proper planning and control actions.

**4.** Provide EDCT information, when requested, for flights departing underlying non-towered airports.

**5.** To the extent possible, plan ground movement of aircraft to meet the parameters of their EDCTs; if unable, advise the ARTCC.

**e.** Amending EDCTs:

**1.** Facilities with FSM may use the EDCT ECR tool to assign an EDCT that is later than the current control time for the flight. Select the SCS option when assigning a new EDCT for a

flight. If the SCS option is not available, use the unlimited delay option. For flights captured in an AFP, select the ECR tool applicable to the corresponding FCA element.

**2.** To assign an earlier control time to a flight or for EDCT amendments not obtained using the ECR tool, coordinate through the Tactical Customer Advocate (TCA) at the ATCSCC.

**3.** Facilities without FSM must contact their overlying facility to request a new EDCT.

**f.** Cancellation procedures:

**1.** When conditions no longer warrant AFP ground delays, the ATCSCC must:

**(a)** Conference facilities and customers to develop an operational plan for release of ground-delayed traffic into the system.

**(b)** Consider using the Integrated Modeling Tool when evaluating a cancellation.

**(c)** Purge the AFP and transmit an advisory stating the AFP has been canceled.

**2.** The ARTCC TMU and the terminal TMU must:

**(a)** Issue cancellation information to underlying facilities.

**(b)** Notify facility personnel, as appropriate, of the cancellation.

**g.** Documentation:

Facilities must use the NTML where applicable to document all pertinent information related to the AFP, including, but not limited to, the start and stop times and the reason for the AFP. Facilities that do not have NTML will log information as required by local procedure.

**h.** Customer options:

**1.** When an AFP is in effect, system customers may exercise options other than ground delays.

**(a)** Intermediate landing: The flight should land at the intermediate airport to provide the delay necessary for the flight to arrive at the CTA. Customer coordination with the TCA is required to avoid assignment of additional delay after an intermediate landing.

**(b)** Reroutes: Customers may reroute flights out of an AFP. Alternative route options will normally be discussed on either a planning telecon or an ad hoc telecon.

**2.** Substitution of flights.

**(a)** The ATCSCC may deny substitution requests when deemed appropriate. The ATCSCC must transmit an advisory when substitutions are suspended and include an estimated time when substitutions will resume.

**(b)** Customers are permitted to exchange and substitute CTAs congruent with CDM agreements concerning substitutions.

# Section 12. Collaborative Trajectory Options Program (CTOP)

## 18−12−1. GENERAL

CTOP is a method of managing demand through constrained airspace leveraging the use of one or more FCAs while considering customer preference with regard to both route and delay as defined in a Trajectory Options Set (TOS). CTOP TMIs are managed through the Traffic Situation Display (TSD). The TOS will allow the customer to better manage flights by expressing route and delay preferences. Whereas a traditional flight plan contained a single request with a defined route, altitude, and speed, a TOS may contain multiple trajectory options with each one containing a different route, altitude, or speed. In addition to multiple options within a single TOS, each option may contain "start" and "end" times which they are willing to accept for that particular option. Each option will be ranked in the order of customer preference indicating their willingness to accept one option over another. This will be expressed in minutes of ground delay. Using algorithms comparing capacity and demand, the CTOP will look at each trajectory option and determine the amount of ground delay that would need to be associated with that option (which may be zero). CTOP will then assign the most preferred trajectory available. Customers must file flight plans in accordance with the TOS option assigned. Customers may manage their flights through the use of the TOS or through the substitution of flights.

## 18−12−2. POLICY

CTOP may be applied to all aircraft departing airports in the contiguous United States and from select international airports. Aircraft that have been assigned an EDCT in a CTOP should not be subject to additional delay. Exceptions to this policy are miles-in-trail and departure/en route spacing initiatives that have been approved by the ATCSCC.

## 18−12−3. DEFINITIONS

**a.** CTOP - Collaborative Trajectory Options Program - A type of traffic management initiative which leverages one or more FCAs to identify demand. Then, based on customer preferred options (as specified in a TOS), it assigns either a route to avoid the FCA, or a route and EDCT to meet an allocated slot time within the FCA.

**b.** TOS - Trajectory Options Set - A message sent by the NAS user to TFMS defining a group of preferences for how they would like to see a specific flight managed. These preferences are defined through a combination of routes and/or altitudes and/or speeds with each trajectory being weighted through the use of flight operator submitted preferences.

## 18−12−4. ATCSCC PROCEDURES

The ATCSCC must:

**a.** In conjunction with the field facilities, identify the constraint through the use of FEA(s)/FCA(s).

**b.** Conference affected facilities and system users as appropriate.

**c.** Create the CTOP in the Traffic Situation Display.

**d.** When time permits, send the Proposed CTOP with the advisory.

**e.** Send the Actual CTOP with the advisory.

**f.** Coordinate with affected facilities to ensure the CTOP is adequately managing demand.

**g.** Revise CTOP parameters as necessary and send the Revised CTOP.

**h.** Cancel the CTOP as per paragraph 18−12−8.

## 18−12−5. ARTCC PROCEDURES

The ARTCC TMU must:

**a.** Issue a GI message advising of the CTOP. In some instances, verbal notification, in addition to a GI, may enhance the dissemination of information.

**b.** Monitor the effectiveness of the CTOP and notify the ATCSCC with requests for adjustments and/or revisions as necessary.

**c.** Issue assigned route and EDCT information to non FDEP/FDIO-equipped towers and other customers in sufficient time for proper planning and control actions. This does not include non-FDEP towers that are satellites of TRACON facilities.

**d.** Relay information, received from Terminal facilities, to the ATCSCC about EDCT issues (i.e., flights requiring a revision due to mechanical or flight crew duty issues).

**e.** Ensure route compliance with assigned TOS option and issue route amendments as needed.

**f.** Provide EDCT information, when requested, for flights departing underlying non-towered airports. If a flight departing a non-towered airport is airborne and not in compliance with a CTOP EDCT, coordinate with the ATCSCC for the appropriate course of action.

## 18−12−6. TERMINAL PROCEDURES

The TRACON/ATCT must:

**a.** Use the TSD/TSD-C to verify EDCT when missing or pilots advise they have something different.

**b.** Ensure the EDCT is included in the flight clearance when a CTOP is in effect.

**c.** Issue EDCT information to non-FDEP/FDIO-equipped towers.

**d.** Provide EDCT information, when requested, for flights departing underlying non-towered airports.

**e.** Forward EDCT issues to their overlying facility.

**f.** Facilities with TMUs, assist the ARTCC to ensure route compliance.

## 18−12−7. AMENDING EDCTS

**a.** Field facilities with TSD may use the UPDATE EDCT feature to assign an EDCT.

***NOTE−***
*Field facilities will only have the "unlimited" option available for use.*

**b.** Field facilities requesting a time other than the time assigned through the "unlimited" option must coordinate through the ATCSCC.

**c.** Field facilities without the CTOP "UPDATE EDCT" feature must contact their overlying facility to request a new EDCT.

**d.** The ATCSCC may amend EDCTs via the CTOP "UPDATE EDCT" feature by first attempting to utilize the "Unlimited" option, followed by the "Limited" option, followed by the "Manual" option.

## 18−12−8. CANCELLATION PROCEDURES

When conditions no longer warrant a CTOP,

**a.** The ATCSCC must:

**1.** Conference facilities and customers as appropriate to develop an operational plan for exiting the CTOP.

**2.** Cancel the CTOP and transmit an advisory stating the CTOP has been canceled.

**b.** The ARTCC TMU and the terminal TMU must:

**1.** Issue cancellation information to underlying facilities.

**2.** Notify facility personnel, as appropriate, of the cancellation.

## 18−12−9. DOCUMENTATION

Facilities must use the NTML, where applicable, to document all pertinent information related to the CTOP. Facilities that do not have NTML will log information as required by local procedure.

# Section 13. Ground Stop(s)

## 18−13−1. POLICY

Ground stop(s) (GS) override all other traffic management initiatives. Aircraft must not be released from a GS without the approval of the originator of the GS.

## 18−13−2. GENERAL

The GS is a process that requires aircraft that meet a specific criteria to remain on the ground. The criteria may be airport specific, airspace specific, or equipment specific; for example, all departures to San Francisco, or all departures entering Yorktown sector, or all Category I and II aircraft going to Charlotte. GSs normally occur with little or no warning. Since GSs are one of the most restrictive methods of traffic management, alternative initiatives must be explored and implemented if appropriate. GSs should be used:

**a.** In severely reduced capacity situations (below most user arrival minimums, airport/runway closed for snow removal, or aircraft accidents/incidents);

**b.** To preclude extended periods of airborne holding;

**c.** To preclude sector/center reaching near saturation levels or airport grid lock;

**d.** In the event a facility is unable or partially unable to perform ATC services due to unforeseen circumstances;

**e.** When routings are unavailable due to severe weather; and

**f.** When routings are unavailable due to catastrophic events.

***NOTE−***
*Helicopters are exempt from ground stops based on weather unless specifically included by the ARTCC facility when requesting the ground stop.*

## 18−13−3. LOCAL GROUND STOP(S)

A facility may initiate a local GS when the facilities impacted are wholly contained within the facility's area of responsibility and conditions are not expected to last more than 30 minutes. Local GSs must not be extended without prior approval of the ATCSCC.

**a.** The TMU must:

**1.** Explore and, if warranted, implement alternative initiatives before implementing a local GS.

**2.** Notify the ATCSCC before implementing a local GS.

***NOTE−***
*If conditions prohibit notifying the ATCSCC before the GS is implemented, the TMU must inform the ATCSCC as soon as practical.*

**3.** Issue GS information to underlying facilities, using normal communication methods, in sufficient time for proper planning.

**b.** The Terminal facility must notify the appropriate TMU before implementing a local GS.

***NOTE−***
*If conditions prohibit notifying the TMU before the GS is implemented, the facility must inform the TMU as soon as practical.*

**c.** The ATCSCC must:

**1.** When available, use the FSM to implement the GS.

**2.** Issue an advisory.

## 18−13−4. NATIONAL GROUND STOP(S)

Prior to implementing a national GS, less restrictive traffic management initiatives must be evaluated. Upon receipt of information that an immediate constraint is needed to manage a condition:

**a.** The ATCSCC must:

**1.** Time permitting, conference affected facilities and system users, as appropriate, to implement a national GS.

**2.** When appropriate, utilize Flight Schedule Monitor (FSM) to implement a national GS, except when deemed impractical.

***NOTE−***
*FSM does not allow for the implementation of category specific GSs, for example, GS for single airline flights or GS for all Cat I and II flights. In these cases the use of the FSM GS is not practical.*

**3.** Transmit an ATCSCC advisory providing information to air traffic facilities and user groups about the implementation or modification of a national GS. The ATCSCC advisory must include the following items:

**(a)** Airport.

**(b)** Facilities Included.

**(c)** Expect Update Time.

**(d)** Reason.

**(e)** Probability of Extension.

**(f)** Remarks. (Optional)

**4.** Continually monitor, adjust, and cancel national GSs, as appropriate, and transmit an ATCSCC advisory as necessary.

**5.** Coordinate with the affected facilities to ensure the GS is managing the condition.

**b.** The ARTCC TMU must:

**1.** Explore and implement alternative initiatives prior to requesting a national GS, if feasible.

**2.** Issue GS information to underlying facilities, using normal communication methods, in sufficient time for proper planning.

**3.** Coordinate closely with the ATCSCC on conditions affecting capacity**.**

**c.** The Terminal facilities must:

**1.** Issue GS information to underlying facilities, using normal communication methods, in sufficient time for proper planning.

**2.** Coordinate closely with the appropriate TMU on conditions affecting the national GS.

**3.** Request release of aircraft through the appropriate protocol.

## 18−13−5. CANCELLATION PROCEDURES

**a.** The ATCSCC must:

**1.** Time permitting, conference affected facilities and system users, as appropriate, to develop an operational plan to release nationally ground stopped traffic.

**2.** Transmit an ATCSCC advisory when a national GS has been cancelled.

**3.** Transmit an ATCSCC advisory to cancel an ATCSCC issued local GS advisory.

**4.** The advisory must include the following items:

**(a)** Airport.

**(b)** Facilities Released.

**b.** The ARTCC TMU and the Terminal facilities must:

**1.** Issue cancellation information to underlying facilities, using normal communication methods, in sufficient time for proper planning and control actions.

**2.** Notify facility personnel, as appropriate, of the cancellation.

**3.** Notify the ATCSCC if a local GS was coordinated with the ATCSCC.

## 18−13−6. DOCUMENTATION

**a.** The ATCSCC must document all pertinent information related to the GS in their position logs, including, but not limited to, the start and stop times, the affected facilities, and the reason for the GS.

**b.** The ARTCC TMU and the Terminal facilities must document all pertinent information related to the GS in their position logs.

# Section 14. Special Traffic Management Programs

## 18−14−1. SPECIAL EVENT PROGRAMS

Special programs may be established for a location to accommodate abnormally large traffic demands (for example, Indianapolis 500 Race, EAA AirVenture Oshkosh, SUN 'n FUN Aerospace Expo) or a significant reduction in airport capacity for an extended period (airport runway/taxiway closures for airport construction). These special programs may remain in effect until the event is over or local TM procedures can handle the volume.

## 18−14−2. COORDINATION

Documentation to justify special programs must be submitted by the facility or TMO to their Operations Support Group (OSG) 90 days in advance, with a copy to the appropriate Deputy Director of System Operations (DDSO). The service area must review and forward the request to the ATCSCC for coordination and approval 60 days in advance.

**a.** Documentation must include the following as a minimum:

**1.** The reason for implementing special programs and a statement of system impact. Include the total number of additional flights expected.

**2.** Airport(s)/sector(s) to be controlled.

**3.** Capacity restraints by user category (five air carrier, three air taxi, seven general aviation, three military) per hour per airport.

**4.** Hours capacity must be controlled specified in both local time and in UTC (e.g., 0900-1859 EST, 1400-2359Z or, 0900-1859 EDT, 1300-2259Z).

**5.** Type of flight to be controlled (e.g., unscheduled, arrivals, departures, IFR, VFR).

**6.** Days of the week and dates (e.g., Thursday, May 7 through Monday, May 11 or Friday, May 22 and Sunday, May 24).

**7.** A draft copy of the associated Domestic Notice and/or temporary flight restrictions (email preferred).

**8.** IFR/VFR capacity at each airport/sector.

**9.** Begin date and time for the start of reservation acceptance.

**10.** The number of slots to be allocated per airport, or group of airports, per time increment (e.g., ten arrivals every fifteen minutes or forty aircraft every sixty minutes).

**11.** Coordination accomplished with impacted facilities and any unresolved issues.

**b.** The Service Center OSG must forward the Domestic Notice to the Mission Readiness Services, Operational Policy (AJV-P), Domestic Notices editor at 9-ATOR-HQ-PubGrp@faa.gov for publication no later than 10 days prior to the start date. Domestic Notices for special events may be published up to 60 days prior to the event. Please submit 70 days prior to the event to allow for the 10-day internal processing.

***NOTE−***

*The web address to obtain a STMP slot:*

1. *www.fly.faa.gov/estmp*
2. *Call the Traffic Flow Management Help Desk (609) 485-9601 for problems using the web-based interface.*

## 18−14−3. IMPLEMENTATION

**a.** Special TM programs must be managed by the ATCSCC or the affected ARTCC. The ATCSCC must transmit an advisory containing the reason for the program, airport(s)/sector(s) involved, dates and times the program will be in effect, telephone numbers to be used, and any special instructions, as appropriate. The affected ARTCC must monitor special TM programs to ensure that the demand to the center/terminal facilities is equal to the capacity.

**b.** The ATCSCC will disseminate a password and instructions for facility STMP reports. Detailed instructions can be found on the web site for the web interface, or in the Aeronautical Information Manual.

## 18−14−4. AIRPORT RESERVATION OFFICE

**a.** The Airport Reservations Office (ARO) has been established to monitor the operation and allocation of reservations for unscheduled operations at airports designated by the Administrator under FAA adopted rules. These airports are generally known as slot controlled airports. The ARO allocates reservations on a first come, first served basis determined by the time the request is received at the ARO. Standby lists are not maintained. Reservations are allocated through the ARO by the Enhanced Computer Voice Reservation System (e-CVRS) and not by the local air traffic control facility.

**b.** Requests for reservations for unscheduled flights at the slot controlled airports will be accepted beginning 72 hours before the proposed time of operation.

**c.** Flights with declared emergencies do not require reservations.

**d.** Refer to the website for the current listing of slot controlled airports, limitations, and reservation procedures.

***NOTE−***
*The URL to obtain a reservation for unscheduled operations at a slot controlled airport is: http://www.fly.faa.gov/ecvrs. Call the ARO trouble number (540) 422-4246 for problems with a slot reservation.*

# Section 15. Severe Weather Management

## 18−15−1. GENERAL

**a.** On a national basis, the AT system is most susceptible to thunderstorm activity between April and October. Thunderstorms create a major disruption to the normal and organized movement of air traffic and significantly increase the workload in an impacted facility. To meet this challenge, System Operations has charged the ATCSCC to deal directly and independently with severe weather problem areas.

**b.** When the potential exists for severe weather which will cause a disruption to normal traffic movements, the ATCSCC will implement procedures designed to optimize the use of the available airspace. Strategic planning is an integral part of severe weather management and the responsibility of all involved.

**c.** Facilities will be called upon to favor and accept traffic that is not normally routed through their area. In the interest of a balanced flow and to minimize delays, we expect air traffic facilities to accept this alternate flow. All facilities are expected to participate and cooperate when called upon. A properly developed, coordinated, and implemented plan will result in the better use of available airspace.

## 18−15−2. DUTIES AND RESPONSIBILITIES

The ATCSCC must be the final approving authority for alternate routes and initiatives that transcend center or terminal boundaries.

**a.** The ATCSCC must:

**1.** Be responsible for severe weather management operations.

**2.** Ensure coordination is completed to implement TM initiatives in support of severe weather management.

**3.** Conducta daily operations critique with affected facilities and system customers, asappropriate.

**4.** Receive and evaluate facility requests for alternate routes and initiatives to avoid severe weather.

**5.** Coordinate with appropriate facilities and customers to determine the need for developing alternate routes and initiatives to avoid severe weather.

**6.** Coordinate alternate routes with all affected facilities.

**7.** Transmit advisories defining severe weather areas and alternate routes.

**8.** Conference all affected facilities and system users to apprise them of weather conditions that will impact the NAS.

**b.** Facility TMUs must coordinate with the ATCSCC for matters pertaining to severe weather.

# Section 16. Severe Weather Avoidance Plan (SWAP)

## 18−16−1. GENERAL

SWAPs are formalized programs that are of considerable value in areas that are particularly susceptible to severe weather. SWAP statements are prepared by ARTCC TMUs and provide specific details surrounding a particular weather event. The ARTCC TMUs consider applicable alternatives that may be used to mitigate expected airspace impacts. These include CDRs, playbook routes, FEA/FCAs, capping/tunneling, AFPs, and any other TMIs that are being considered. The SWAP statement is then delivered to the ATCSCC for discussion and coordination and may be sent as a SWAP advisory. SWAP advisories are sent by the ATCSCC and developed from SWAP statements and provide direction to customers and facilities on what TMIs are expected to be used to manage airspace constraints.

Plans that are properly developed, coordinated, and implemented can reduce coordination and TM restrictions associated with rerouting aircraft around areas of severe weather, resulting in better utilization of available airspace.

## 18−16−2. RESPONSIBILITIES

**a.** Air traffic facilities must:

**1.** Favor and accept traffic flows that are not normally routed through their area.

**2.** Monitor, evaluate, and adjust programs to ensure maximum effectiveness.

**3.** Use the following procedures when considering a route unusable:

**(a)** Notify the ATCSCC anytime airspace, established flows of traffic, routes or any other factor affecting airborne capacity becomes or is expected to become unusable. The ATCSCC must be notified when normal traffic can be accepted.

**(b)** Enter into the NTML, using the “SWAP” tab, any information regarding unusable routes and/or routes that become available.

**(c)** Solicit flights to file and/or fly routes that are impacted by weather, when appropriate.

**(d)** Issue minute-in-trail/mile-in-trail restrictions that allow airspace to remain available when defined as “severely constrained.” A severely constrained area is identified as an airway, fix, or sector impacted by any circumstance that significantly reduces, but does not eliminate the ability to handle aircraft.

***NOTE−***
*This minimum flow of traffic will ensure that demand does not exceed current capacity, yet will assist in determining the suitability for increased traffic for the impacted route or area.*

**(e)** Increase and reduce TMIs as necessary to accommodate airspace impacts.

**(f)** Record in NTML two or more aircraft identifications:

**(1)** When flights deviate significantly, and/or elect not to file or fly on a route impacted by weather.

**(2)** When flights elect not to depart and/or land due to the current weather conditions.

**(3)** Forward flight information to the ATCSCC.

**4.** Facilities may consider issuing a SWAP statement indicating all expected impacts to available routes and airspace in their area of concern. The SWAP statement should contain

mitigation strategies for expected impacts. This includes alternate routes, use of CDRs, use of TMIs, altitude capping/tunneling, possible FEAs/FCAs, AFPs, etc.

**b.** The ATCSCC must:

**1.** Obtain a severe weather analysis from weather information providers and discuss the findings with the appropriate TMU.

**2.** Conference affected facilities and customers to apprise them of forecast severe weather conditions and the routes or areas that will be impacted.

**3.** Formulate a dynamic severe weather operational plan. Coordinate TMIs and alternate routes with all affected facilities.

**4.** Use, to the extent possible, the following options in the order listed when developing an operational plan:

**(a)** Expanded miles-in-trail initiatives.

**(b)** SWAP advisories.

***NOTE−***
*When developing the SWAP advisory, the ATCSCC should consider all possible mandatory and recommended route options; applicable CDRs and playbooks; and the use of User Preferred Trajectory (UPT) and Integrated Collaborative Routing (ICR) strategies.*

**(c)** Reroutes.

**(d)** Ground delay programs.

**(e)** AFPs.

**(f)** Ground Stops.

**5.** Transmit advisories describing the existing or forecast weather conditions, the operational plan, alternate routes, or cancellation thereof.

**6.** Be the final approving authority for traffic flows and reroutes.

**c.** The ARTCC TMU must:

**1.** Coordinate with the ATCSCC when implementing SWAP procedures that affect other ARTCCs. If possible, this coordination should be completed at least 2 hours prior to expected implementation.

**2.** When suitable, facilities should consider developing a SWAP statement that specifies expected airspace impacts; developed shared FEAs representing airspace impacts; possible route closures; effective times of constraints; and expected routing alternatives including applicable CDRs and playbook routes.

**3.** Notify affected facilities within their area of responsibility when SWAP is expected to be implemented, including initiatives, reroutes, and affected times.

**4.** Furnish the sector or facility issuing the revised clearance a route of flight to a point where the new route connects with the filed route.

**5.** Notify the ATCSCC and affected facilities within their area of responsibility when normal routings can be resumed.

# Section 17. Preferred IFR Routes Program

## 18−17−1. GENERAL

**a.** This section identifies responsibilities and establishes procedures for the development, revision, and cancellation of Preferred IFR Routes. These routes, as published in the Chart Supplement, include Low Altitude, High Altitude, Tower En route Control (TEC), North American Routes (NAR), and both High and Low Single Direction Routes (HSD/LSD). The objective of Preferred IFR Routes is the expeditious movement of traffic during heavy demand periods and the reduction of TMIs and coordination.

**b.** Preferred IFR Routes must only be established when traffic density and/or safety make such routes necessary for the expeditious movement of air traffic.

**c.** Preferred IFR Routes must be developed in accordance with paragraph 18−17−3, Development Procedures.

## 18−17−2. RESPONSIBILITIES

**a.** ARTCCs are responsible for:

**1.** Developing, revising, and deleting Preferred IFR Routes. The originating ARTCC is responsible for coordinating with all affected facilities, ensuring the accuracy of the submitted route(s), examining routes for operational impact, and ensuring compatibility with NAS processing.

**2.** At a minimum, reviewing all Preferred IFR Routes annually and revising or canceling routes as necessary.

**3.** Identifying a single Office of Primary Responsibility (OPR) for their Preferred IFR Routes program. This office must be the focal point for coordination with affected FAA facilities and the ATCSCC.

**b.** The ATCSCC is responsible for:

**1.** Operating as the OPR at the National level

**2.** Reviewing and evaluating Preferred IFR Route submissions

**3.** Submitting approved Preferred IFR Routes to AIS for publication

**4.** Providing feedback on unapproved routes to the submitting OPR

**c.** The AIS must be responsible for:

**1.** Entering the route in the national database.

**2.** Forwarding errors noted during the validation to the ATCSCC for resolution.

**3.** Publishing the route as an add-on page to the National Flight Data Digest (NFDD).

## 18−17−3. DEVELOPMENT PROCEDURES

**a.** Routes and route segments must be defined by any combination of the following:

**1.** DPs/SIDs/STARs if applicable

**2.** NAVAID identifier, intersection name, fix name, RNAV Waypoint or Navigation Reference System Waypoints (NRS) (e.g., FUZ, ZEMMA, KK45G).

**3.** Type and number of the airway (e.g., J87 M201 Q40 T295 V16)

**b.** When establishing or amending Preferred IFR Routes the following rules must be applied:

**1.** When including a DP/SID/STAR use a published transition fix or the common fix for the procedure.

**2.** When describing an airway include a published entry and exit point (e.g., CVE J87 BILEE).

**3.** When connecting two airways, a published fix common to both airways and that is depicted on en route charts must be included (e.g., ADM J21 ACT J50). If there is not a fix common to both airways, include a published exit point for the first airway and a published entrance point for the second airway (e.g., OCS J206 NLSEN CYS J148).

**4.** The first route element following the origin must not be an airway (e.g., KDFW J4).

**5.** The last route element prior to the destination must not be an airway (e.g., J35 KMSY).

**6.** Inclusive altitudes must be used when describing a Low Altitude Preferred IFR Route.

**7.** Low frequency non-directional beacons must not be used.

**c.** Other considerations should include:

**1.** Terminal/en route traffic flows

**2.** Radar coverage

**3.** SAA/SUA

**4.** Adapted Arrival (AARs), Adapted Departure (ADRs) and Adapted Departure and Arrival Routes (ADARs).

**5.** MEA, MOCA, and Minimum Reception Altitude (MRA) must be considered when establishing inclusive altitudes for Low Altitude routes.

**6.** When describing High Altitude preferred routes, victor airways may only be used to define climbing/descending segments, provided that such usage does not exceed the service limitations of the NAVAID.

**7.** Single direction routes may be established in the high altitude stratum to enhance safety and expedite air traffic. The routes may begin or end at any fix within the en route structure and need not serve a specific terminal area. Single direction routes serving terminal/en route needs must be depicted on en route charts.

## 18−17−4. COORDINATION PROCEDURES

**a.** Interfacility Coordination

**1.** The originating ARTCC is defined as follows:

**(a)** New Routes: The ARTCC identifying the need to establish a new Preferred IFR Route.

**(b)** Existing Routes: The ARTCC identifying the need to amend or delete a Preferred IFR Route.

**(c)** When establishing, amending, or deleting a Preferred IFR Route is proposed by a facility other than an ARTCC, the requesting facility must coordinate with the parent ARTCC. The overlying ARTCC must assume responsibility as the originator.

**2.** The originating ARTCC must:

**(a)** Coordinate with all affected ATC facilities.

**(b)** Upon completion of the coordination process, submit data to the ATCSCC Point of Contact (POC).

**3.** The ATCSCC must:

**(a)** Resolve differences between ATC facilities.

**(b)** Review for accuracy and forward the completed data to the AIS for publication.

## 18−17−5. PROCESSING AND PUBLICATION

**a.** The airspace information cutoff date listed in the Chart Supplement is the latest date route information may be received by AIS to ensure publication on the planned effective date. The following procedures must apply:

**1.** Plan effective dates to coincide with the Chart Supplement publication dates.

**2.** ARTCCs must submit completed data to the ATCSCC at least 21 days prior to the desired publication cutoff date. The data must be submitted via the AIS Preferred IFR Routes submission form. The ATCSCC will provide the OPR with this form.

**3.** The ATCSCC must forward the completed data to the AIS on or before the desired publication cutoff date.

# Section 18. North American Route Program

## 18−18−1. PURPOSE

The NRP provides the users of the NAS greater flexibility in flight plan filing at or above 29,000 feet (FL290).

## 18−18−2. RESPONSIBILITIES

**a.** The ATCSCC must:

**1.** Have the authority to suspend and/or modify NRP operations for specific geographical areas or airports. Suspensions may be implemented for severe weather reroutes, special events, or as traffic/equipment conditions warrant.

**2.** Conduct special user teleconferences and transmit ATCSCC advisories whenever a provision of the NRP will not be available to the user community for more than one hour.

**b.** ARTCC TMUs must:

**1.** Avoid issuing route and/or altitude changes for aircraft which display the remarks “NRP" except when due to strategic, meteorological or other dynamic conditions.

**2.** Coordinate with ATCSCC before implementing any reroute to NRP flights beyond 200 NM from point of departure or destination.

**3.** Monitor activity to identify potential sector/airport constraint that may impact DP/STAR operations and coordinate with the ATCSCC for problem resolution.

**c.** DP/STAR procedures for the ARTCCs are authorized the following exemptions:

**1.** NRP flights will be allowed to file and fly any published transitions of the DPs and/or STARs. Not all of the published transitions may be available, due to facility procedural constraints.

**2.** In the case of radar vector DPs the ARTCC will clear the NRP flight to the first en-route NAVAID/fix/waypoint of the flight plan as soon as practical.

**3.** When problems are identified involving the use of the DP/STAR transitions, immediately notify the ATCSCC for resolution.

**d.** Customer flight plan filing requirements are authorized the following exemptions:

**1.** Customers may file and fly any published transition of the DPs and/or STARs, regardless of the mileage from the airport to transition end point.

**2.** Customers should not file DP/STAR transitions in offshore transition areas (12 NM or more off the United States shoreline)

## 18−18−3. PROCEDURES

**a.** “NRP" must be retained in the remarks section of the flight plan if the aircraft is moved due to weather, traffic, or other tactical reasons. In these situations, every effort will be made to ensure the aircraft is returned to the original filed flight plan/altitude as soon as conditions warrant.

**b.** Traffic management specialists must not enter “NRP" in the remarks section of a flight plan unless prior coordination concerning this particular flight is accomplished with the ATCSCC or as prescribed by international NRP flight operations procedures.

**c.** The en route facility within which an international flight entering the conterminous United States requests to participate in the NRP must enter “NRP" in the remarks section of the flight plan.

## 18−18−4. REPORTING REQUIREMENTS

Reports of unusual or unsatisfactory events attributable to NRP traffic should be forwarded to the System Operations ATCSCC TCA via facsimile at (540) 422-4196 or telephone at (540) 359-3146. Reports must include, at a minimum: aircraft call sign, type, altitude, route of flight, affected sectors, brief description of event, description of impact, and any actions taken.

## 18−18−5. USER REQUIREMENTS

**a.** International operators filing through the Canadian airspace to destinations within the conterminous United States must file an inland navigational fix within 30 NM north of the common Canada/United States airspace geographical boundary to be eligible to participate in the NRP.

**b.** Flights must be filed and flown via any published DP or STAR for the departure/arrival airport respectively, or published preferred IFR routes, for at least that portion of flight which is within 200 NM from the point of departure or destination. If the procedures above do not extend to 200 NM, published airways may be used for the remainder of the 200 NM. If the procedures above do not exist, published airways may be used for the entire 200 NM.

**c.** Operators that file a flight plan which conforms to a published preferred IFR route must not enter “NRP" in the remarks section of that flight plan.

**d.** Operators must ensure that the route of flight contains no less than one waypoint, in the FRD format, or NAVAID, per each ARTCC that a direct route segment traverses and these waypoints or NAVAIDs must be located within 200 NM of the preceding ARTCC's boundary. Additional route description fixes for each turning point in the route must be defined.

**e.** Operators must ensure that the route of flight avoids active restricted areas and prohibited areas by at least 3 NM unless permission has been obtained from the using agency to operate in that airspace and the appropriate air traffic control facility is advised.

**f.** Operators must ensure that “NRP" is entered in the remarks section of the flight plan for each flight participating in the NRP program.

# Section 19. Coded Departure Routes

## 18−19−1. PURPOSE

This section prescribes policies and guidelines for Coded Departure Route(s) (CDR).

## 18−19−2. DEFINITION

The CDR program is a combination of coded air traffic routings and refined coordination procedures designed to mitigate the potential adverse impact to the FAA and users during periods of severe weather or other events that impact the NAS.

## 18−19−3. POLICY

Abbreviated clearances must only be used with CDRs at locations covered by a Memorandum of Agreement (MOA) between the customers and the FAA that specifies detailed procedures, or with general aviation customers who include in the remarks section of their flight plan, “CDR Capable”.

***NOTE−***
*Air Traffic Control Facilities will determine which city pairs will be included in the database.*

## 18−19−4. RESPONSIBILITIES

**a.** The ATCSCC must:

**1.** Manage the national CDR program.

**2.** Operate as Office of Primary Interest (OPI) at the national level.

**3.** Conduct a review of the submitted CDRs and facilitate necessary corrections.

**4.** Issue an advisory when facilities implement or terminate use of CDRs.

**b.** AIS must:

**1.** Forward to the ATCSCC POC any changes to the published navigational data base (i.e., SIDs/STARs, NAVAIDs, Fixes, RNAV Waypoints, etc.) contained in the NFDD(s) that are effective for the subsequent chart date. This data must be provided at least 45 days prior to the chart date.

**2.** Error check all submitted route elements and forward errors noted during the validation to the ATCSCC for resolution.

**c.** ARTCCs must:

**1.** Identify, develop, coordinate, and establish CDRs, as needed, in accordance with this section.

**2.** Supply a POC for the ATCSCC to contact regarding CDRs.

**3.** Ensure that all affected facilities have approved newly created CDRs, or CDR route amendments, prior to inclusion in the operational database.

**4.** Notify the originating Center when a CDR must be modified to accommodate changes within their airspace, such as traffic flow changes, airway realignments, and/or navigational aid designator changes. Exceptions: Revisions to STAR/SID/DP numbers will be entered into the CDR database by the ATCSCC via Global Modification.

**5.** Ensure ERAM CDR data is identical to data published in the CDR operational database.

6. Report unusable, inaccurate, or unsatisfactory CDRs to the ATCSCC POC. Reports must include the CDR Route Code, specific description of the impact and if appropriate, suggestion for modification.
7. When requested, facilitate the coordination necessary for the use of abbreviated clearances.
8. Notify the ATCSCC when implementing and terminating use of CDRs.

**d.** Terminal facilities must coordinate with their overlying ARTCC for all matters pertaining to CDRs.

## 18−19−5. CDR DATA FORMAT

All ARTCCs must develop and update CDRs in accordance with the following:

**a.** Utilize the eight character naming convention as follows:

1. Characters one through three are the three-letter ID of the origination airport.
2. Characters four through six are the three-letter ID for the destination airport.
3. Characters seven and eight are reserved for local adaptation and may be any two alphanumeric characters other than O or I.

***NOTE−***
*O and I must not be used to preclude confusion with the numbers zero and one.*

**b.** Although the use of RNAV procedures is preferred when developing or amending CDRs, ARTCCs may also include conventional CDRs in their CDR database.

**c.** All CDR route strings must tie into normal arrival routings into the destination airport.

**d.** CDRs must be developed and/or amended in accordance with the following:

1. Routes and route segments must be defined by any combination of the following:
   **(a)** DPs/SIDs/STARs if applicable.
   **(b)** NAVAID identifier, intersection name, fix name, RNAV Waypoint or NRS Waypoint (e.g., FUZ, ZEMMA, KK45G).
   **(c)** Type and number of the airway (e.g., J87 M201 Q40 T295 V16).
2. When establishing or amending CDRs the following rules must be applied:
   **(a)** When including a DP/SID/STAR use a published transition fix or the common fix for the procedure.
   **(b)** When describing an airway include a published entry and exit point (e.g., CVE J87 BILEE).
   **(c)** When connecting two airways, a published fix common to both airways and that is depicted on en route charts must be included (e.g., ADM J21 ACT J50). If there is not a fix common to both airways, include a published exit point for the first airway and a published entrance point for the second airway (e.g., OCS J206 NLSEN CYS J148).
   **(d)** The first route element following the origin must not be an airway (e.g., KDFW J4).
   **(e)** The last route element prior to the destination must not be an airway (e.g., J35 KMSY).

**e.** CDRs for each location must be published via the Route Management Tool (RMT) CDR database. Updates to the database will coincide with the normal 56-day chart updates. There are two components of the CDR database. The operational database is a read-only record of all the current CDRs. The staging database is amendable by ARTCC POCs. The staging database replaces the operational database on each chart date.

**f.** CDR changes must be entered into the staging database at least 36 days prior to the chart date. The staging database is closed to changes 35 days prior to the chart date.

***NOTE−***
*The timeline for the CDR staging database is available in RMT under the Help tab, Show Chart Dates. The status of the staging database is provided at each login to the CDR database.*

**g.** 30-35 days prior to the Chart Date. During this period, the staging database is checked for errors. Any errors are forwarded to the POC designated at each facility for correction. If the error cannot be corrected immediately, the route involved will be deleted from the database for that cycle. Once the error is corrected, the route may be reentered for a future date.

***NOTE−***
*30 days prior to the Chart Date the staging database is available to FAA and users for downloading or updating of their files.*

**h.** On each chart date, the staging database replaces the operational database and a mirror copy becomes the new staging database. The staging database is available for changes until it is locked 35 days prior to the next chart date, and the cycle starts over.

# Section 20. Route Advisories

## 18−20−1. PURPOSE

This section prescribes policies and guidelines for issuing Route Advisories.

## 18−20−2. POLICY

In accordance with Federal Air Regulations, all operators have the right of refusal of a specific route and may elect an alternative. Alternatives include, but are not limited to, ground delay, diversion to another airport, or request to stay on the filed route.

## 18−20−3. EXPLANATION OF TERMS

**a.** Required (RQD): System stakeholders must take action to comply with the advisory.

**b.** Recommended (RMD): System stakeholders should consider Traffic Management Initiatives (TMI) specified in the advisory.

**c.** Planned (PLN): Traffic management initiatives that may be implemented.

**d.** For Your Information (FYI): Advisories requiring no action.

**e.** User Preferred Trajectory (UPT): The route that the user requests based on existing conditions.

**f.** System stakeholders: A group of interdependent NAS users and FAA air traffic facilities.

**g.** Protected Segment: The protected segment is a segment on the amended TFM route that is to be inhibited from automatic adapted route alteration by ERAM.

**h.** Protected Segment Indicator: The protected area will be coded on the display and strips using the examples in TBL 18−20−1.

**i.** TMI Indicator: This denotes protected coding exists for a flight's route even though the coding within the route may be scrolled off the view surface.

**j.** TMI Identifier: Identifies the name of the initiative and is inserted into the beginning of Interfacility Remarks after the clear weather symbol.

***TBL 18−20−1***

**Example of Protected Segment Indicators**

| Presentation | Character Used | Example |
|---|---|---|
| Display | Bracketing chevrons >< | ILM..FAK..J109.>LEONI.J110.IHD.J518.DJB<..DTW |
| Enroute Flight Strip | Reverse bracketing parentheses )( | ILM FAK J109 )LEONI J110 IHD J518 DJB( DTW |

## 18−20−4. ROUTE ADVISORY MESSAGES

**a.** All route advisories must specify whether an action is RQD, RMD, PLN, FYI.

**b.** The following information will be included in a route advisory:

**1.** Header: Includes the DCC advisory number, category of route, and action. A "/FL" indicates that a flight list is attached to the advisory.

**2.** Name: Descriptive of the situation to the extent possible.

**3.** Constrained Area: Impacted area referenced by the advisory.

**4.** Reason: Causal factors for the advisory.

**5.** Include Traffic: Factors identifying specific flows of traffic in the route.

**6.** Facilities Included: May indicate the specific facilities or use the phrase "multiple facilities;" a minus sign (-) indicates to omit that facility's traffic from the route.

**7.** Flight Status: Will indicate all, airborne, or non-airborne.

**8.** Valid: Time frame for the route will be specified.

**9.** Probability of Extension: High, medium, low, or none will be stated.

**10.** Remarks: Further clarifying information.

**11.** Associated Restrictions: Traffic management restrictions to be implemented in conjunction with the route, e.g., miles in trail. ALT RSTN indicates that there is an altitude restriction associated with the advisory.

**12.** Modifications: Amendments to the standard Playbook routing.

**13.** Route: A specific route, route options, or user preferred trajectory around the area may be indicated. When UPT is indicated, an additional route(s) must be listed. This route becomes the "default" route.

**14.** Footer: Date/time group for Flight Service Station information.

**c.** Categories of route advisories and possible actions are listed in TBL 18−20−2 .

*TBL 18−20−2*

**Categories of Route Advisories and Possible Actions**

| ROUTE CATEGORY | REQUIRED RQD | RECOMMENDED RMD | PLANNED PLN | INFORMATION FYI |
|---|---|---|---|---|
| 1. Route | ✓ | ✓ | ✓ | ✓ |
| 2. Playbook | ✓ | ✓ | ✓ | |
| 3. CDR | ✓ | ✓ | ✓ | |
| 4. Special Operations | ✓ | | | |
| 5. NRP Suspensions | ✓ | | | |
| 6. VACAPES (VS) | | ✓ | ✓ | |
| 7. NAT | ✓ | | | |
| 8. Space Operations | ✓ | ✓ | ✓ | |
| 9. FCA | ✓ | | | |
| 10. FEA | | ✓ | ✓ | ✓ |
| 11. Informational | | ✓ | ✓ | ✓ |
| 12. Miscellaneous | | ✓ | ✓ | ✓ |

## 18−20−5. RESPONSIBILITIES

**a.** The ATCSCC must:

**1.** Be the final approval authority for all routes that traverse multiple center or terminal boundaries.

**2.** Coordinate routes with impacted facilities prior to implementing the route.

**3.** Verbally notify all impacted en route facilities of the implementation, modification, or cancellation of routes as the situation dictates.

**4.** Document and disseminate coordinated routes through an advisory with a flight list, if appropriate.

**5.** Implement, modify, and/or cancel routes.

**b.** Field facilities must:

**1.** Remain cognizant of operational areas of interest in the National Airspace System (NAS) including local adaptations that affect route changes; e.g., Preferential Arrival Routes and Preferential Arrival Departure Routes, and forward any issues that may require modification to normal traffic flows within their area of jurisdiction when national support may be required.

**2.** Coordinate routes with facilities within their area of jurisdiction.

***NOTE−***
*Normally the ATCSCC coordinates with en route facilities, en route facilities coordinate with terminals.*

**3.** Participate in the PT Conference as appropriate.

**4.** Implement the required routes for flights less than 45 minutes from departure or airborne. The departure Center is responsible for ensuring that proposed flights are on the proper route, and airborne traffic is the responsibility of the Center with track control and communications when the advisory is received.

**5.** Forward user requests to deviate from required routes to the ATCSCC, if they traverse more than one Center.

**6.** Not amend flight plans for flights outside their area of jurisdiction without prior approval.

**c.** NAS users should:

**1.** Amend flight plans to the published route when aircraft are 45 minutes or more from departure;

**2.** Forward requests to the ATCSCC Tactical Customer Advocate (TCA) when an aircraft is on the ground and is requesting to deviate from a published route.

## 18−20−6. PROCEDURES

**a.** System stakeholders must forward information to be considered in route planning and route implementation when capable.

**b.** Time permitting, the ATCSCC consolidates the information for inclusion into the PT Conference, or initiates tactical action, as required.

**c.** The ATCSCC coordinates routes with impacted facilities and issues advisories.

**d.** The ATCSCC verbally advises all impacted Centers that a route advisory has been issued, modified, or cancelled.

**e.** Field facilities and users review advisories and dynamic lists, and take appropriate action.

**f.** Field facilities issue routes to users if flight plans do not reflect the required routes as stated in the advisory.

**g.** If a route is cancelled, field facilities leave the aircraft on the existing route at the time of the cancellation of the route, unless a new route pertinent to the aircraft is issued.

**h.** NAS users forward requests to the ATCSCC TCA for flights that request to be exempted from required routes. The TCA completes the coordination and provides a determination on the request to the appropriate party(ies).

**i.** Routes are implemented, modified, and cancelled as needed.

# Section 21. Operations Plan

## 18−21−1. PURPOSE

Establishes the process, structure and responsibilities for developing, managing and implementing a daily strategic plan for air traffic operations in the National Airspace System (NAS).

## 18−21−2. DEFINITION

**a.** The Operations Plan (OP): The OP is a plan for management of the NAS and is formulated, developed, and maintained by the Air Traffic Control System Command Center (ATCSCC) Planning Team (PT) in collaboration with FAA and customer weather forecasters, ATCSCC personnel, Air Route Traffic Control Center (ARTCC), District Traffic Management Officers (TMO) or designees, terminals, airline planners, international facilities, military, general aviation planners, and other FAA field facility management personnel. The Operations Planning Webinar (PW) is conducted via a web-based application to include an audio dial-in capability.

**b.** Advance Plan (AP): The AP is for advanced (next day or later) management of the NAS. The AP is developed by the PT after collaboration with the same personnel as the OP.

**c.** Trigger: A specific event/critical decision window (CDW) that causes a specific traffic management initiative (TMI)/time-based management (TBM) operation to be implemented or modified.

**1.** A trigger is for planning purposes and is intended to reduce coordination when implementing or modifying the specified TMI/TBM operation.

**2.** All en route facilities impacted by the TMI/TBM operation must be contacted prior to implementing the TMI/TBM operation in response to the trigger.

**3.** En route facilities must relay TMIs/TBM operations to affected terminal facilities within its area of jurisdiction.

**4.** All triggers will be identified by “IF, THEN” clauses in the OP.

***EXAMPLE−***

*IF thunderstorms develop as forecast on J96, THEN ZKC will initiate the ORD BDF1 Playbook route.*

**d.** The OP will specify:

**1.** Terminal constraints: facilities where delays are expected to be 15 minutes or greater.

**2.** En route constraints: facilities where expanded miles-in-trail, deviations, and tactical reroutes may be required.

## 18−21−3. RESPONSIBILITIES

**a.** The PT provides operational same day analysis and support, advanced planning, and historical review to provide greater predictability and reliability in managing NAS performance. Responsibilities include:

**1.** Deliver a detailed Advance Plan (AP) to identify the next day's potential NAS impacts and TMIs/TBM operations as well as multi-day outlooks containing potential constraints and initiatives.

2. Identify aviation system efficiencies while using historical NAS performance data and trends to develop effective advance planning strategies.
3. Provide historical data analysis, demand projections, and potential mitigation strategies for future constraint management.
4. Use post-event analysis and lessons learned to define and implement future strategies and operational triggers based on past performance and outcomes.
5. Gather and share timely and continuous feedback with operational personnel to provide increased data, weather knowledge, and tools for analytical use and planning.

**b.** The ATCSCC PT must:

1. Lead the development of the OP.
2. Formulate the OP through coordination with PT members using the OP timeline.
3. Brief the National Operations Manager (NOM), National Traffic Management Officer (NTMO), and other ATCSCC operational elements on the OP.
4. Post the OP on the ATCSCC website and issue as a numbered advisory.
5. Document agreed-upon triggers in the OP.
6. Maintain the PW.

**c.** The NOM must:

1. Direct the NTMO, ATCSCC operational units, and personnel on implementation of the OP.
2. Coordinate with and provide direction to FAA facilities on implementation of the OP.

**d.** The District TMO or designee must:

1. Provide input to the AP.
2. Participate via the PW in formulation and development of the OP when stated in the previous OP, when requested later by the ATCSCC, or when issues within the facility warrant participation.
3. Provide input on:
   **(a)** Equipment outages having an operational impact;
   **(b)** Internal initiatives;
   **(c)** Terminal constraints;
   **(d)** Route closure/recovery information;
   **(e)** Anticipated use of airborne rerouting;
   **(f)** Anticipated use of TBM;
   **(g)** Anticipated TMI; or
   **(h)** Other issues which may impact operations (i.e., staffing, special events, etc.). (See FIG 18−21−1, Operational Planning Webinar Checklist.)
4. Brief and direct facility Operational Supervisors, Traffic Management Supervisors, Traffic Management Units, and operational personnel on the implementation of the OP and gather additional information for the next conference.
5. Coordinate with and provide direction to underlying facilities on the implementation of the OP.
6. Monitor and assess the OP, notifying the ATCSCC of problems that may impact the OP.
7. Provide operational feedback for use in post-operational evaluation of the OP.

**e.** Terminal Facility Management must:

**1.** When notified by the District TMO or designee, or ATCSCC PT, participate in the PW.

**2.** Brief and direct facility operational personnel on actions required by the OP.

**3.** Monitor and assess the OP, notifying the ATCSCC of problems that may impact the OP.

**4.** Participate in the AP when necessary or notified.

## 18−21−4. PROCEDURES

**a.** The PW participants are FAA and customer weather forecasters, FAA District TMO or designee, other FAA field facility management personnel, airline strategic planners, ATCSCC personnel, international facilities, and military and general aviation system customers.

**b.** The ATCSCC is delegated the authority to direct the operation of the PW for the FAA.

**1.** The ATCSCC will notify those FAA facilities required to participate as part of the PW.

**2.** Military, international, and general aviation entities will be included as necessary.

**c.** The PT collaborates on the formation of the OP. The OP is continuously evaluated, and updated or amended, as necessary.

**d.** Weather information provided by National Weather Service meteorologists will be used in the conference. If there is a collaborative product of weather information, developed by both government and industry meteorologists, it will be used as the primary source for the PW.

**e.** OP timeline (all times local/Eastern): The OP Timeline provides a continuous process and method for group decision-making and collaboration in dealing with system constraints. Modification of the timeline, participation, and scheduling is done at the discretion of the PT and as directed by the ATCSCC. The PT conducts and facilitates the PW with FAA field facilities and NAS customers beginning at 7:15 a.m. Eastern time, then every 2 hours, unless otherwise coordinated, with the last Webinar usually being conducted at 9:15 p.m. Webinar duration should be less than 30 minutes. Discuss recurring issues (e.g., VIP movements, overnight cargo operations) as necessary.

***NOTE−***
*The time intervals may be varied; however, each OP and associated advisory will state the time for the next Conference.*

Review the Current OP
Review the applicable weather information
Input from the Areas
♦ Staffing
♦ Combined Sectors
♦ Current/Anticipated Weather Constraints
♦ Anticipated Initiatives
♦ Equipment
♦ Anticipated Traffic Volume
♦ Constraints/Other
Input from Approaches and Towers
♦ Staffing
♦ Current/Anticipated Weather Constraints
♦ Equipment
♦ Current Configuration and AAR

♦ Anticipated Configuration and AAR
♦ Other
Other Constraints
♦ VIP Movement
♦ Special Events
♦ Military Activities
♦ Diversions
♦ Launch/recovery activities
Flow Constrained Areas
♦ Current
♦ Anticipated Rerouting
♦ Pathfinders
♦ Recovery
Anticipated TBM Operations
♦ Alternatives
♦ Triggers Needed
♦ Exit Strategy Needed
♦ Airborne Metering
♦ Surface Metering
♦ Outages
Anticipated Traffic Management Initiatives
♦ Alternatives
♦ Triggers Needed
♦ Exit Strategy Needed

# Section 22. National Playbook

## 18−22−1. PURPOSE

The National Playbook is a collection of Severe Weather Avoidance Plan (SWAP) routes that have been pre-validated and coordinated with impacted ARTCCs. The National Playbook is designed to mitigate the potential adverse impact to the FAA and customers during periods of severe weather or other events that affect coordination of routes. These events include, but are not limited to, convective weather, military operations, communications, and other situations.

## 18−22−2. POLICY

National Playbook routes must only be used after collaboration and coordination between the ATCSCC and the TMU(s) of affected air traffic facilities.

## 18−22−3. DEFINITION

The National Playbook is a traffic management tool developed to give the ATCSCC, FAA facilities, and industry a common product for various route scenarios. The purpose of the National Playbook is to aid in expediting route coordination during periods of constraint in the NAS. The National Playbook contains common scenarios that occur during each severe weather season, and each includes the airspace or flow impacted, facilities included, and specific routes for each facility involved. The National Playbook is available on the ATCSCC website at: http://www.atcscc.faa.gov/Operations/operations.html.

## 18−22−4. RESPONSIBILITIES

**a.** The ATCSCC must:

**1.** Manage the National Playbook program.

**2.** Operate as the OPI at the National Level.

**3.** Identify and coordinate the development/ modification/deletion of National Playbook routes as needed.

**4.** Evaluate and coordinate, as appropriate, National Playbook development/modification/deletion requests received from the ARTCCs.

**5.** Conduct a yearly review of the National Playbook routes and procedures.

**6.** The ATCSCC will hold telcons/meetings to facilitate the coordination of playbooks on an as needed basis.

**b.** The AIS must forward to the ATCSCC any changes to the published navigational database, (i.e., DPs/SIDs/STARs, NAVAIDs, Fixes, Waypoints, etc.) contained in the NFDD(s) that are effective for the subsequent chart date. The data must be provided at least 45 days prior to the chart date.

**c.** The ARTCCs must:

**1.** Forward to the ATCSCC any request to develop/modify/delete National Playbook routes in accordance with this section. Requests must include the National Playbook designation and a description of the desired additions/deletions/ modifications.

**2.** Supply a POC for the ATCSCC to contact regarding National Playbook routes.

**3.** Participate in the coordination process of National Playbook routes impacting their facility.

**d.** Terminal facilities must coordinate with their overlyingARTCC for all matters pertaining to the National Playbook.

## 18−22−5. NATIONAL PLAYBOOK DATA FORMAT

**a.** Playbooks must be developed and/or amended in accordance with the following:

**1.** Routes and route segments must be defined by any combination of the following:

**(a)** STAR and associated STAR number.

**(b)** NAVAID identifier, intersection name, fix name, RNAV Waypoint, or NRS Waypoints (e.g., FUZ, ZEMMA, KK45G).

**(c)** Type and number of the airway (e.g., J87 M201 Q40 T295 V16.

**2.** When establishing or amending Playbook Routes the following rules must be applied:

**(a)** When including a DP/SID/STAR use a published transition fix or the common fix for the procedure.

**(b)** When describing an airway include a published entry and exit point (e.g., CVE J87 BILEE).

**(c)** When connecting two airways, a published fix common to both airways and that is depicted on en route charts must be included (e.g., ADM J21 ACT J50). If there is not a fix common to both airways, include a published exit point for the first airway and a published entrance point for the second airway (e.g., OCS J206 NLSEN CYS J148).

**(d)** The first route element following the origin must not be an airway (e.g., KDFW J4).

**(e)** The last route element prior to the destination must not be an airway (e.g., J35 KMSY).

**(f)** Low frequency non-directional beacons must not be used.

**b.** The National Playbook will be published on the ATCSCC site. Updates to the National Playbook will coincide with the normal 56-day chart updates.

**c.** All changes to the National Playbook require coordination with affected facilities. Therefore, changes must be submitted to the ATCSCC at least 60 days prior to the desired publication date to be eligible for inclusion in the update.

## 18−22−6. IMPLEMENTATION PROCEDURES

**a.** Implementation of National Playbook routes may be initiated by the ATCSCC or requested by the TMU at an ARTCC.

**b.** The ATCSCC will coordinate the activation/deactivation of National Playbook routes. National Playbook routes are considered active when the ATCSCC has completed coordination with all impacted facilities. A numbered advisory will be sent by the ATCSCC describing the route(s) being used.

**c.** The ATCSCC will display current National Playbook advisories on the ATCSCC web page.

**d.** National Playbook routes may be modified tactically to achieve an operational advantage. The ATCSCC will coordinate these changes verbally with all impacted facilities and ensure that the published advisory contains the modifications.

**e.** Facilities must monitor and provide real-time reports of the impact and continued need for the use of the National Playbook routes through the ATCSCC.

**f.** A National Playbook route is no longer active when the expiration time stated on the advisory has been reached without an extension coordinated or a decision to cancel the route has been

reached. If the route is cancelled prior to the expiration time, the ATCSCC will coordinate with all impacted facilities and publish an advisory stating that the route has been cancelled.

**g.** If there are circumstances that prevent the use of a National Playbook route, then the air traffic facility involved must inform the ATCSCC. It is the responsibility of the impacted facility and the ATCSCC to ensure the route is not utilized until the circumstances preventing its use are corrected or the route is deleted.

# Section 23. Traffic Management (TM) Support of Non-Reduced Vertical Separation Minima (RVSM) Aircraft

## 18−23−1. PURPOSE

This section prescribes policies and guidelines for Traffic Management (TM) support of Non-Reduced Vertical Separation Minima (RVSM) Aircraft.

## 18−23−2. POLICY

In accordance with 14 CFR section 91.180, domestic RVSM airspace (FL 290-410) is exclusionary airspace. With only limited exceptions, all operators and individual aircraft must have received RVSM authorization from the Federal Aviation Administration (FAA) to operate at RVSM altitudes. If an aircraft or its operator has not been authorized for RVSM operation, the aircraft is referred to as a "non-RVSM" aircraft. Excepted non-RVSM aircraft are granted access to RVSM altitudes on a workload permitting basis. Priority in RVSM airspace is afforded to RVSM compliant flights, then file-and-fly flights.

## 18−23−3. DEFINITIONS

**a.** File-and-Fly. Operators of excepted non-RVSM flights requesting access to or through RVSM airspace will file a flight plan. This flight plan serves as the notification to the FAA of the operator's intent to request access to or through RVSM airspace.

**b.** STORM Flight. A non-RVSM exception designated by the Department of Defense (DoD) for special consideration via the DoD Priority Mission website.

**c.** Entry Facility. Facility where an aircraft penetrates RVSM airspace designated for U.S. air traffic control.

**d.** RVSM Facility. Air Traffic facility that provides air traffic services in RVSM airspace.

## 18−23−4. EXCEPTED FLIGHTS

Under the authority granted in 14 CFR section 91.180, the Administrator has determined that the following groups of non-RVSM aircraft may enter RVSM airspace subject to FAA approval and clearance:

**a.** Department of Defense aircraft;

**b.** Foreign State (government) aircraft;

**c.** Active air ambulance utilizing MEDEVACcall sign;

**d.** Flights conducted for aircraft certification and development flights for RVSM.

## 18−23−5. OPERATOR ACCESS OPTIONS

Operators of excepted non-RVSM aircraft requesting access to DRVSM airspace have the following options available to them:

**a.** Letter of Agreement/Memorandum of Understanding (LOA/MOU). Comply with a LOA/MOU for operations within a single or adjacent RVSM facility.

**b.** File-and-Fly. File a flight plan and make the initial request to access RVSM airspace by requesting an ATC clearance.

***NOTE−***
*Non-RVSM aircraft not listed under excepted flights may climb/descend through RVSM airspace without leveling off, subject to FAA approval and clearance.*

**c.** DoD. Enter STORM flights on the DoD Priority Mission website. For STORM flights that are within 60 minutes of departure notify the departure RVSM facility via telephone, in addition to entering the flight into the DoD Priority Mission website.

***NOTE−***
*Special consideration will be afforded a STORM flight; however, accommodation of any non-RVSM exception flight is workload permitting.*

## 18−23−6. DUTIES AND RESPONSIBILITIES

Traffic Management Units (TMU) in facilities with RVSM airspace must:

**a.** Monitor, assess, and act on the information in the Traffic Situation Display (TSD) to evaluate the facility's ability to manage non-RVSM aircraft;

**b.** Coordinate calls from DoD operators of STORM flights that will depart within 60 minutes, with the appropriate area supervisor/controller-in-charge. Obtain and coordinate the following information:

**1.** Call sign.

**2.** Origination point.

**3.** Proposed departure time.

**4.** Number of aircraft in formation, when applicable.

**c.** For a non-RVSM exception flight inbound to the U.S., the TMU at the entry facility receives the request for access to RVSM airspace directly from an international point of contact (POC). The TMU must coordinate the information received from the international POC with the appropriate operational supervisor/controller-in-charge in a timely manner.

# Section 24. Route Test

## 18−24−1. PURPOSE

This section describes policies and guidelines for conducting and evaluating route tests.

## 18−24−2. DEFINITION

**a.** Route test - a process established for the purpose of:

**1.** Assessing new routing concepts.

**2.** Exploring alternative routing possibilities.

**3.** Developing new routes to enhance system efficiency and safety.

**b.** Route test will:

**1.** Last for a pre-determined length of time, usually 90 days.

**2.** Include, but not be limited to, the following NAS elements:

**(a)** NRS waypoints.

**(b)** RNAV waypoints.

**(c)** NAVAIDs.

**(d)** Departure Procedures (DP).

**(e)** Standard Terminal Arrival Routes (STAR).

## 18−24−3. POLICY

Route tests must be conducted only after collaboration and coordination between the ATCSCC, affected en route and terminal facilities, and stakeholders. Route tests will include existing certified NAS elements. The ATCSCC is the final approval authority for all route tests.

## 18−24−4. RESPONSIBILITIES

**a.** The requesting facility must:

**1.** Ensure coordination is accomplished with all affected FAA facilities and stakeholders.

**2.** Submit a formal letter, in memorandum format, to the ATCSCC Procedures Office,throughthe DDSO. The memorandum must include:

**(a)** Detailed summary of the route test being requested and the anticipated results.

**(b)** List of affected FAA facilities and stakeholders with which coordination has been completed.

**(c)** Length of time for which the route test will be in effect, not to exceed 180 days.

**(d)** Detailed summary of the possible impact to the NAS, surrounding facilities, and stakeholders.

**3.** Perform an air traffic safety analysis in accordance with FAA Order 1100.161, Air Traffic Safety Oversight.

**4.** After the above items have been completed and the test approved, conduct the test as requested.

**5.** Determine if the route test timeframe is adequate. A facility may be granted an extension of up to 90 days with the approval of the ATCSCC. Submit requests for extension through

the DDSO to the ATCSCC Procedures Office, with supporting documentation. Facilities requesting extensions exceeding 180 days must review and comply with FAA Order 1050.1, Environmental Impacts: Policies and Procedures, to ensure environmental studies are completed. Include the studies with your request.

**6.** Within 30 days of completion of the test:

**(a)** Conduct a review and analysis with the stakeholders and accept comments.

**(b)** Determine if the proposed route is viable or if other alternatives should be explored.

**(c)** Document test results and prepare a post-test report in accordance with Air Traffic Safety Analysis and with FAA Order 1100.161, Air Traffic Safety Oversight.

**7.** If the route is determined to be beneficial, initiate implementation and have the route published in appropriate charts, databases, letters of agreement, and any other appropriate FAA publications.

**b.** The ATCSCC must:

**1.** Review the route test memorandum and approve the test or provide justification for disapproval.

**2.** Review and approve requests for test extensions or provide justification for disapproval.

**3.** Issue any necessary traffic management advisories.

**4.** Be the approving authority for any TMIs requested in association with the route test.

# Section 25. Time-Based Flow Management (TBFM)

## 18−25−1. GENERAL

Time-based flow management (TBFM) is a foundational decision support tool (DST) for time-based management in the en route and terminal environments. TBFM's core function is the ability to schedule aircraft within a stream of traffic to reach a defined constraint point (e.g., meter fix/meter arc) at specified times, creating a time-ordered sequence of traffic. The scheduled times allow for merging of traffic flows, while minimizing coordination, reducing the need for vectoring/holding, and efficiently utilizing airport and airspace capacity. The TBFM schedule is based on current aircraft estimated time of arrival at key defined constraint points based on wind forecasts, aircraft flight plan, the desired separation at the constraint point and other parameters. The schedule applies time-based spacing only when needed to maintain the desired interval at one or more constraint points.

## 18−25−2. PURPOSE

**a.** This section establishes the purpose of TBFM.

**b.** TBFM enables the use of time-based management in the en route and terminal environments to enable gate-to-gate improvements in operational efficiencies by:

**1.** Applying spacing only where needed.

**2.** Allowing for the routine use of PBN operations.

**3.** Capitalizing on advanced aircraft Flight Management System (FMS) capabilities.

**4.** Adding more predictability to the ATC system.

## 18−25−3. POLICY

When departure and or arrival flows are subject to TMIs, or when supporting PBN procedures, TBFM must be used to the maximum extent feasible in preference to miles-in-trail initiatives. Procedures for use of the capabilities within TBFM, in support of PBN operations and TMIs, must be documented in facility directives (e.g., LOAs, SOPs).

> ***NOTE−***
> *The benefits of TBFM are best realized through the coordinated effort of all facilities supporting PBN procedures or TMIs.*

## 18−25−4. DEFINITIONS

**a.** Time-Based Flow Management (TBFM). A foundational decision support tool (DST) for time-based management in the En Route and Terminal environments. TBFM's core function is the ability to schedule aircraft within a stream of traffic to reach a defined constraint point (e.g., meter fix/meter arc) at specified times, creating a time-ordered sequence of traffic. The scheduled times allow for merging of traffic flows, while minimizing coordination, reducing the need for vectoring/holding, and efficiently utilizing airport and airspace capacity. The TBFM schedule is based on current aircraft estimated time of arrival at key defined constraint points based on wind forecasts, aircraft flight plan, the desired interval at the constraint point and other parameters. The schedule applies the right spacing to the right aircraft, at the right time. This

includes, but is not limited to, SCM, ACM, EDC, IDAC, GIM-S, departure scheduling and extended/coupled metering.

**b.** Single Center Metering (SCM). Capability that provides personnel providing traffic management services with the ability to view and manage arrival flows to an ARTCC's internal airports.

**c.** Adjacent Center Metering (ACM). An extension of SCM that provides metering capability to neighboring facilities.

**d.** Constraint Satisfaction Point (CSP) . A meter arc, meter fix, meter point or other meter reference element.

**e.** Coupled Scheduling (CS)/Extended Metering (XM). Adds additional CSPs for an aircraft to meet the scheduled time of arrival along their route. This results in a more optimal distribution of delays over a greater distance from the airport or CSP.

**f.** Ground-Interval Management-Spacing (GIM-S). Capability that provides automated speed advisories prior to descent to enable en route controllers to meet the scheduled time of arrival (STA).

**g.** En Route Departure Capability (EDC). Scheduling capability that assists personnel providing traffic management services in formulating release times to a CSP to manage a miles-in-trail restriction.

**h.** Departure Scheduling. The action of personnel to obtain a runway departure time from TBFM for release of aircraft. Departure scheduling can be used to schedule into an arrival flow or into EDC.

**i.** Integrated Departure/Arrival Capability (IDAC). Capability allows the tower to conduct departure scheduling electronically.

**j.** Managing Facility. That facility which exercises control over TBFM settings and the relevant metering operation.

**k.** Supporting Facility. A facility that maintains an ancillary relationship to the managing facility in supporting TBFM-related functions.

**l.** Graphical User Interface (GUI). The computer interface that displays TBFM data utilizing timeline graphical user interface (TGUI) and planview graphical user interface (PGUI).

**1.** Full Controlling (FC). The ability to exercise control over TBFM settings and the relevant metering operation.

**2.** Limited Control (Partial Control GUI) (PC). The ability to manage specific TBFM settings and activities for relevant metering operations.

**3.** Non-Controlling (Non-Control GUI) (NC). A GUI that only has monitoring capability.

**4.** Terminal Control GUI (TC). A GUI specific to TSAS operations that resides in the TRACON.

**m.** Reschedule/Global Reschedule. The recalculation of generated frozen scheduled times of arrival (STA) resulting from an action taken at the TBFM GUI. Reschedule/global reschedule, also commonly referred to as “rescheduling” or “rippling,” can be executed as an independent function but is also accomplished when changes to TBFM configurations or settings occur.

**n.** Terminal Sequencing and Spacing (TSAS). Extends scheduling and metering capabilities into the terminal area and provides metering automation tools to terminal controllers and terminal traffic management personnel. Those controllers and traffic management personnel become active participants in time-based metering operations as they work to deliver aircraft accurately to CSPs within terminal airspace to include the runway in accordance with scheduled times at

those points. Terminal controllers are better able to utilize efficient flight paths, such as standard instrument approach procedures (SIAPs) that require a navigational specification (NavSpec) of RNP APCH with Radius-to-Fix (RF) legs, or advanced RNP (A-RNP), through tools that support the merging of mixed-equipage traffic flows. For example, merging aircraft flying RNP APCH AR with RF, A-RNP, and non-RNP approach procedures). Additional fields in the flight plan will identify those flights capable of flying the RNP APCH with RF or A-RNP procedures, and those flights will be scheduled for those type procedures when available. TSAS will schedule these and the non-RNP aircraft to a common merge point. Terminal traffic management personnel have improved situation awareness using displays that allow for the monitoring of terminal metering operations, similar to the displays used today by center traffic management personnel to monitor en route metering operations. See also TSAS Notice when available.

**o.** Speed Advisory. Speed advisories that are generated within TBFM to assist controllers to meet the scheduled time of arrival (STA) at the meter fix/meter arc and terminal meter points.

## 18−25−5. RESPONSIBILITIES

**a.** The managing facility (ARTCC/TRACON) must:

**1.** Determine appropriate TBFM settings and parameters and enter them into the TBFM system and coordinate as necessary.

**2.** Determine TBFM activity timeframes and coordinate start/stop times with the ATCSCC and affected facilities.

**3.** Communicate TBFM activity start/stop information to operational areas, operating positions, and supporting facilities, and log.

**4.** Enable/disable sector meter list as coordinated.

**5.** Monitor internal and upstream compliance and take appropriate action.

**6.** Monitor TBFM airborne delays and initiate actions, as appropriate, when values exceed or are projected to exceed delays that can be absorbed by control sectors. Notify the OS or affected areas/sectors of actions taken and expected outcomes.

**7.** Notify ATCSCC when unable to use TBFM capabilities, provide supporting justification, and log.

**8.** Coordinate internally with affected areas and with supporting facilities before taking action when changes to the metering strategy or updates to the TBFM schedule are necessary.

***NOTE−***
*To the extent possible, avoid making any changes in TBFM that cause a reschedule/global reschedule during metering operations. Coordinate with affected facilities and sectors before a reschedule/global reschedule.*

**9.** Ensure TBFM coordination procedures are placed into local SOP or LOAs between facilities.

***REFERENCE−***
*FAA Order JO 7210.3, Para 4−3−1, Letters of Agreement.*

**10.** Use TBFM to determine release times for facility-controlled departures to a metered airport.

**11.** Ensure TBFM adaptations are maintained to reflect current operations.

**12.** Ensure trouble reports are submitted and reconciled.

**13.** Ensure TBFM training is completed.

**14.** Provide support to other local facilities with TBFM equipment.

**b.** The ATCSCC must:

**1.** Maximize NAS efficiency and ensure optimal distribution of any delay.

**2.** Maintain awareness of all TBFM related operations and/or activities.

**3.** Include the status of pertinent TBFM information on planning telecons and on the National Airspace System status display.

**4.** Prioritize daily TBFM actions based on NAS and/or facility constraints.

**5.** Establish and maintain multifacility communications when necessary for TBFM operations.

**6.** Log TBFM related activities.

**7.** Be the final decision authority to resolve TBFM conflicts.

**c.** Supporting facilities (ARTCC/TRACON/ Tower) must:

**1.** Determine appropriate local TBFM settings.

**2.** Ensure TBFM settings are entered via TBFM TGUI, kept current, and coordination is accomplished.

**3.** Determine TBFM activity timeframes and coordinate start/stop times with the ATCSCC and affected facilities.

**4.** Communicate TBFM activity start/stop information to operational areas, operating positions, and supporting facilities, and log.

**5.** Enable/Disable sector meter list as coordinated, where applicable.

**6.** Use TBFM to determine release times for facility controlled departures to a metered airport.

**7.** Monitor arrival and departure flows for potential metering actions/changes.

**8.** Notify managing facility when unable to use TBFM capabilities, provide supporting justification, and log.

**9.** Monitor internal and upstream compliance and take appropriate action.

**10.** Ensure TBFM training is completed.

**11.** Through the appropriate managing facility, supporting facilities must:

**(a)** Ensure adaptations are maintained to reflect current operations.

**(b)** Ensure trouble reports are submitted and reconciled.

**(c)** Provide support to other local facilities with TBFM equipment.

# Section 26. Weather Management

## 18−26−1. GENERAL

This section prescribes policy and responsibilities to ensure required weather products and services are provided in a timely manner.

## 18−26−2. BACKGROUND

The FAA (AJR) maintains an Inter-Agency Agreement (IA) with the National Oceanic and Atmospheric Administration/National Weather Service (NWS) for the provision of meteorological services to FAA facilities and specifies assignment of NWS meteorologists to the ATCSCC and to each ARTCC. The meteorologists provide ATC operational personnel advised of weather conditions that may be hazardous to aviation or impede the flow of air traffic in the NAS sixteen hours a day/ seven days a week. Specific duties of the meteorologists are outlined below in paragraph 18−26−4 for FAA personnel awareness. Additional details can be found in the IA Statement of Work (SOW) and NWS Instruction 10-803, Support to Air Traffic Control Facilities.

## 18−26−3. POLICY

Facility managers will designate an operational ATC representative to serve as the Weather Coordinator (WC). The WC position is required for all shifts and is the primary interface between the NWS meteorologist and the facilities air traffic staff. The WC position is located in the TMU of each ARTCC. This position is a 24 hour position and can be combined with the OMIC when there are no TMU personnel present. All personnel assigned to this function must receive training for the associated responsibilities. If weather conditions warrant and workload permits, the WC may perform other operational or administrative functions.

## 18−26−4. RESPONSIBILITIES

**a.** Facility Managers must:

**1.** Have operational responsibility for the NWS meteorologists although responsibility for day to day activities can be delegated to the TMO. For example, if weather conditions warrant that the CWSU staff needed to be continued beyond the typical 16 hour day, the TMO could approve this.

**2.** Work with the local NWS Meteorologist-in-Charge (MIC) to ensure local orders and procedures define the NWS support expected and that compliance in the provision of the support is attained.

**3.** Ensure NWS meteorologists receive facility and air traffic control system familiarization training, as appropriate.

**4.** Forward any unresolved issues with NWS support to the appropriate Service Area and the FAA COTR for the IA.

**5.** Maintain a copy of the current IA and SOW.

**b.** The Weather Coordinator must:

**1.** Disseminate inter/intrafacility SIGMETs, AIRMETs(except over CONUS), CWAs, urgent PIREPs (UUA), and routine PIREPs (UA).

**2.** Provide assistance in the collection and dissemination of other significant weather information. WC priority of duties and responsibilities include:

**(a)** Inter/intrafacility dissemination of SIGMETs.

**(b)** Dissemination of CWAs within the ARTCC.

**(c)** Dissemination of urgent PIREPs within the ARTCC.

**(d)** Dissemination of CWAs to other facilities.

**(e)** Dissemination of AIRMETs within the ARTCC.

**(f)** Inter/intrafacility dissemination of Meteorological Impact Statements as required.

**(g)** Dissemination of other weather intelligence within the ARTCC as specified by local requirements.

**(h)** Receipt and handling of requests for PIREP/SIGMET/AIRMET/CWAs and other pertinent weather information.

**(i)** Notify Enroute Watch Supervision when barometric pressure within an ARTCC area of jurisdiction is greater than, or forecast to be greater than, 31.00 inches mercury (31” Hg).

**c.** NWS meteorologists' duties include:

**1.** Provide meteorological advice and consultation to ARTCC operational personnel and other designated FAA air traffic facilities, terminal, and FSS, within the ARTCC area of responsibility.

**2.** Provide scheduled and unscheduled briefings and products as needed per the IA SOW, NWS Instruction 10-803, and the operational direction of the Facility Manager. Examples include:

**(a)** Scheduled Briefings generally consist of forecast weather conditions pertinent to the ARTCC area during a specified period, plus an extended outlook. These briefings are scheduled and provided as required by the facility manager.

**(b)** Unscheduled products include the Meteorological Impact Statement (MIS) which is an unscheduled planning forecast describing conditions expected to begin within 4 to 12 hours which will, in the forecaster's judgment, impact the flow of air traffic within the ARTCC's area of responsibility and the Center Weather Advisory (CWA) which is an unscheduled air traffic and aircrew advisory statement for conditions currently in existence or beginning within the next 2 (two) hours.

**3.** The MIC will work with the Facility Manager to ensure local orders and procedures define the NWS support expected, to include operating hours. The MIC will also ensure back-up support plans are in place when and if the meteorologists at the center are not available.

# Part 6. REGULATORY AND PROCEDURAL INFORMATION

# Chapter 19. Waivers, Authorizations, and Exemptions

## Section 1. Regulatory Waivers and Authorizations

### 19−1−1. PURPOSE

This section prescribes policy and guidelines for the grant or denial of a Certificate of Waiver or Authorization from Title 14, Code of Federal Regulations (14 CFR).

### 19−1−2. POLICY

**a.** ATO Mission Readiness Services (AJV) and Flight Standards Service (AFS) are delegated the Administrator's authority to authorize or deny a Certificate of Waiver or Authorization (FAA Form 7711–1), and may further delegate this authority. Each office having delegated regulatory authority is responsible for authorizing or denying waivers, authorizations, or exemptions from the delegated regulatory sections. To waive or authorize the regulatory requirements of a 14 CFR part, section, or paragraph, the regulation must contain an authorization or waiver provision.

**b.** Applications for a Certificate of Waiver or Authorization acted upon by a Service Center Operations Support Group (OSG) will normally be processed in accordance with guidelines and standards contained herein, unless found to be in the best interest of the agency to deviate from them.

**c.** Applications for waiver or authorization that require both Air Traffic Organization and Flight Standards technical considerations must be handled jointly.

**d.** The grant of a Certificate of Waiver or Authorization constitutes relief from the specific regulations stated, to the degree and for the period of time specified in the certificate, and does not waive any state law or local ordinance. Should the proposed operations conflict with any state law or local ordinance, or require permission of local authorities or property owners, it is the applicant's responsibility to resolve the matter.

### 19−1−3. RESPONSIBILITIES

**a.** The Service Center Director is responsible for the authorization or denial of a Certificate of Waiver or Authorization except for those sections assigned to AFS.

**b.** AFS has responsibility for the authorization or denial of Certificate of Waiver or Authorization from the following sections of 14 CFR:

**1.** Section 91.119, Minimum safe altitudes: General;

**2.** Section 91.135, Operations in Class A Airspace;

**3.** Section 91.175, Takeoff and landing under IFR;

**4.** Section 91.209, Aircraft lights;

**5.** Section 91.303, Aerobatic flight;

**6.** Any section listed in 91.905 as appropriate for aerobatic demonstrations and other aviation events;

7. Section 105.21, Parachute operations over or into congested areas or open air assembly of persons, as appropriate for aerobatic demonstrations and other aviation events.

**c.** Certificate Holder, compliance with the provisions of a waiver is the responsibility of the holder who must be thoroughly informed regarding the waiver and those actions required of them by any special provisions. The holder must be advised that it is their responsibility to ensure that all persons participating in the operation are briefed on the waiver.

## 19−1−4. PROCESSING CERTIFICATE OF WAIVER OR AUTHORIZATION (FAA FORM 7711-2) REQUESTS

**a.** Requests for a Certificate of Waiver or Authorization may be accepted by any FAA facility and forwarded, if necessary, to the appropriate office having waiver authority. Those offices making the determination of whether an application should be processed by higher authority may forward the request to the appropriate Service Center Director. Requests requiring FAA Headquarters attention must be forwarded through the Service Center Director to the Director, Mission Readiness Services, Operational Policy (AJV-P), for action.

**b.** Requests must be coordinated with all concerned FAA elements, prior to approval, by the office that is most convenient to the applicant and having waiver authority, even though the proposed operation will be conducted within or extended into other jurisdictional areas. This procedure is intended to establish one office as the agency contact for an applicant and will preclude the need for the petitioner to deal with the FAA at various locations.

**c.** Requests forwarded to FAA Headquarters for processing must be coordinated with appropriate stakeholders and include all pertinent facts, background information, recommendation(s), as well as the basis and reasons for requesting Headquarters action.

## 19−1−5. PROCESSING CERTIFICATE OF WAIVER OR AUTHORIZATION RENEWAL OR AMENDMENT REQUESTS

**a.** A renewal request should be made by means of a new application. However, a request by another method is acceptable if its substance is essentially the same as the previous application or when, in the judgment of the waiver or authorization office, the request is sufficiently similar that new considerations are not required.

**b.** An existing waiver or authorization may be amended either by re-issuance or by letter.

## 19−1−6. ISSUANCE OF CERTIFICATE OF WAIVER OR AUTHORIZATION (FAA FORM 7711-1)

Waivers and authorizations must be completed in accordance with the following instructions and must be signed only by the appropriate authority (see FIG 19−1−1 and Example). The FAA Form 7711-1 should be:

**a.** Issued to an organization, whenever possible, in preference to an individual but indicate name and title of the individual acting for the organization.

**b.** Specify the operations that are permitted by the waiver or authorization.

**c.** Define the area and specify altitudes at which they may be conducted.

**d.** Specify the regulation, or portion thereof waived by numerical and letter reference as well as title. This section is left blank for authorizations (e.g., unmanned air vehicle operations, etc.).

**e.** Specify the effective and expiration dates, including hours of operation. The specific dates and hours of operation must allow sufficient time for the accomplishment of the operation and, if

appropriate, an alternate date to cover cancellations that might be necessary due to adverse weather conditions.

1. ATO issued waivers or authorizations may be made effective for a period of up to 24 calendar months in accordance with Flight Standards and ATO policies.
2. Flight Standards may issue waivers for aerobatic practice areas (APAs) for a period of up to 36 calendar months.

**f.** Restrict the waiver or authorization to the extent required by the operation. Further, any special provisions that are required to provide for an adequate level of flight safety and the protection of persons and property on the surface; for example: limitations, location, time periods, and type aircraft, must be specified and included as part of the waiver or authorization.

***NOTE−***
*If a longer duration is requested, or the operation is of national importance, advise the proponent to petition for an exemption utilizing 14 CFR section 11.63, How and to whom do I submit my petition for rulemaking or petition for exemption.*

## 19−1−7. RETENTION OF CERTIFICATES OF WAIVER OR AUTHORIZATION

The issuing office must retain one copy of each waiver, authorization or denial, along with supporting data, for at least one year after the date of denial or expiration, as appropriate. Significant or unusual waivers or authorizations may be retained for longer periods.

## 19−1−8. WAIVER, AUTHORIZATION OR DENIAL PROCEDURE

The applicant must be advised in writing of the waiver or authorization approval or denial, and, if appropriate, what is required to obtain reconsideration.

**a.** Applicant: The original waiver, authorization or denial, and a copy of the application must be forwarded to the applicant.

**b.** Issuing Office: The original of the application and a copy of the waiver, authorization or denial must be retained by the issuing office.

**c.** Washington Headquarters: Except for waivers or authorizations issued by AFS, forward copies of waivers, authorizations or written denials to the Washington Headquarters Airspace Regulation Group (AJV-P2).

**d.** Other Distribution: Other than as specified above and as necessary to satisfy Service Center needs, distribution must be limited to those offices that have a need for the information. For parasail operations covered under paragraph 19−5−1, Service Centers must distribute approved waivers or authorizations to the appropriate AFS office.

## 19−1−9. CANCELLATION OF WAIVERS AND AUTHORIZATIONS

A waiver or authorization may be canceled at any time by the Administrator or the person authorized to grant the waiver or authorization, or the representative designated to monitor a specific operation. Generally, a waiver or authorization should be canceled when it is no longer required or there is an abuse of its provisions or unforeseen safety factors develop. Failure to comply with the waiver or authorization is cause for cancellation. Canceling offices must use the following procedures, as applicable:

**a.** Immediately notify the holder and all appropriate FAA elements.

**b.** Verify and document the basis for the cancellation.

**c.** Notify the Service Center, as well as the issuing office.

**d.** Provide the holder with written notice of cancellation, or written confirmation of a verbal cancellation, with copies to appropriate offices.

**e.** Take any other action deemed necessary.

**EXAMPLE OF SPECIAL PROVISIONS**

These special provisions are for suggested use only. You will need to modify them or develop new ones depending on the proponent and the operating conditions.

1. Contact the [name of FAA facility] at [telephone number], not less than 24 hours or more than 48 hours prior to conducting any [name of event], for the purpose of issuing a Notice to Airmen.

2. Contact the [name] Air Route Traffic Control Center at [telephone number], prior to and immediately after [name of event], for the purpose of providing real time notice of operations.

3. All persons connected with this [name of event] must be familiar with this waiver and its special provisions, as well as part 101, [specific section of 14 CFR].

4. [Any other special provision(s) as required].

# Section 2. Elimination of Fixed-Wing Special Visual Flight Rules Operations

## 19−2−1. PURPOSE

This section prescribes policy and guidance for the elimination of fixed-wing special visual flight rules (SVFR) operations within Class B and Class C airspace areas.

## 19−2−2. POLICY

Fixed-wing SVFR operations may interfere with the safe, orderly and expeditious flow of aircraft operating under instrument flight rules (IFR) within certain high activity airspace areas (Class B, or C airspace areas only). To preclude such adverse effect, it may be necessary to eliminate SVFR operations within those affected airspace areas.

> ***NOTE−***
> *Section 3, appendix D to part 91 of 14 CFR lists the locations wherein fixed-wing SVFR operations are prohibited.*

## 19−2−3. RESPONSIBILITIES

**a.** The Service Center must conduct periodic reviews of terminal areas to determine when fixed-wing SVFR operations should be eliminated or restored in the specific airspace areas.

**b.** Each Service Center must forward the names of surface areas recommended for elimination/restoration of fixed-wing SVFR operations, with justification, to System Operations (AJR-1) and Aeronautical Information Services (AJV-A) for review.

# Section 3. Current Authorizations and Exemptions from Title 14, Code of Federal Regulations

## 19−3−1. AUTHORIZATIONS AND EXEMPTIONS FROM TITLE 14, CODE OF FEDERAL REGULATIONS (14 CFR)

Authorizations and exemptions from specified sections of 14 CFR have been granted to specified Departments, Agencies, and certain aircraft operators to permit accomplishment of their assigned missions (i.e., to conduct inflight identification, surveillance, and pursuit operations) subject to specified conditions and limitations.

## 19−3−2. AUTHORIZATION AND EXEMPTION REQUESTS

Requests for summaries of all ATO authorizations and exemptions from 14 CFR processed by a Service Center or Washington Headquarters should be made through the Service Center.

# Section 4. Parachute Jump Operations

## 19−4−1. NONEMERGENCY PARACHUTE JUMP OPERATIONS

**a.** All concerned personnel must familiarize themselves with 14 CFR part 105, and obtain the required information required by section 105.25 when processing requests for authorization or notification of non-emergency parachute jumps.

**b.** When operational/procedural needs require or when warranted by high density air traffic or constrained airspace, negotiate letters of agreement that designate areas of ongoing jump activity as permanent jump sites. Letters of agreement should contain:

**1.** The description and the location of the jump zone(s) and the conditions of use.

**2.** The activity schedules.

**3.** The maximum jump altitudes, common jump altitudes and common parachute opening altitudes (all altitudes should be expressed in feet above mean seal level).

**4.** Thecommunication frequencies to be used by the jump aircraft.

**5.** Jump aircraft call signs.

**6.** Jump aircraft climb and descent areas.

**7.** Notification procedures.

**8.** Assigned transponder code when appropriate.

**9.** Any other items pertinent to the needs of the ATC system and the users.

**c.** Where ongoing jump sites are established, but not yet published, ATMs may work with the parachute operator to ensure pertinent information is submitted for publication in the Chart Supplement and contact the Operations Support Group for assistance as needed.

**d.** To the extent possible, advise parachute jumping organizations or responsible individuals of known high traffic density areas or other airspace where sport parachuting may adversely impact system efficiency, such as IFR departure/arrival routes, Federal airways, VFR flyways, military training routes, etc.

**e.** A record of parachute jump coordination must be maintained by the facility for 45 days. The records must contain at least a copy of the NOTAM, reason(s) for cancellation (if applicable), name of the person(s) effecting coordination, and instructions or conditions imposed on the jump operation.

# Section 5. Moored Balloons, Kites, Parasail, Unmanned Rockets, and Unmanned Free Balloons/Objects

## 19−5−1. MOORED BALLOONS, KITES, PARASAIL, UNMANNED ROCKETS, AND UNMANNED FREE BALLOONS/OBJECTS

Apply the following guidelines to moored balloon, kite, parasail, unmanned rocket, or unmanned free balloon flights conducted in accordance with part 101 of 14 CFR:

**a.** Facilities receiving moored balloon, kite, unmanned rocket, or unmanned free balloon information must ensure that appropriate notices include the information required by 14 CFR sections 101.15, 101.37, and 101.39.

**b.** Facilities receiving parasail information must ensure that appropriate notices include the information required by 14 CFR section 101.15.

**c.** Notice information must be forwarded to affected air traffic facility/s. Also, air traffic facilities must forward notices received to the appropriate FSS for dissemination as a NOTAM.

**d.** Handle unmanned free balloon operations below 2,000 feet above the surface in Class B, Class C, Class D or Class E airspace areas requiring ATC authorization as follows:

**1.** Authorize the request if the operation is not expected to impact the normally expected movement of traffic.

**2.** Coordinate with other affected facilities before authorizing the flight.

**e.** Request the operator of unmanned free balloon flights to forward position reports at any time they are needed to assist in flight following.

***NOTE−***
*Operators are required only to notify the nearest FAA ATC facility if a balloon position report is not recorded for 2 hours. Other position reports are forwarded only as requested by ATC.*

## 19−5−2. DERELICT BALLOONS/OBJECTS

Take the following actions when a moored balloon/object is reported to have escaped from its moorings and may pose a hazard to air navigation, the operator of an unmanned free balloon advises that a position report has not been recorded for a 2-hour period, or the balloon's/object's flight cannot be terminated as planned:

**a.** Determine from the operator the last known and the present estimated position of the balloon/object as well as the time duration that the balloon/object is estimated to stay aloft. Also obtain other information from the operator such as the operator's access to a chase plane, hazardous material onboard, balloon/object coloring, special lighting, etc.

**b.** Attempt to locate and flight follow the derelict balloon/object.

**c.** Determine if the balloon's/object's flight can be terminated by the operator. If the balloon's/object's flight can be terminated, inform the operator of any known air traffic that might be a factor.

**d.** If the balloon's/object's flight cannot be terminated:

**1.** Advise the operator that the balloon/object is declared to be a derelict and as such is a potential hazard to air navigation.

**2.** Notify the National Tactical Security Operations (NTSO) Air Traffic Security Coordinator (ATSC) team on the Domestic Events Network (DEN), the ATCSCC National Operations Manager (NOM), the Regional Operations Center, and all immediately affected facilities of the derelict balloon/object. The ATCSCC NOM will serve as the focal point for the collection and dissemination of further information except for the information in subparagraph d3 below.

**3.** Provide the NTSO ATSC with revised position or altitude information.

**4.** If required, the NTSO ATSC may request assistance in locating and tracking the balloon from the appropriate Air Defense Sector (ADS) or other agencies with surveillance capabilities. If appropriate, the NTSO ATSC will advise the ADS that the derelict balloon is a current or potential hazard to air traffic. If the balloon cannot be located or flight followed, it poses at least a potential hazard.

**e.** Record and handle the derelict balloon as a Miscellaneous Incident.

***REFERENCE−***
*FAA Order JO 7110.65, Para 9−6−2, Derelict Balloons.*

# Section 6. 14 CFR Part 107, sUAS Operations

## 19−6−1. GENERAL

**a.** No person may operate a small unmanned aircraft in Class B, Class C, or Class D airspace, or within the lateral boundaries of the surface area of Class E airspace designated for an airport unless that person has prior authorization from Air Traffic Control (ATC). Proponents requesting to operate under 14 CFR part 107.41 within these classes of airspace must request an authorization through either the Low Altitude Authorization and Notification Capability (LAANC) or DroneZone.

**1.** LAANC Operations: https://www.faa.gov/uas/getting_started/laanc.

**2.** DroneZone: https://faadronezone.faa.gov/.

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

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

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

**e.** For all operations occurring on-airport, follow procedures in FAA Order JO 7200.23, Processing of Unmanned Aircraft Systems Requests, Chapter 3, Processing of 14 CFR Part 107.41 Airspace Authorization Request.

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

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

***REFERENCE−***

*FAA Order JO 7210.3, Chapter 12, Section 10, UAS Facility Maps (UASFM).*

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

## 19−6−3. MANUAL AIRSPACE AUTHORIZATION PROCEDURES (VIA FAA DRONEZONE)

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

**1.** ATC facility coordination is not required, if the request:

**(a)** Complies with the UASFM altitudes.

**(b)** Does not incorporate a 14 CFR part 107 operational waiver under § 107.37(a), Right-of-way rules, or § 107.51(b), Operating limitations for small unmanned aircraft.

**(c)** Does not include operations at a public-use airport.

**(d)** Does not comply with the UASFM altitudes but involves an sUAS visual line of sight operation conducting inspections of vertical structures, while meeting the criteria listed below:

**(1)** Remains within a 100-foot radius of the structure and no more than 100 feet above the upper-most portion of the vertical structure.

**(2)** Does not operate within 2 NM of any landing surface of an aerodrome, heliport, seaplane base, or vertiport except as otherwise authorized under a separate COA.

**(3)** The minimum flight visibility, as observed from the control station must be no less than 3 SM.

**(4)** Remains no less than 500 feet below the clouds and 2,000 feet horizontally from the clouds.

**2.** If the processor is unable to authorize the request in accordance with the above, they must coordinate with the facility.

**b.** If there is a facility approved UASFM for Class E airspace areas designated as a surface area for an airport, requests will be processed in accordance with the UASFM. If there is no facility approved UASFM, the Class E surface area designated for airport requests will be processed at Headquarters/Service Centers using the following criteria. Any requests outside of these parameters must be coordinated directly with the controlling facility prior to approval:

**1.** Operations conducted from 0 to 2 nautical miles (NM) from the Airport Reference Point (ARP) will not be authorized by Headquarters/Service Center without prior coordination with the facility.

**2.** Operations conducted from beyond 2 NM and up to 3 NM from the ARP will be authorized to operate at or below 100 feet above ground level (AGL).

**3.** Operations conducted from beyond 3 NM and up to 4 NM from the ARP will be authorized to operate at or below 200 feet AGL.

**4.** Operations conducted from beyond 4 nautical miles from the ARP will be authorized to operate at or below 400 feet AGL.

**5.** A weather minimum of a 1000-foot ceiling.

**6.** All authorization for Class C and D surface areas that revert to Class E surface area designated for an airport will be evaluated utilizing UASFM for the Class “C and D” surface area.

***NOTE−***

***1.*** *Headquarters/Service Centers are responsible for issuing waivers to the proponent. In instances where the authorization requires a waiver to 14 CFR part 107.31 (Visual line of sight), 14 CFR part 107.35 (Operations of multiple sUAS), 14 CFR part 107.41 (Operation in certain airspace), 14 CFR part 107.37 (Operation near aircraft; right of way rules), or 14 CFR part 107.51(b) (Operating limitations for sUAS – altitude), pending waivers must be included with the authorization request and coordination will take place with the facility.*

***2.*** *The responsible person for the operation and their contact information will be listed in the authorization or waiver.*

***3.*** *With regards to Class E airspace, only airspace within the lateral boundaries of the surface area designated for an airport (Class E2) requires a part 107 authorization or waiver.*

**c.** An automated message will be forwarded to the facility and the proponent of the approval, which will contain:

**1.** Waivers if applicable.

**2.** Description of the operational area.

**3.** Contact information for communication/recall.

**4.** Times of operation.

**d.** If 14 CFR part 107 operations cannot be authorized using the UASFM, ATC facilities will be contacted by Headquarters/Service Centers for coordination.

**e.** If after coordinating with the ATC facility, the operation cannot be authorized, an automated message will be forwarded notifying the facility and the proponent of the denial.

**f.** Special Governmental Interest (SGI), part 107 authorizations/waivers will be managed by System Operations Security, AJR-2.

## 19−6−4. HEADQUARTERS/SERVICE CENTER AIRSPACE WAIVER PROCESS

**a.** Applications for waivers are submitted to the Headquarters/Service Center through DroneZone.

**b.** UnderHeadquarters/Service Center waiver process, ATO approval is required for the following waivers and will coordinate with Flight Standards Service (AFS), if needed:

**1.** Yielding the right of way (§ 107.37a).

**2.** Operations in Certain Airspace (§ 107.41).

**3.** Maximum altitude (§ 107.51b).

**c.** UnderHeadquarters/Service Center waiver process, AFS may approve waivers requested for the following items and will coordinate with ATO, if needed:

**1.** Operations from a moving vehicle or aircraft (§ 107.25).

**2.** Daylight operation (§ 107.29).

**3.** Visual line of sight (§ 107.31).

**4.** Visual observer (§ 107.33).

**5.** Operations of multiple UASs (§ 107.35).

**6.** Operation over people (§ 107.39).

**7.** Maximum ground speed (§ 107.51a).

**8.** Minimum flight visibility (§ 107.51c).

**9.** Cloud minimum (§ 107.51d).

**d.** Headquarters/Service Center will evaluate the waiver(s) for justification, including supporting data and documentation, as necessary, which establishes the proposed operation can be safely conducted under the terms of a certificate of waiver. Headquarters/Service Center will coordinate all waivers to 14 CFR part 107.29, 14 CFR part 107.31, 14 CFR part 107.35, 14 CFR part 107.37, 14 CFR part 107.41, and 14 CFR part 107.51(b) (except those covered below in subparagraph e), with the affected facility to evaluate if the proposed operation can be safely conducted based on the proposed mitigation(s) and, if needed, apply any additional mitigations/ limitations.

**e.** Waivers in Class E surface areas and Class G airspace (excluding those waivers that take the aircraft into all other classes of airspace that are not in compliance with UASFMs) will be approved by Headquarters/Service Center. This approval authority does not preclude the facility from being coordinated with if Headquarters believes additional input from the facility is beneficial to the safety of the operation.

# Section 7. Procedural Waivers

## 19−7−1. PURPOSE

This section prescribes policies and guidelines for the processing of air traffic procedural waiver requests.

## 19−7−2. POLICY

**a.** The Director, Mission Readiness Services, Operational Policy (AJV-P), is the authority to grant or deny a waiver to air traffic procedures.

**b.** Procedural waivers pertaining to separation minima require Aviation Safety Management (ASM) approval.

***REFERENCE−***
*ATO-SG-15-05, Safety and Technical Training Guidance on Separation Minima.*

**c.** The grant of a procedural waiver constitutes relief from a specific requirement in an air traffic directive.

## 19−7−3. RESPONSIBILITIES

The Air Traffic Manager (ATM) must ensure the facility adheres to the provisions outlined in the approved waiver, and that facility personnel are trained accordingly.

## 19−7−4. WAIVER REQUESTS

**a.** The ATM must communicate intent and garner support to pursue a new waiver from their operational chain of command, to include the following, as applicable:

**1.** District General Manager
**2.** Service Area Director
**3.** Director, Strategic Operations, AJT-1
**4.** Director, AJV-P

**b.** All required safety studies and safety documentation must be completed and approved prior to the request for a new waiver.

**c.** New waiver requests must follow the process outlined in the AJV-P Waiver Checklist and must include a memorandum from the appropriate Service Area Director supporting the request. The processing time for a new waiver request package, once received by AJV-P, is normally 240 days. The AJV-P Waiver Checklist is available through the appropriate Service Center or may be obtained from the Air Traffic Procedures Group (AJV-P3) by submitting a request to: 9-AJV-P-HQ-Correspondence@faa.gov.

## 19−7−5. DEVELOPMENT OF SAFETY DOCUMENTATION AND OTHER SAFETY STUDIES

**a.** A new waiver request pertaining to separation minima requires a safety analysis (e.g., Flight Standards [AFS] study, Monte Carlo simulation) in addition to requiring a Safety Risk Management (SRM) document delineated in the ATO Safety Management System (SMS)

Manual. The funding for such a study must be coordinated within the operational service unit. For additional assistance, please contact AJT.

***REFERENCE−***
*ATO Safety Management System Manual, Annex A, Para 2.2, Documentation, Review, and Approval Process for Waivers to Separation Minima.*

**b.** The facility may seek assistance with the development of an SRM document, as needed, from the appropriate Service Center Quality Control Group (QCG).

## 19−7−6. WAIVER RENEWAL PROCESSING

**a.** The ATM must submit waiver renewals to AJV-P via their operational chain of command, to include the District General Manager, appropriate Service Area Director, and the Director, Strategic Operations (AJT-1). Waiver renewal packages must be received by AJV-P at least 180 days prior to a waiver's expiration date.

**b.** When submitting a waiver renewal request, review the current SRM document to determine whether any updates are necessary. Specific requirements pertaining to *Post-SRM Monitoring* and *Revising an SRM Document* are outlined in the ATO SMS Manual.

**c.** Before submitting a waiver renewal request, ensure the following:

**1.** Monitoring information pertaining to the existing waiver is reflected in the Safety Management Tracking System (SMTS), as outlined in the ATO SMS Manual.

**2.** A statement of monitoring activities must be included in the facility memorandum request.

***REFERENCE−***
*Safety Management Systems Manual, Para 4.2, Developing the Monitoring Plan.*
*Safety Management Systems Manual, Para 4.3, Post-SRM Monitoring.*
*Safety Management Systems Manual, Para 5.7, Revising an SRM Document.*

**d.** Requests for waiver renewals must be processed in accordance with the AJV-P Waiver Checklist.

**e.** The AJV-P Waiver Checklist is available through the appropriate Service Center or may be obtained from the Air Traffic Procedures Group (AJV-P3) by submitting a request to: 9-AJV-P-HQ-Correspondence@faa.gov.

## 19−7−7. PERIODICITY OF WAIVER RENEWALS

Existing waivers to air traffic procedures that, upon review, are deemed necessary for the continued efficiency and safety of the NAS must adhere to the following renewal timelines:

**a.** Waivers in existence for 1 to 10 years must undergo the renewal process every 2 years.

**b.** Waivers in existence for 11 to 19 years must undergo the renewal process every 3 years.

**c.** Waivers 20 years or older must undergo the waiver renewal process every 5 years.

## 19−7−8. WAIVER APPROVAL PROCESS

The Operational Policy Directorate must coordinate all waiver approvals with appropriate headquarters organizations based on the nature of the waiver request. If there is a need to coordinate

with a field facility, the Operational Policy Directorate must do so through the appropriate Service Center.

# Chapter 20. Temporary Flight Restrictions (TFRs)

## Section 1. General Information

### 20−1−1. PURPOSE

This section prescribes guidelines and procedures regarding the use and issuance of regulatory temporary flight restrictions (TFR).

### 20−1−2. AUTHORITY

**a.** The FAA Administrator has sole and exclusive authority over the navigable airspace of the United States. The Administrator has broad authority under section 40103 of Title 49 of the United States Code (49 U.S.C.) to regulate, control, and develop plans and policy for the use of navigable airspace. See also 49 U.S.C. section 40101(d).

**b.** 49 U.S.C. section 44812 and Title 14 of the Code of Federal Regulations (14 CFR) part 91 contain authority and regulations addressing temporary flight restrictions.

### 20−1−3. REASONS FOR ISSUING A TFR

While not all inclusive, a TFR may be issued for the following reasons: toxic gas leaks or spills, fumes from flammable agents which, if fanned by rotor or propeller wash, could endanger persons or property on the surface or in other aircraft; volcanic eruptions that could endanger airborne aircraft and occupants; hijacking incidents that may endanger persons or property on the surface, or airborne aircraft and occupants; aircraft accident/incident sites; aviation or ground resources engaged in wildfire suppression; aircraft relief activities following a disaster; aerial demonstrations or major sporting events.

### 20−1−4. TYPES OF TFRS

TFRs may be issued under the following regulations:

**a.** 49 U.S.C. section 44812, Temporary Flight Restrictions for Unmanned Aircraft.

**b.** 14 CFR section 91.137, Temporary Flight Restrictions in the Vicinity of Disaster/Hazard Areas.

**c.** 14 CFR section 91.138, Temporary Flight Restrictions in National Disaster Areas in the State of Hawaii.

**d.** 14 CFR section 91.139, Emergency Air Traffic Rules.

**e.** 14 CFR section 91.141, Flight Restrictions in the Proximity of the Presidential and Other Parties.

**f.** 14 CFR section 91.143, Flight Limitation in the Proximity of Space Flight Operations.

**g.** 14 CFR section 91.145, Management of Aircraft Operations in the Vicinity of Aerial Demonstrations and Major Sporting Events.

> ***NOTE−***
> *See Chapter 21, Section 6, for information regarding Special Security Instructions issued under 14 CFR section 99.7, Special Security Instructions.*

## 20−1−5. TFR NOTAM CONTENT

TFR NOTAMs must comply with procedures detailed in FAA Order7930.2, Notice to Airmen (NOTAM).

## 20−1−6. TFR INFORMATION

National Airspace System (NAS) users or other interested parties should contact the nearest flight service station, or (in CONUS) the appropriate ARTCC for TFR information. Additionally, you can find TFR information on automated briefings and at any of the following sources:

**a.** TFR List: https://tfr.faa.gov

**b.** TFR Graphical: https://tfr.faa.gov/tfr3/?page=map

**c.** Domestic Notices: https://www.faa.gov/air_traffic/publications/domesticnotices/

**d.** International Notices: https://www.faa.gov/air_traffic/publications/internationalnotices/

**e.** NOTAM Management Service (NMS) Public NOTAM Search: https://nms.aim.faa.gov/

**f.** FCFSS website: https://www.1800wxbrief.com/

## 20−1−7. TFRS OUTSIDE OF THE UNITED STATES AND ITS TERRITORIES

TFRs are only implemented for sovereign U.S. airspace and its territories. If restrictions are located in an area that extends beyond the 12-mile coastal limit or a U.S border, the NOTAM will contain language limiting the restriction to the airspace of the U.S., and its territories and possessions. The FAA may issue an advisory via the NOTAM System to inform affected usersof any hazard or dangerous information outside of the sovereign U.S. airspace and its territories.

## 20−1−8. TFR QUESTIONS

Direct any questions or concerns regarding TFRs to the appropriate ATO Service Center (or designee) with jurisdiction over the TFR area. Additional inquiries may also be directed to the FAA Headquarters Mission Readiness Services, Airspace Regulation Group, (202) 267-8783.

# Section 2. Temporary Flight Restrictions for Unmanned Aircraft (49 U.S.C. Section 44812)

## 20−2−1. PURPOSE

This section prescribes guidelines and procedures regarding TFRs issued in accordance with 49 U.S.C. section 44812. These TFRs temporarily restrict unmanned aircraft operations over eligible large public gatherings at the request of an eligible law enforcement agency.

## 20−2−2. TFR CRITERIA

**a.** To be eligible for a TFR under section 44812(c)(1), large public gatherings hosted in a stadium or other venue must:

**1.** be hosted in a stadium or venue that has previously hosted events qualifying for the application of special security instructions in accordance with Public Law 108-199, section 521, and the venue is not enclosed;

**2.** have an estimated attendance of at least 30,000 people; and

**3.** be advertised in the public domain.

**b.** To be eligible for a TFR under section 44812(c)(2), large public gatherings hosted in a venue other than a stadium or other venue described above must:

**1.** have an estimated attendance of at least 100,000 people;

**2.** be primarily outdoors;

**3.** have a defined and static geographical boundary; and

**4.** be advertised in the public domain.

## 20−2−3. REQUESTING AUTHORITIES/ELIGIBLE ENTITIES

**a.** Credentialed law enforcement organizations of the Federal Government or a State, local, Tribal, or territorial government may request a TFR under this section.

**b.** The law enforcement agency must submit the TFR request to the appropriate ATO Service Center OSG Manager not less than 30 calendar days prior to the event.

## 20−2−4. ISSUING TFRS

FAA Headquarters or the ATO Service Center Director (or designee) having jurisdiction over the area concerned may issue a TFR under this section.

## 20−2−5. DEGREE OF RESTRICTIONS

When a NOTAM has been issued establishing a TFR under this section, no person may operate an unmanned aircraft within the TFR unless at least one of the following conditions is met:

**a.** The Administrator authorizes the operation for operational, safety, security, or compliance oversight purposes; or

**b.** The aircraft operation is conducted with the approval of the eligible entity who requested the TFR.

# Section 3. Temporary Flight Restrictions in the Vicinity of Disaster/Hazard Areas (14 CFR Section 91.137)

## 20−3−1. PURPOSE

This section prescribes guidelines and procedures regarding the management of aircraft operations in the vicinity of disaster/hazard areas in accordance with 14 CFR section 91.137. TFRs issued under this section are for disaster/hazard situations that warrant regulatory measures to restrict flight operations for a specified amount of airspace, on a temporary basis, in order to provide protection of persons or property in the air or on the ground.

## 20−3−2. TFR CRITERIA

TFRsin accordance with 14 CFR section 91.137 are issued when necessaryto:

**a.** 14 CFR 91.137(a)(1) – Protect persons and property on the surface or in the air from an existing or imminent hazard associated with an incident on the surface when the presence of low-flying aircraft would magnify, alter, spread, or compound that hazard.

***EXAMPLE−***

*Toxic gas leaks or spills; flammable agents or fumes that, if fanned by rotor or propeller wash, could endanger persons or property on the surface or, if entered by an aircraft, could endanger persons or property in the air; volcanic eruptions that could endanger airborne aircraft and occupants; nuclear accident or incidents; hijackings; and certain law enforcement activities.*

**b.** 14 CFR 91.137(a)(2) - Provide a safe environment for the operation of disaster relief aircraft.

***EXAMPLE−***

*Aviation or ground resources engaged in wildfire suppression, and relief activities following a disaster (earthquake, tidal wave, flood, etc.).*

**c.** 14 CFR 91.137(a)(3) - Prevent an unsafe congestion of sightseeing and other aircraft above an incident or event that may generate a high degree of public interest.

***EXAMPLE−***

*Disaster/hazard incidents/events of limited duration that would attract an unsafe congestion of sightseeing aircraft, such as aircraft accident sites.*

***NOTE−***

*A 14 CFR section 91.137(a)(3) TFR applies only to disaster/hazard incidents/events of limited duration that would attract an unsafe congestion of sightseeing aircraft. It is not to be used for other outdoor public events.*

## 20−3−3. REQUESTING AUTHORITIES

A TFR under 14 CFR section 91.137 may be requested by various entities, including military commands; regional directors of the Office of Emergency Planning; Civil Defense State Directors;

civil authorities directing or coordinating air operations associated with disaster relief; civil authorities directing or coordinating organized relief air operations (including representatives of the Office of Emergency Planning, U.S. Forest Service, and state aeronautical agencies); and law enforcement agencies.

## 20−3−4. ISSUING TFRS

**a.** The Director, System Operations Security (AJR-2), (or designee) or the ATO Service Area Director (or designee) having jurisdiction over the area concerned may issue a TFR.

**b.** The Director, System Operations Security (AJR-2), (or designee) or the ATO Service Area Director (or designee) with jurisdiction over the area concerned may issue TFRs in accordance with 14 CFR section 91.137(a)(1) for law enforcement incidents posing direct hazards. These TFRs must be approved in advance by the ATO Director of System Operations Security (or designee) and operationally coordinated with the System Operations Support Center (SOSC) at (202) 267-8276.

***NOTE−***

1. *Law enforcement activities that may warrant TFRs include, but are not limited to, situations where there is a direct hazard to aircraft (for example, shots fired at aircraft) or where the presence of aircraft could exacerbate the danger to personnel on the ground (for example, SWAT or other personnel moving into position).*
2. *Law enforcement TFR NOTAMs must include wording that directs the media to contact the FAA Office of Communications (AOC) through the Washington Operations Center at 202-267-3333.*

**c.** ARTCC managers (or designee) may issue TFRs in accordance with 14 CFR sections 91.137(a)(1) and (a)(2).

**d.** TFRs issued in accordance with 14 CFR section 91.137(a)(3) require FAA Headquarters approval.

## 20−3−5. DEGREE OF RESTRICTIONS

**a.** Section 91.137(a)(1). Restrictions issued in accordance with this section prohibit all aircraft from operating in the designated area unless that aircraft is participating in the disaster/hazard relief activities and is being operated under the direction of the official in charge of on-scene emergency response activities.

**b.** Section 91.137(a)(2). Restrictions issued in accordance with this section prohibit all aircraft from operating in the designated area unless at least one of the following conditions is met:

1. The aircraft is participating in hazard relief activities and is being operated under the direction of the official in charge of on-scene emergency response activities.
2. The aircraft is carrying law enforcement officials.
3. The aircraft is operating under an ATC approved IFR flight plan.
4. The operation is conducted directly to or from an airport within the area, or is necessitated by the impracticability of VFR flight above or around the area due to weather or terrain. Notification must be given to the ATC facility or office that was specified in the NOTAM for coordination with the official in charge of on-scene emergency response activities. Also, the operation does not hamper or endanger relief activities and is not conducted for observing the disaster.

5. The aircraft is carrying properly accredited news representatives, and prior to entering the area, a flight plan is filed.

***NOTE−***
*Coordination with the official in charge of on-scene emergency response activities is required prior to ATC allowing any IFR or VFR aircraft to enter into the TFR area.*

**c.** Section 91.137(a)(3). Restrictions issued in accordance with this section prohibit all aircraft from operating in the designated area unless at least one of the following conditions is met:

1. The operation is conducted directly to or from an airport within the area, or is necessitated by the impracticability of VFR flight above or around the area due to weather or terrain, and the operation is not conducted for the purpose of observing the incident or event. Notification must be given to the ATC facility that was specified in the NOTAM for coordination with the official in charge of the activity.
2. The aircraft is operating under an ATC approved IFR flight plan.
3. The aircraft is carrying incident or event personnel, or law enforcement officials.
4. The aircraft is carrying properly accredited news representatives and, prior to entering that area, a flight plan is filed with FSS or the ATC facility specified in the NOTAM. Flight plans must include aircraft identification, type, and color; radio frequencies to be used; proposed times of entry to and exit from the TFR area; the name of news media or organization and purpose of flight.

## 20−3−6. RESPONSIBILITIES

**a.** All FAA personnel approving or issuing TFRs must ensure that restrictions meet regulatory criteria and are issued in accordance with FAA directives.

**b.** The ATO Director of System Operations Security (or designee) must:

1. Review and, if warranted, approve TFRs issued for law enforcement activities in accordance with the provisions of 14 CFR section 91.137.
2. Act as the operational representative for media concerns regarding active 14 CFR 91.137 TFRs.

**c.** ATO service area director (or designee) must:

1. Review all flight restrictions in their jurisdiction issued in accordance with 14 CFR 91.137 for compliance with regulations, directives, and policy (e.g., correct format, valid criteria).
2. Coordinate with affected air traffic facilities, event personnel, and local authorities when applicable.
3. Coordinate with the Domestic Events Network (DEN) air traffic security coordinator (ATSC) when hijacking situations are involved.

**d.** ARTCC/CCF/HCF air traffic managers (or designee) having jurisdiction over the area concerned must:

1. Accept requests for and, if warranted, establish TFRs in accordance with the provisions of 14 CFR sections 91.137(a)(1) and 91.137(a)(2).
2. Contact the System Operations Support Center (SOSC) at (202) 267-8276 to obtain approval for TFRs requested for law enforcement activities.
3. Inform all affected facilities of the TFR; including location, altitude, and effective times.

**4.** Coordinate with SUA using agencies when a TFR may impact SUA activities.

**5.** Notify the Regional Operations Center when a 91.137(a)(1) TFR has been issued. Ensure information is passed to Service Center Operations Support Group (OSG) and SOSC personnel.

**6.** Ensure IFR traffic is routed around the TFR, unless prior approval is obtained from the on-scene coordinator. No aircraft is authorized to enter a 14 CFR section 91.137(a)(1) TFR unless it is taking part in the relief activity.

**7.** Ensure the TFR is monitored for both IFR and VFR unauthorized traffic and a Mandatory Occurrence Report (MOR) is submitted for all TFR violators.

**8.** Maintain a chronological log of all TFR related actions on FAA Form 7230-4, Daily Record of Facility Operation Log, to include:

**(a)** The name and the organization of the person requesting the TFR.

**(b)** A brief description of the situation.

**(c)** The estimated duration of the restrictions.

**(d)** The name of the agency responsible for on-scene emergency activities and the telephone or other communications contact.

**(e)** A description of the location of the affected area.

**9.** Act as, or designate, an ATC coordination facility. If assistance is required, the coordination facility must serve as a primary “communication facility" for communications between the emergency control authorities and affected aircraft.

**10.** Issue flight restrictions, NOTAM, and appropriate cancellation in a timely manner.

**e.** All air traffic facilities must:

**1.** To the maximum extent possible, render assistance to the agency requesting the TFR.

**2.** Disseminate TFR information to all affected pilots in the area by all possible means.

**3.** Direct all media requests for information concerning TFRs to the FAA Office of Communications (AOC) through the Washington Operations Center at (202) 267-3333.

## 20−3−7. REVISIONS AND CANCELLATIONS

**a.** When restrictions are necessary beyond the published termination date/time, the ARTCC must ensure that a revised NOTAM and an appropriate cancellation are issued.

**b.** When the ARTCC within whose area the restrictions are established receives information from the ATO service area or the agency that requested the restrictions that the restrictions are no longer required, the ARTCC must take action to cancel them. If the information is received by another facility, that facility must notify the ARTCC, which will take appropriate action.

**c.** When it is obvious that the restrictions are no longer required but a cancellation request has not been received, the ARTCC must take action to ascertain the status of the restrictions from the ATO service area or the agency that requested the restrictions, and if appropriate, cancel them.

# Section 4. Temporary Flight Restrictions in National Disaster Areas in the State of Hawaii (Section 91.138)

## 20−4−1. PURPOSE

TFRs issued in accordance with 14 CFR section 91.138 address a determination that an inhabited area within a declared national disaster area in the State of Hawaii needs protection for humanitarian reasons.

## 20−4−2. REQUESTING AUTHORITIES

The Governor of the State of Hawaii or the Governor's designee may request a TFR under 14 CFR 91.138.

## 20−4−3. DEGREE OF RESTRICTIONS

The TFR will specify the extent and duration necessary to protect persons and property on the surface. Restrictions issued under this section prohibit all aircraft from operating in the designated area unless at least one of the following conditions is met:

**a.** Authorization is obtained from the official in charge of associated emergency or disaster relief response activities, and the aircraft is operated under the conditions of that authorization.

**b.** The aircraft is carrying law enforcement officials.

**c.** The aircraft is carrying persons involved in an emergency or a legitimate scientific purpose.

**d.** The aircraft is carrying properly accredited newspersons, and before entering the area, a flight plan is filed with the appropriate FAA or ATC facility specified in the NOTAM, and the operation is conducted in compliance with the conditions and restrictions established by the official in charge of on-scene emergency response activities.

**e.** The aircraft is operating in accordance with an ATC clearance or instruction.

## 20−4−4. DURATION OF RESTRICTIONS

A NOTAM issued under this section is effective for 90 days or until the national disaster area designation is terminated, whichever comes first, or otherwise terminated by notice or extended at the request of the Governor of the State of Hawaii or the Governor's designee.

## 20−4−5. ISSUING TFRS

FAA Headquarters or the ATO Service Area Director (or designee) having jurisdiction over the area concerned may issue a TFR.

# Section 5. Emergency Air Traffic Rules (14 CFR Section 91.139)

## 20−5−1. PURPOSE

TFRs issued in accordance with 14 CFR section 91.139 utilize NOTAMs to advise of the issuance and operations under emergency air traffic rules and regulations.

## 20−5−2. REQUESTING AUTHORITIES

Whenever the Administrator determines that an emergency condition exists, or will exist, relating to the FAA's ability to operate the air traffic control system and during which normal flight operations under this chapter cannot be conducted consistent with the required levels of safety and efficiency:

**a.** The Administrator issues an immediately effective air traffic rule or regulation in response to that emergency condition.

**b.** The Administrator (or designee) may utilize the NOTAM system to provide notification of the issuance of the rule or regulation.

## 20−5−3. ISSUING TFRS

TFRs issued in accordance with 14 CFR section 91.139 may be issued by the FAA Administrator (or designee), the Chief Operating Officer of the ATO, FAA ATO Headquarters, or the ATO Director of System Operations Security.

## 20−5−4. DEGREE OF RESTRICTIONS

**a.** NOTAMs issued communicate information concerning the rules and regulations that govern flight operation, the use of navigation facilities, and designation of that airspace in which the rules and regulations apply.

**b.** When a NOTAM has been issued under this section, no person may operate an aircraft, or other device governed by the regulation concerned, within the designated airspace except in accordance with the authorizations, terms and conditions prescribed in the regulation covered by the NOTAM.

# Section 6. Flight Restrictions in the Proximity of the Presidential and Other Parties (14 CFR Section 91.141)

## 20−6−1. PURPOSE

TFRs issued in accordance with 14 CFR section 91.141 address air security with respect to airspace over presidential and other parties.

## 20−6−2. REQUESTING AUTHORITIES

A TFR under 14 CFR section 91.141 may be requested by the Washington headquarters office of the U.S. Government agency responsible for the protection of the person concerned. This agency will contact FAA Headquarters in accordance with established procedures and request the necessary regulatory action.

## 20−6−3. ISSUING TFRS

TFRs issued in accordance with 14 CFR section 91.141 may be issued by the ATO Director of System Operations Security (or designee).

## 20−6−4. DEGREE OF RESTRICTIONS

No person may operate an aircraft over or in the vicinity of any area to be visited or traveled by the President, the Vice President, or other public figures contrary to the restrictions established by the FAA and published in a NOTAM.

## 20−6−5. PROCEDURES

Flight restrictions in the proximity of the President, Vice President, and other parties must be in accordance with FAA Order JO 7610.4, Special Operations.

# Section 7. Flight Limitation in the Proximity of Space Flight Operations (14 CFR Section 91.143)

## 20−7−1. PURPOSE

TFRs issued in accordance with 14 CFR section 91.143 segregate nonparticipating aircraft from space flight operations. This includes launch and reentry phases, and Class 2 and Class 3 amateur rocket operations.

## 20−7−2. ISSUING AUTHORITIES

FAA Headquarters or the Manager of Terminal or En Route and Oceanic Service Area Operations (or designee) having control jurisdiction over the affected airspace can issue a TFR under 14 CFR section 91.143.

## 20−7−3. DEGREE OF RESTRICTIONS

No person may operate an aircraft of U.S. registry or pilot an aircraft under the authority of an airman certificate issued by the FAA within areas designated in a NOTAM for space flight operations except when authorized by ATC.

## 20−7−4. AIRPORTS WITHIN AIRCRAFT HAZARD AREAS AND TRANSITIONAL HAZARD AREAS

ATC services may not be provided to aircraft at airports that lie within an aircraft hazard area (AHA) or a transitional hazard area (THA) unless real-time start of activity and end of activity notification procedures for space launch and reentry operations are contained in local SOPs or LOAs. There must be sufficient lead-time prior to the start of space launch or reentry operations to allow for departure aircraft to clear the AHA and/or the THA, and to allow arrival aircraft to land and exit the airport movement area. ATC services may resume upon end of activity notification.

***REFERENCE−***
*P/CG Term – Aircraft Hazard Area.*
*P/CG Term – Transitional Hazard Area.*

# Section 8. Management of Aircraft Operations in the Vicinity of Aerial Demonstrations and Major Sporting Events (14 CFR Section 91.145)

## 20−8−1. PURPOSE

This section prescribes guidelines and procedures in accordance with 14 CFR section 91.145, Management of Aircraft Operations in the Vicinity of Aerial Demonstrations and Major Sporting Events. Additionally, this section provides guidance on the processing of sponsor requests for these types of operations.

## 20−8−2. DEGREE OF RESTRICTIONS

When a NOTAM has been issued in accordance with this section, no person may operate any aircraft or device, or engage in any activity within the designated airspace area except in accordance with the authorizations, terms, and conditions of the TFR published in the NOTAM, unless otherwise authorized by: (1) Air Traffic Control; or (2) a Certificate of Waiver or Authorization FAA Form 7711-1 issued for the aerial demonstration by Flight Standards.

***NOTE−***
*Process applications for Waiver of Authorization in accordance with Chapter 19 of this order. Coordination with affected ATC facilities and Flight Standards, as applicable, is required.*

## 20−8−3. REQUESTING AUTHORITIES

**a.** An aerial demonstration/airshow or major sporting event organizer may request a TFR under this section.

**b.** For an aerial demonstration/airshow, the event organizer must submit the TFR request to the appropriate ATO Service Center Operations Support Group (OSG) Manager at least 45 days prior to the event. In addition, the event organizer must contact the appropriate Flight Standards District Office regarding requirements for a Certificate of Waiver or Authorization.

**c.** For a major sporting event, the event organizer must submit the TFR request to the appropriate ATO Service Center OSG Manager at least 45 days prior to the event.

## 20−8−4. AERIAL DEMONSTRATION/AIRSHOW TFRS

**a.** ATO Service Center Operations Support Groups (OSG) are responsible for aerial demonstration/airshow TFRs within their geographic area. The OSGs are delegated the authority to approve and issue TFRs for aerial demonstrations/airshows listed as Qualifying Events (QE) below:

**1.** Military aircraft conducting aerobatic demonstrations;

**2.** Civilian aircraft that operate in excess of 200 knots while conducting aerobatic demonstrations;

3. Military or civilian parachute team performances.

***NOTE−***
*Demonstrations involving only "fly-bys" or air race events are not QEs and should be handled with existing operational procedures. A 14 CFR section 91.145 TFR is not authorized.*

**b.** TFRs may be issued to cover practice sessions for a QE aerial demonstration/airshow. Practice sessions may include the terms aerial survey, arrival show, circling maneuvers, etc. Practice sessions are required to determine aerobatic maneuver timing and visual references for the airshow.

**c.** Duration of aerial demonstration/airshow TFRs is determined by the following:

1. The TFR time period must terminate when there is a gap of two hours or more between QEs.
2. Should additional QEs occur beyond the two-hour gap, another TFR time period is authorized.
3. If there is only one QE scheduled for an aerial demonstration/airshow, the TFR will be established for that performance only.
4. TFR time periods must fall within the times indicated in the Certificate of Waiver or Authorization (FAA Form 7711-1) issued by the Flight Standards District Office, but the TFR times are not required to cover the entire waiver times or periods when an airport is closed by a Notice to Airmen (NOTAM).

**d.** The dimensions of the TFR should conform to the following:

1. The TFR area will normally be a 5 nautical mile (NM) radius around the show center for the demonstration.
2. A 7 NM radius may be approved for the Canadian Snowbirds Team if requested and supported by local air traffic operations.
3. When the field elevation at the demonstration site is 5,000 feet or greater, other military jet teams may require a 7 NM radius, subject to ATC approval.
4. TFR altitude should be no greater than the minimum airspace necessary for the aerial demonstration and management of aircraft operations in the vicinity of the airshow.
5. The maximum altitude for an aerial demonstration TFR is 17,999 feet MSL.
6. TFR areas must be defined in published NOTAMs using nautical miles and feet MSL.

**e.** The following processing procedures apply to TFR requests for aerial demonstrations/airshows that meet the Qualifying Event criteria:

1. The OSG Manager (or designee) reviews the request package to determine if it meets TFR criteria in accordance with FAA regulations, directives, and policies.
2. If the request does not meet the criteria, it must be disapproved by the OSG Manager (or designee).
3. If the request meets the criteria for an aerial demonstration TFR, the OSG Manager (or designee) approves and processes the TFR for publication.
4. The OSG Manager (or designee) should publish a NOTAM via the TFR Builder application at least 7 days prior to the first requested practice or demonstration time period.
5. Changes to published 14 CFR section 91.145 TFR NOTAMs should not be made within 48 hours of the event, except in an emergency.

## 20−8−5. TFR REQUESTS FOR MAJOR SPORTING EVENTS

**a.** The ATO Mission Readiness Services, Airspace Regulation Group Manager is responsible for approving all TFR requests for major sporting events.

**b.** The OSG Manager with jurisdiction of the request may disapprove TFR requests for major sporting events based on valid aeronautical reasons or noncompliance with FAA policy.

**c.** The following procedures apply:

**1.** Event organizers must submit requests for TFRs to support major sporting events to the jurisdictional ATO OSG Manager at least 45 days prior to the event.

**2.** The OSG Manager (or designee) will:

**(a)** Review the request based on the factors listed in 14 CFR section 91.145(b)(1) through (12).

**(b)** Evaluate the proposed restriction's impact on airspace and ATC operations.

**(c)** Determine if the requested TFR is warranted for the major sporting event and prepare an approval recommendation package to send to the Airspace Regulation Group Manager for requests recommended for approval.

**(d)** Forward all applicable information (original request from originator, OSG analysis and recommendation, and supporting documents) for TFR approval recommendations to the Airspace Regulation Group Manager, at least 30 days prior to the event.

**(e)** Disapprove any requested TFR for major sporting events that do not warrant a TFR based on valid aeronautical reasons or noncompliance with FAA policy.

**(1)** Notify the requestor, in writing, stating the basis for the disapproval and any available alternatives.

**(2)** Send an information copy of the disapproval correspondence to the Airspace Regulation Group Manager.

**3.** The Airspace Regulation Group Manager will determine if a recommended TFR is warranted.

**(a)** If the TFR is approved, the Airspace Regulation Group Manager will advise the OSG Manager to issue the TFR.

**(b)** If the TFR is disapproved, the Airspace Regulation Group Manager will advise the OSG Manager and provide the basis for the disapproval. The OSG Manager (or designee) will inform the requestor of the disapproval and any available alternatives.

**d.** The dimensions of a Major Sporting Event TFR will vary depending on the size of the event. The TFR will normally be limited to a 3 NM radius from the center of the event, upward from the surface to 2,500 feet above the surface (converted to MSL), but will not be greater than the minimum airspace necessary for the management of aircraft operations in the vicinity of the specified area.

***NOTE−***

***1.*** *The U.S. Congress has mandated flight restrictions over specific major sporting events. In response, the FAA issued a standing "Select Sporting Events" FDC NOTAM listing the following covered events and restrictions:*

*(a) Regular or post-season Major League Baseball, National Football League, or NCAA Division One Football games;*

*(b) NASCAR Cup, Indy Car, or Champ Series races, excluding qualifying and pre-race events.*

*(c) Restrictions are in effect within a 3 NM radius of the stadium or venue hosting the covered event, up to and including 3,000 feet AGL, from one hour before the scheduled start until one hour after the end of the covered event. For more details, refer to the current FDC NOTAM.*

***2.*** *A 14 CFR section 91.145 TFR is not issued for the above events.*

## 20−8−6. TFR REVISIONS AND CANCELLATIONS

**a.** When restrictions are necessary beyond the published 91.145 TFR termination date/time, the Service Center OSG Manager (or designee) must ensure that a new NOTAM and a cancellation of the previous NOTAM are issued.

**b.** When it becomes apparent restrictions are no longer required but information to that effect has not been received, prior to cancelling the 91.145 TFR, the Service Center OSG Manager (or designee) must confirm the status of the activity from the agency/person that requested the restrictions.

# Part 7. SYSTEM OPERATIONS SECURITY

# Chapter 21. Operations Security: Tactical, Special, and Strategic

## Section 1. Organizational Missions

### 21−1−1. SYSTEM OPERATIONS SECURITY MISSION

**a.** System Operations Security leads the Air Traffic Organization's (ATO) use of the agency's Air Navigation Services (ANS) authorities, expertise, and operational capability to help protect the United States and its interests from Air Domain related threats and hazards in the national defense, homeland security, law enforcement, and disaster response arenas. System Operations Security is also responsible for leading the ATO's Air Traffic Management (ATM) security efforts to mitigate the impacts of those threats and hazards on the safety and efficiency of the National Airspace System (NAS).

***NOTE−***

1. *To align with ICAO Document 9985, Air Traffic Management Security Manual, the FAA defines ATM security as the safeguarding of the ATM system from security threats and vulnerabilities; and the contribution of the ATM system to civil aviation security, national security and defense, and law enforcement.*
2. *To align with ICAO Document 9985, Air Traffic Management Security Manual, the FAA defines "air domain" as the global airspace; all manned and unmanned aircraft operating in the global airspace; all people and cargo present in the global airspace; and all aviation-related infrastructure.*

**b.** System Operation Security's collaboration with air traffic field facilities and interaction with Federal, State, and local interagency partners falls into three general mission areas, which broadly reflect the organization structure of the office's groups: Tactical Operations Security, Special Operations Security, and Strategic Operations Security.

### 21−1−2. TACTICAL OPERATIONS SECURITY MISSION

Tactical Operations Security is responsible for themanagement of ATO's real-time ATM security-related operations. These tactical operations principally focus on: monitoring air traffic and using intelligence information to detect potential threats, validating those threats, and facilitating tactical responses in order to reinforce efforts to defeat those threats while mitigating safety and efficiency impacts on the NAS.

### 21−1−3. SPECIAL OPERATIONS SECURITY MISSION

Special Operations Security is principally responsible for the development and coordination of near-term plans to provide ATM security related support to classified or sensitive operations undertaken by national defense, homeland security, and law enforcement interagency partners. Special Operations also serves as the primary interface with NORAD and other interagency partners for the development of protocols and plans to support the integration of live and exercise missions into the NAS, mitigating any safety and efficiency impacts.

## 21−1−4. STRATEGIC OPERATIONS SECURITY MISSION

Strategic Operations Security is principally responsible for supporting ATM security measures through development and coordination of procedures, plans, programs, exercises, and policies needed to effectively carry out ATO's efforts in the national defense, homeland security, law enforcement, and disaster response arenas while mitigating safety and efficiency impacts on the NAS. In addition, this group leads ATO's efforts on Continuity of Operations, disaster response, and other emergency operations.

# Section 2. Responsibilities

## 21−2−1. DESCRIPTION

This section identifies the primary Air Traffic Management (ATM) security responsibilities of System Operations Security, as well as air traffic facilities, pertinent to the implementation of ATM security measures. System Operations Security is responsible for collaboration and coordination with air traffic facilities on the planning and operational execution of ATM security measures and related efforts to protect the nation while mitigating safety and efficiency impacts on the National Airspace System (NAS).

## 21−2−2. TACTICAL OPERATIONS SECURITY GROUP RESPONSIBILITIES

Tactical Operations Security Group responsibilities are undertaken primarily through four Air Traffic Security Coordinator (ATSC) teams and the System Operations Support Center (SOSC) team. Tactical Operations Security Group, as appropriate and in collaboration with air traffic facilities, must:

**a.** Cooperate with the North American Aerospace Defense Command (NORAD), the Transportation Security Administration (TSA), Customs and Border Protection (CBP), and other interagency security partners to monitor the NAS and other relevant airspace to detect and tactically respond to potential threats, including suspicious flights.

**b.** Cooperate with the United States Secret Service (USSS), Federal Bureau of Investigation (FBI), and other interagency partners to operationally implement ATM security measures used to protect security-sensitive locations (e.g., the DC Special Flight Rules Area and Flight Restricted Zone [DC SFRA and FRZ]); events (e.g., National Special Security Events [NSSE]); and activities, including Very Important Persons (VIP) travel.

**c.** Conduct operational efforts to mitigate the impact of threats and security measures on the safety and efficiency of the NAS.

**d.** Develop and coordinate the publication of flight advisories, Security Notices (SECNOT), and Notices to Airmen (NOTAM) enabling ATM security and/or other emergency operationsefforts. This function includes the publication of Temporary Flight Restrictions (TFR) pursuant to Title 14 Code of Federal Regulations (CFR) parts 99.7, Special security instructions; 91.141, Flight restrictions in the proximity of Presidential and other parties; and 91.137, Temporary flight restrictions in the vicinity of disaster/hazard areas.

**e.** Serve as the final approving authority for all real-time ATM security determinations regarding aviation operations within the NAS.

**f.** Coordinate and authorize routings for U.S. Department of State (DOS) designated Special Interest Flights (SIF).

**g.** Lead execution of ATM aspects of classified and other sensitive security-related air missions.

**h.** Manage the Special Governmental Interest (SGI) Program for Unmanned Aircraft System (UAS) waivers and authorizations, including emergency addendums to UAS Certificates of Authorization or Waiver (ECOA).

**i.** Staff ATSC and SOSC positions.

## 21−2−3. SPECIAL OPERATIONS SECURITY GROUP RESPONSIBILITIES

Special Operations Security Group responsibilities are undertaken primarily through senior FAA representatives, who represent the agency in coordinating ATM security issues with national defense, homeland security, and law enforcement interagency partners. Special Operations Security Group, as appropriate and in collaboration with air traffic facilities must:

**a.** Cooperate with the USSS, FBI, and other interagency partners to develop and coordinate ATM security measures used to protect security-sensitive locations (e.g., the DC SFRA and FRZ); events (e.g., NSSEs); and activities, including VIP travel (e.g., Presidential travel).

**b.** Develop and coordinate plans and procedures to mitigate the impact of threats and security measures on the safety and efficiency of the NAS, including coordination with NORAD and other interagency partners to facilitate fighter intercept operations.

**c.** Develop plans for and coordinate the execution of ATM elements of select national defense, homeland security, and law enforcement exercises. This work includes support of classified and other sensitive security-related exercises.

**d.** Plan and coordinate ATM related support to classified and other sensitive aviation operations, including UAS flights, and mitigate impact of that activity on the NAS.

**e.** Coordinate and authorize call signs for special aircraft missions operated by law enforcement agencies (federal, state, and local), national defense entities, and for other special activities.

**f.** Staff senior FAA representative and liaison officer positions at FAA Headquarters and embedded at key national defense, homeland security, and law enforcement locations.

## 21−2−4. STRATEGIC OPERATIONS SECURITY GROUP RESPONSIBILITIES

Strategic Operations Security Group responsibilities are undertaken primarily through a staff at FAA Headquarters. Strategic Operations Security Group, as appropriate and in collaboration with air traffic facilities, must:

**a.** Cooperate with the Federal Emergency Management Agency (FEMA), State Emergency Management Agencies (SEMA), U.S. Northern Command (USNORTHCOM), State National Guard (NG) commands, and other federal, state, and local partners to develop and implement air traffic management aspects of disaster response and other emergency operations plans.

**b.** Manage the development and sustainment of ATM security related FAA ATO procedures, including: FAA Order JO 7610.4, Special Operations; FAA Order JO 7110.67, Air Traffic Management Security Services for Special Operations; FAA Order JO 7110.65, Air Traffic Control; and FAA Order JO 7210.3, Facility Operation and Administration.

**c.** Coordinate with U.S. Strategic Command (STRATCOM), FAA Spectrum Engineering, andother key stakeholders to support Global Positioning System (GPS) interference and Electronic Attack (EA) testing, and Identification Friend or Foe (IFF) exercises within the NAS. Plan and, as needed, coordinate actions to mitigate impact of this specialized activity on the safety and efficiency of the NAS.

**d.** Lead the planning and coordination of ATM security related procedures for foreign aircraft overflight, including DOS SIF activity and part 99.7 NOTAMs that describe instructions for entry/exit, transit, and flight operations within U.S. controlled airspace.

**e.** Lead ATO engagement on ATM security matters with foreign counterparts, including the International Civil Aviation Organization (ICAO) and foreign Air Navigation Service Providers (ANSP).

**f.** Track, collect, and analyze aviation security data related to ATM security events in the NAS, such as unauthorized laser illuminations, unauthorized UAS, TFR violators, Tracks of Interest (TOI), No Radio (NORDO).

**g.** Provide the means for identification and protection of all real-time flight data information associated with sensitive flights in the NAS.

**h.** Develop and implement call sign procedures for the NAS.

**i.** Coordinate requests from governmental agencies, including law enforcement, for use of ICAO 3-letter designators/telephonies; and coordinate all requests for use of U.S. special call sign designators/telephonies.

**j.** Serve as ATO lead for the National Hurricane Operations Plan (NHOP).

**k.** Develop and coordinate ATM security related procedures for specialized NAS threats, including lasers, Man Portable Air Defense Systems (MANPADS), UAS, and diseases of global public health concern.

**l.** Develop ATM security procedures related to NEXTGEN systems, the use of emerging technologies, and new entrants in the NAS, such as UAS and commercial space activities.

## 21−2−5. AIR TRAFFIC FACILITY RESPONSIBILITIES

In collaboration with System Operations Security as described in paragraph 21−2−1, Description, the ATM must ensure:

**a.** ATM security measures are coordinated with System Operations Security, and implemented by the facility.

**b.** ATM security measures are briefed to all operational personnel.

**c.** The air traffic facility follows DEN reporting requirements published in FAA orders. This is toinclude maintaining a listening watch of the DEN when it is known that a facility is needed on the network.

**d.** All violators of ATM security measures are tracked, identified when possible, and reported via the DEN.

**e.** Support of and compliance with DEN Air Traffic Security Coordinator (ATSC) tactical decisions.

**f.** The safety of air traffic while implementing ATSC tactical decisions.

# Section 3. Operational Line of Authority

## 21−3−1. AUTHORITY FOR OPERATIONAL SECURITY-RELATED ACTIONS

Under the general supervision of the Director, System Operations Security, the Manager of Tactical Operations Security is authorized to direct security-related air traffic actions coordinated through ATC facilities, to support national defense, homeland security, and law enforcement efforts. The manager operationally executes these actions through the ATO's Air Traffic Security Coordinators (ATSC).

## 21−3−2. AIR TRAFFIC SECURITY COORDINATOR (ATSC)

**a.** Air Traffic Security Coordinators (ATSCs) are air traffic control specialists that have been provided with additional training and responsibilities in the area of air security and air defense.

**b.** The ATSC works under the general supervision of the Tactical Manager. In the absence of the Tactical Manager, the ATSC responsible for the Domestic Events Network (DEN) assumes the operational responsibility of System Operations Security.

**c.** ATSCs assigned to liaison positions will normally be directly assigned at the Commanding General Officer staff level, such as Continental NORAD Region (CONR) or NORAD.

# Section 4. Supplemental Duties

## 21−4−1. DOMESTIC EVENTS NETWORK (DEN)

**a.** Domestic Events Network (DEN). A 24/7 FAA sponsored telephonic conference call network (recorded) that includes all of the air route traffic control centers (ARTCC) in the United States. It also includes various other Governmental agencies that monitor the DEN. The purpose of the DEN is to provide timely notification to the appropriate authority that there is an emerging air-related problem or incident.

**b.** Required ATC facility DEN participation.

**1.** All ARTCCs.

**2.** All facilities in the National Capital Region (NCR).

**3.** Approach control facilities must participate on the DEN during President of the United States (POTUS) TFRs, National Special Security Events (NSSE) affecting their area, or when directed by System Operations Security or the DEN Air Traffic Security Coordinator (ATSC).

**4.** ATCT must participate on the DEN during arrival and departure phase of POTUS, Vice President of the United States (VPOTUS), First Lady of the United States (FLOTUS) movements, or when directed by System Operations Security or the DEN ATSC.

**5.** If the ATC facility is not actively monitoring the DEN or have a dedicated line to the DEN, they should call into the DEN directly via (844) 432-2962 (toll free).

**6.** All communication regarding real-time security concerns and operational impacts should be initiated and coordinated on the DEN. The premise of the DEN is a need to share versus a need to know.

**7.** The DEN is an open mode of communication and is not intended for classified information.

## 21−4−2. PRESIDENTIAL/UNITED STATES SECRET SERVICE (USSS) SUPPORTED VIP MOVEMENT

**a.** The System Operations Support Center (SOSC), (202) 267-8276, is responsible for the coordination, planning, and timely communication of POTUS, VPOTUS, FLOTUS, or USSS supported VIP movements and associated security measures.

**b.** Tactical Operations Security is responsible for the real-time coordination of POTUS, VPOTUS, FLOTUS, or USSS supported VIP movement and tactical adjustments to security initiatives as coordinated with the USSS.

**c.** Tactical Operations Security personnel, working in conjunction with the USSS, are the final authority on adjustments to or implementation of no-notice security measures regarding POTUS, VPOTUS, FLOTUS, or USSS supported VIP movement.

**d.** All security initiative coordination regarding POTUS, VPOTUS, FLOTUS, or USSS supported VIP movements will be coordinated on the DEN. At no time should the exact location of the above be transmitted over the DEN.

**e.** Presidential Prohibited Areas (P-56A & B, P-40, etc.) are coordinated and managed by the SOSC working in concert with the USSS. The SOSC, (202) 267-8276, is responsible for waivers to prohibited areas. Tactical Operations Security is responsible for the real time coordination

of Prohibited Area violations. Field facilities are responsible for the tracking and processing of violators.

**f.** All security related requests to ATC facilities from external agencies (for example, Air and Marine Operations Center (AMOC), Federal Bureau of Investigation (FBI), USSS, etc.), unless critical or a life or death situation, must be referred to the DEN at (844) 432-2962 (toll free).

## 21−4−3. SPECIAL INTEREST FLIGHTS (SIFS)

**a.** Special Interest Flights identified by FAA, the Department of Defense or other national security agencies are the responsibility of Tactical Operations Security and must be coordinated on the DEN real time.

**b.** Tactical Operations Security, System Operations Support Center, (202) 267-8276, is responsible for advanced coordination regarding special interest flights from State Department designated special interest countries known to the Agency.

## 21−4−4. CONTINUITY OF OPERATIONS AND CONTINUATION OF GOVERNMENT (COOP/COG)

**a.** Strategic Operations Security is responsible to establish Agency policies and procedures regarding COOP/COG activities.

**b.** Tactical Operations Security is responsible for the coordination and accomplishment of Agency COOP/COG initiatives upon activation.

**c.** Tactical Operations Security, in conjunction with appropriate agencies, is the final authority regarding NAS operations involving COOP/COG activities.

## 21−4−5. CLASSIFIED OPERATIONS

**a.** Strategic Operations Security is responsible for the coordination and implementation of all classified operations that impact the NAS.

**b.** Tactical Operations Security is responsible for the tactical coordination of classified operations in the NAS. Tactical Operations Security, in coordination with appropriate agencies, is the final authority regarding classified operations within the NAS.

## 21−4−6. INTELLIGENCE ANALYSIS AND COMMUNICATION

**a.** Tactical Operations Security must provide staffing at operational locations where intelligence and threat assessments potentially impacting the NAS are processed and reviewed.

**b.** Tactical Operations Security is responsible to communicate any intelligence/threat concerns with potential NAS impact to the Director, System Operations Security.

**c.** Tactical Operations Security personnel are responsible to correlate the feasibility of threats and the potential impact to the NAS.

**d.** Tactical Operations Security will work in conjunction with Strategic Operations Security to amend and/or implement national security procedures to mitigate any potential threats to the NAS.

## 21−4−7. UAS SPECIAL GOVERNMENTAL INTEREST (SGI) OPERATIONS

**a.** Public UAS and, in select cases, civil UAS operations may be needed to support activities which answer significant and urgent governmental interests, including national defense,

homeland security, law enforcement, and emergency operations objectives. These operations are authorized through UAS SGI Addendums.

**b.** Requests for UAS SGI operations are processed as either a COA addendum, modification, or a 14 CFR part 89/part 107 authorization and granted through the SGI process managed by System Operations Security and applied under the authority of their System Operations Support Center (SOSC).

## 21−4−8. UAS SGI ADDENDUM REQUEST PROCESS AND COORDINATION

**a.** SGI Qualifying Requirements. Prior to processing a UAS SGI request, the System Operations Support Center (SOSC) must ensure the requestor meets the following conditions:

**1.** The proponent is operating under the authority of an active certificate of waiver or authorization (COA), including Blanket COAs, or in compliance with part 107.

**2.** The UAS operations to be authorized would be conducted within a timeframe incompatible with the processing time required for regular COA or 14 CFR part 89/part 107 processes.

**3.** The requested operations will be flown by a governmental (public) entity or sponsored/supported by a governmental (public) entity.

**4.** The operations directly support an active (e.g., not demonstration) homeland security, law enforcement, or emergency operations effort, or some other response, relief, or recovery activity benefiting a critical public good, such as restoration of an electrical grid or some other critical infrastructure, or media coverage. The fulfillment of this requirement is determined by the SOSC in consultation, as needed, with the FAA's interagency partners.

**b.** Refer UAS SGI requests to the SOSC at 202–267–8276 for revisions to COAs for time-critical requirements related to national defense, homeland security, law enforcement and emergency operations objectives. If the SGI request does not meet the qualifying requirements for an SGI Addendum, the SOSC will direct requestors to the FAA website at https://www.faa.gov/uas/. For non-time-critical request, direct requestors to AAP website at https://waivers.faa.gov.

**c.** Civil UAS Operations. The SOSC requires qualifying proponents of civil UAS operations to secure support from a governmental entity participating in the response relief or recovery effort, to which the proposed UAS operations will contribute, prior to submitting its request for an SGI Addendum.

**d.** DC FRZ Operations. The SOSC requires qualifying proponents of public UAS SGI operations inside the Washington DC Flight Restricted Zone (DC FRZ) to apply for an FAA/TSA airspace waiver and SGI Addendum at https://waivers.faa.gov.

**1.** In support of the FAA/TSA airspace waiver request, the requestor will upload all pertinent documents, and a request for an FAA REQUEST FORM FOR EXPEDITED SGI WAIVER OR AUTHORIZATION FOR UAS OPERATION.

**2.** If the FAA/TSA airspace waiver request is approved, the requestor will receive an Airspace Access Program (AAP) airspace approval waiver and an SGI Addendum.

**e.** The SOSC will review and coordinate the SGI Addendum requests as follows:

**1.** Conduct a review of the proposed operation and determine any amendments necessary to the current COA requirements (e.g., operating area, altitudes, class of airspace, transponder usage) or any authorizations or waivers under part 107 processes.

**2.** Determine if the request meets all necessary SGI criteria.

**3.** Coordinate with affected ATC facilities and determine and implement any needed mitigations (e.g., the application of Temporary Flight Restrictions) to reach an acceptable level of safety risk and to minimize impacts on other air traffic operations.

**f.** These mitigations and other authorizations, including deviations from the operator's current COA or 14 CFR part 89/part 91/part 107 authorization/waiver, will be implemented through COA addendum or 14 CFR part 89/part 91/part 107 authorization/waiver, and other operational measures (e.g., coordinated ATC action and/or the application of Temporary Flight Restrictions).

***NOTE-***
*LOAs may be used in conjunction with airspace authorizations/waivers when the ATM deems it necessary; they cannot be used in lieu of the SGI process.*

# Section 5. Coordination

## 21−5−1. COORDINATION

Coordinate through verbal and automated methods. When available, use tools that permit common situational awareness.

## 21−5−2. COMMUNICATION AND DOCUMENTATION

**a.** When time and mission requirements permit, utilize communication techniques that emphasize consensus decision making.

**b.** In a tactical situation, verbal communication will be sufficient for the exercising of the authority within this section.

**c.** The NAS Daily Security Report will be maintained by an ATSC and will be utilized to record any verbal decisions and operational security matters within the NAS.

## 21−5−3. RESPONSIBILITIES

**a.** System Operations Security must:

**1.** Coordinate with all facilities affected by a pending or recurring security measure.

**2.** Ensure interagency coordination regarding any security measure within the NAS.

**3.** Facilitate coordination between defense/security forces and air traffic facilities.

**4.** Initiate inquiries regarding ATC involvement in security infractions.

**b.** Field facilities must:

**1.** Communicate and coordinate with System Operations Security and external agencies regarding security measures and associated operations in the NAS.

**2.** Report aviation security incidents in a timely manner.

**3.** Utilize the DEN for the communication of potential security related issues.

**4.** Ensure compliance with Agency security policies and tactical decisions.

**5.** Remain responsible for the safety of air traffic while achieving compliance with security initiatives.

# Section 6. Special Security Instruction (SSI) (14 CFR Section 99.7)

## 21−6−1. PURPOSE

In accordance with 14 CFR section 99.7, the FAA, in consult with the Department of Defense or other Federal security/intelligence agencies, may issue special security instructions to address situations determined to be detrimental to the interests of national defense.

## 21−6−2. REQUESTING AUTHORITIES

**a.** The Department of Defense, or other Federal security/intelligence agency may request a SSI under 14 CFR section 99.7.

**b.** The Director, System Operations Security, oversees SSI information issued under this section.

## 21−6−3. DEGREE OF RESTRICTIONS

Each person operating an aircraft in an Air Defense Identification Zone (ADIZ) or Defense Area must (in addition to applicable parts of 14 CFR part 99) comply with special security instructions issued by the Administrator in the interest of national security, under agreement between the FAA and the Department of Defense, or other Federal security/intelligence agencies.

# Section 7. Security Notice (SECNOT)

## 21−7−1. POLICY

This section contains policy, responsibilities, and procedures for issuing a SECNOT. A SECNOT is only issued when the aircraft identification is known and either a security violation has occurred or an aircraft is considered a security risk.

## 21−7−2. PURPOSE

**a.** A SECNOT enables the FAA to locate aircraft that violate national security measures or are considered a security risk. National security measures include the DC SFRA and SSIs. Security risks include stolen aircraft and other law enforcement activities involving aircraft.

**b.** A SECNOT is a request originated by the Air Traffic Security Coordinator (ATSC) for an extensive communications search for aircraft involved or suspected of being involved in a security violation or are considered a security risk.

## 21−7−3. RESPONSIBILITIES

**a.** A SECNOT will include the aircraft identification, search area, and expiration time. The search area, as defined by the ATSC, could be a single airport, multiple airports, a radius of an airport or fix, or a route of flight. Once the expiration time has been reached, a SECNOT is considered to be canceled.

**b.** SECNOT aircraft lookouts must be initiated by the ATSC and broadcast on the DEN.

**c.** SECNOT aircraft alerts must be given wide distribution, including all FAA air traffic facilities 50 miles on either side of the route of flight from the lastreported position or departure point of the aircraft. SECNOT alerts must be distributed outside the FAA to fixed base operators and law enforcement agencies. When contacting airports or offices outside of official government agencies, provide no further information other than that which is contained in the SECNOT. A SECNOT expiration time will be provided by the ATSC at the time of issue. The DEN may expand the search area to cover the maximum range of the aircraft.

**d.** Upon receiving notification of a SECNOT, the controller must forward all information of the subject aircraft to the OS/CIC. If information is not known, broadcast call sign on all frequencies and advise the OS/CIC of the response. The OS/CIC must check the position records to determine if the aircraft has contacted your facility. Immediately notify the parent ARTCC OM or DEN of subsequent contact and keep the alert in an active status until cancellation is received or the SECNOT expiration time is reached.

**e.** When information becomes known about an aircraft for which a SECNOT message has been issued, do the following:

**1.** Forward any information on the aircraft to the parent ARTCC OM or DEN.

**2.** Do not take any action related to the SECNOT aircraft other than normal ATC procedures.

**f.** The SECNOT alert remains in effect until canceled by the DEN or the expiration time is reached.

# Appendix 1. [RESERVED]

# Appendix 2. [RESERVED]

# Appendix 3. Air Carrier Aircraft for Air Traffic Activity Operations Count

For traffic count purposes, an air carrier aircraft is considered to be an aircraft capable of carrying more than 60 passengers. All of the following model types, when accompanied by a Federal Aviation Administration authorized three-letter company designator, must be counted as air carrier operations in all Air Traffic Activity Reports. This applies even though the aircraft is conducting air freight operations.

| Type Designator | Model(s) |
|---|---|
| A148 | An-148 |
| A158 | An-158 |
| A19N | A-319neo<br>ACJ-319neo |
| A20N | A-320neo<br>ACJ-320neo |
| A21N | A-321neo |
| A306 | A-300B4-600<br>A-300C4-600<br>A-300F4-600 |
| A30B | A-300B2<br>A-300B2-1<br>A-300B2-100<br>A-300B2-200<br>A-300B2K-3<br>A-300B4-100<br>A-300B4-2<br>A-300B4-200<br>A-300C4-200<br>A-300F4-200 |
| A310 | A-310<br>CC-150 Polaris<br>Polaris |
| A318 | A-318<br>A-318 Elite<br>Elite |

| Type Designator | Model(s) |
|---|---|
| A319 | A-319<br>A-319 ACJ<br>ACJ (A-319)<br>VC-1 ACJ |
| A320 | A-320<br>A-320 Prestige<br>Prestige (A-320) |
| A321 | A-321 |
| A332 | A-330-200<br>A-330-200 Prestige<br>A-330-200 Voyager<br>KC-30<br>Prestige (A-330-200)<br>Voyager |
| A333 | A-330-300 |
| A338 | A-330-800<br>ACJ-330-800 |
| A339 | A-330-900<br>ACJ-330-900 |
| A342 | A-340-200<br>A-340-200 Prestige<br>Prestige (A-340-200) |
| A343 | A-340-300<br>A-340-300 Prestige<br>Prestige (A-340-300) |
| A345 | A-340-500<br>A-340-500 Prestige<br>Prestige (A-340-500) |
| A346 | A-340-600<br>A-340-600 Prestige<br>Prestige (A-340-600) |
| A359 | A-350-900 XWB<br>A-350-900 XWB Prestige<br>ACJ-350-900<br>Prestige (A-350-900) |

| Type Designator | Model(s) |
|---|---|
| A35K | A-350-1000 XWB<br>A-350-1000 XWB Prestige<br>ACJ-350-1000<br>Prestige (A-350-1000) |
| A388 | A-380-800<br>A-380-800 Prestige<br>Prestige (A-380-800) |
| AJ27 | ARJ-21-700<br>ARJ-21-700 Xiangfeng<br>Xiangfeng |
| AT72 | ATR-72-201<br>ATR-72-202 |
| AT73 | ATR-72-211<br>ATR-72-212 |
| AT75 | ATR-72-212A (500)<br>ATR-72-500 |
| AT76 | ATR P-72<br>ATR-72-212A (600)<br>ATR-72-600 |
| ATP | 61<br>ATP |
| B37M | 737 MAX 7<br>737 MAX 7 BBJ<br>737-7<br>BBJ (737 MAX 7) |
| B38M | 737 MAX 8<br>737 MAX 8 BBJ<br>737 MAX 8200<br>737-8<br>737-8200<br>BBJ (737 MAX 8) |
| B39M | 737 MAX 9<br>737 MAX 9 BBJ<br>737-9<br>BBJ (737 MAX 9) |

| Type Designator | Model(s) |
|---|---|
| B3XM | 737 MAX 10<br>737-10 |
| B461 | BAe-146-100<br>BAe-146-100 Statesman<br>Statesman (100) |
| B462 | BAe-146-200<br>BAe-146-200 Quiet Trader<br>BAe-146-200 Statesman<br>Quiet Trader<br>Statesman (200) |
| B463 | BAe-146-300 |
| B701 | 707-100 |
| B703 | 707 Phalcon<br>707-300<br>C-137<br>C-18<br>E-8 J-Stars<br>EC-137<br>EC-18<br>J-Stars<br>KC-137<br>Phalcon |
| B712 | 717-200<br>717-200 Business Express |
| B720 | 720 |
| B721 | 727-100<br>C-22 |
| B722 | 727-200 |
| B732 | 737-200<br>737-200 Surveiller<br>CT-43<br>Surveiller<br>VC-96 |
| B733 | 737-300 |

| Type Designator | Model(s) |
|---|---|
| B734 | 737-400 |
| B735 | 737-500 |
| B736 | 737-600 |
| B737 | 737-700<br>737-700 BBJ<br>BBJ (737-700)<br>C-40<br>C-40 Clipper<br>Clipper |
| B738 | 737-800<br>737-800 BBJ2<br>BBJ2 |
| B739 | 737-900<br>737-900 BBJ3<br>BBJ3 |
| B741 | 747-100 |
| B742 | 747-200<br>E-4<br>VC-25 |
| B743 | 747-300 |
| B744 | 747-400 |
| B748 | 747-8<br>747-8 BBJ<br>BBJ (747-8) |
| B74R | 747SR |
| B74S | 747SP |
| B752 | 757-200<br>C-32 |
| B753 | 757-300 |

| Type Designator | Model(s) |
|---|---|
| B762 | 767-200<br>KC-46 Pegasus<br>KC-767<br>Pegasus |
| B763 | 767-300 |
| B764 | 767-400 |
| B772 | 777-200<br>777-200ER |
| B773 | 777-300 |
| B778 | 777-8 |
| B779 | 777-9 |
| B77L | 777-200LR<br>777-200LR BBJ<br>777-F<br>BBJ (777-200LR) |
| B77W | 777-300ER<br>777-300ER BBJ<br>BBJ (777-300ER) |
| B788 | 787-8 BBJ<br>787-8 Dreamliner<br>BBJ (787-8)<br>Dreamliner (Srs.8) |
| B789 | 787-9 BBJ<br>787-9 Dreamliner<br>BBJ (787-9)<br>Dreamliner (Srs.9) |
| B78X | 787-10 Dreamliner<br>Dreamliner (Srs.10) |
| BA11 | 111 One-Eleven<br>BAC-111 One-Eleven<br>One-Eleven<br>Rombac 1-11 One-Eleven |

| Type Designator | Model(s) |
|---|---|
| BCS1 | A-220-100<br>A-220-100 ACJ TwoTwenty<br>ACJ TwoTwenty<br>BD-500 CSeries CS100<br>CS100<br>CSeries CS100 |
| BCS3 | A-220-300<br>BD-500 CSeries CS300<br>CS-300<br>CSeries CS-300 |
| C919 | C-919 |
| CONI | C-121 Constellation<br>Constellation<br>VC-121 Constellation<br>Warning Star<br>WV Warning Star |
| CRJ7 | Challenger 870<br>CL-600 Challenger 870<br>CL-600 Regional Jet CRJ-550<br>CL-600 Regional Jet CRJ-700<br>CL-600 Regional Jet CRJ-701<br>Regional Jet CRJ-550<br>Regional Jet CRJ-700<br>Regional Jet CRJ-701 |
| CRJ9 | Challenger 890<br>CL-600 Challenger 890<br>CL-600 Regional Jet CRJ-705<br>CL-600 Regional Jet CRJ-900<br>Regional Jet CRJ-705<br>Regional Jet CRJ-900 |
| CRJX | CL-600 Regional Jet CRJ-1000<br>Regional Jet CRJ-1000 |
| DC10 | DC-10<br>Extender<br>KC-10 Extender<br>KDC-10<br>MD-10 |

| Type Designator | Model(s) |
|---|---|
| DC6 | C-118 Liftmaster<br>DC-6<br>Liftmaster<br>R6D Liftmaster<br>VC-118 Liftmaster |
| DC7 | DC-7<br>DC-7 Seven Seas<br>Seven Seas |
| DC85 | DC-8-50<br>DC-8-50 Jet Trader<br>Jet Trader |
| DC86 | DC-8-60 |
| DC87 | DC-8-70 |
| DC91 | DC-9-10 |
| DC92 | DC-9-20 |
| DC93 | C-9 Nightingale<br>C-9 Skytrain 2<br>DC-9-30<br>Nightingale<br>Skytrain 2<br>VC-9 |
| DC94 | DC-9-40 |
| DC95 | DC-9-50 |
| DH8D | Dash 8 (400)<br>DHC-8-400 Dash 8 |
| E170 | 170<br>ERJ-170-100 |
| E190 | 190<br>ERJ-190 Lineage 1000<br>ERJ-190-100<br>Lineage 1000 |
| E195 | 195<br>ERJ-190-200 |

| Type Designator | Model(s) |
|---|---|
| E275 | E175-E2<br>ERJ-190-500 |
| E290 | E190-E2<br>ERJ-190-300 |
| E295 | E195-E2<br>ERJ-190-400 |
| E75L | 175 (long wing)<br>ERJ-170-200 (long wing) |
| E75S | 175 (short wing)<br>ERJ-170-200 (short wing) |
| F100 | 100 |
| F28 | F-28 Fellowship<br>Fellowship |
| F70 | 70 |
| I114 | Il-114 |
| IL18 | Bizon<br>Il-18<br>Il-18 Bizon<br>Il-20<br>Il-22 Zebra<br>Il-24<br>Zebra |
| IL62 | Il-62 |
| IL86 | Il-86<br>Il-87 |
| IL96 | Il-96 |
| L101 | L-1011 TriStar<br>TriStar |
| L188 | Electra (L-188)<br>L-188 Electra |
| MA60 | MA-60 |

| Type Designator | Model(s) |
|---|---|
| MA6H | MA-60H |
| MC23 | MC-21-300 |
| MD11 | MD-11 |
| MD81 | MD-81 |
| MD82 | MD-82 |
| MD83 | MD-83 |
| MD87 | MD-87 |
| MD88 | MD-88 |
| MD90 | MD-90 |
| MRJ7 | MRJ-70 |
| MRJ9 | MRJ-90 |
| R721 | 727-100RE Super 27<br>Super 27 (100) |
| R722 | 727-200RE Super 27<br>Super 27 (200) |
| RJ1H | Avro RJ-100<br>Avroliner (RJ-100)<br>RJ-100<br>RJ-100 Avroliner |
| RJ70 | Avro RJ-70<br>Avroliner (RJ-70)<br>RJ-70<br>RJ-70 Avroliner |
| RJ85 | Avro RJ-85<br>Avroliner (RJ-85)<br>RJ-85<br>RJ-85 Avroliner |
| SU95 | Superjet 100-95 |
| T134 | Tu-134 |

| Type Designator | Model(s) |
|---|---|
| T154 | Tu-154 |
| T204 | Tu-204<br>Tu-214<br>Tu-224<br>Tu-234 |
| T334 | Tu-334 |
| YK42 | Yak-142<br>Yak-42 |
| YS11 | YS-11 |

# Appendix 4. Glideslope Outage Authorization Request

| **Request for Authorization to Conduct Simultaneous Independent Approaches with Glideslope Out After 29 Days** | |
|---|---|
| Submit via Email to:<br>**AJV-P** 9-AJV-P-HQ-Correspondence@faa.gov | |
| **Section 1** | |
| **Facility Identification: (KXYZ)** | |
| **Runway (###) Glideslope OTS:** | |
| **Dates of Expected Outage:**<br>**(xx/xx/xx to xx/xx/xx)** | |
| **Reason Glideslope is OTS:** | |
| **Section 2** | |
| **(Simultaneous) Approaches Impacted:** | |
| **Runway Usage Percentage:** | |
| **IFR Limits/Weather Minimum:** | |
| **RNAV Capability/Equipage:** | |
| **Peak IFR Airport Arrival Rate:** | |
| **Section 3** | |
| **Impact if Authorization is Not Granted:** | |
| Facility Manager must include a narrative of the operational impact if continuation of this procedure is not approved. | |
| **Section 4** | |
| Attach a copy of the facility Contingency Authorization for Glideslope Out Procedures. | |

# Appendix 5. Checklist for Reported Headset Tone Incidents

This form will be completed by the operations supervisor (OS)/controller-in-charge (CIC) and must be retained by the employee's OS for a period of 1 year.

| Checklist Requirement for Headset Tone Incidents | OS/CIC Initials |
|---|---|
| Ensure that Technical Operations is notified to evaluate the affected operational position and associated NAS equipment for normal operations as soon as possible. | |
| Secure the affected headset for testing by facility Air Traffic Management.<br>The affected employee and their union representative will be given the opportunity to observe the headset testing. | |
| Secure the audio recording of the headset tone incident. | |
| Record the incident on FAA Form 7230-4, Daily Record of Facility Operation, using the “E” entry. Carry the item on the facility log until headset testing has been completed. | |
| When headset testing is complete, annotate the facility log using an “E” entry with the statement, “Tests complete. (Record test results).” Report any abnormal test results (headset or other communications equipment), as appropriate, on FAA Form 7230-4, Daily Record of Facility Operation.<br>The ATM must ensure headsets which fail the headset testing are secured and, within 30 days, contact the secondlevel Engineering Office, AJW-173, at (405) 954-0066 for instructions to return the headset to the manufacturer. | |
| Have the affected employee(s) complete OSHA Form 301 on ECOMP. Once the form is submitted, the employee may choose to file an OSHA CA-1 form. | |
| If the employee is incapacitated, then management must complete the OSHA-301 form in ECOMP. Manager will receive an email detailing the next steps to review the incident in ECOMP. | |
| Manager will receive an email from SMIS to review and complete the Supplemental 301. | |

***NOTE−***
*OSHA forms and instructions are available on the Department of Labor Employees' Compensation Operations and Management Portal (ECOMP) located on the website https://www.ecomp.dol.gov/#/.*

# Appendix 6. Space LOA Sample Templates

**Instructions for Letter of Agreement Template: Launch and Reentry Operator**

[Name(s) of affected Air Traffic Control Facilities (Controlling Facility listed first)], ATO Space Operations, [Operator] Letter of Agreement

Effective:

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

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

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

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

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

3. **Scope:**
   List the pertinent ATC facilities, Operator, and any additional stakeholders, including ATO Space Operations, Federal Ranges, and military facilities as applicable. State distribution of the LOA. The distribution should include, at a minimum, all signatories and the Office of Commercial Space Transportation (AST).

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

4. **Responsibilities:**
   State the responsibilities of the Operator, Controlling Facility, and as needed, any other stakeholders and/or affected facilities.

   a. Operator must fulfill requirements provided in the Sample Text for this section.

   b. Controlling Facility must fulfill requirements provided in the Sample Text for this section and

   1. Fill out the Points of Contact Table (Attachment B).

   2. Fill out the Actions Timetable (Attachment C).

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

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

*Sample text for Operator*:

a. [Operator] must:

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

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

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

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

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

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

*Sample text for Controlling Facility*:

b. [Controlling Facility] must:

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

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

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

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

5. Take additional measures for public safety deemed necessary by 14 CFR parts 400-460.

*Sample text as needed*:

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

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

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

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

**5. Procedures:**

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

Specify frequency of proposed operations and any limitations when considering dates and times of operations. Include any restrictions on days of week and/or times of day operations that may or may not occur. Restrictions may include times when military operations require use of certain airspace. Specify procedure(s) for handling anomalies and emergencies. Information

conveyed should include the location of event (latitude and longitude, represented as degree-minute-second) (when available), vehicle state, projected time the hazard will no longer be present, and any other pertinent details.

*Sample text*:

a. [Operator] must:

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

2. Provide [Controlling Facility] a pre-planning package a minimum of [XX] calendar days prior to the planned operation. At a minimum, the package should include:

a) The launch/reentry window.

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

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

3. *(As needed)* Submit Altitude Reservation (ALTRV) request(s) to CARF (and email a copy of the request to the [Controlling Facility]) a minimum of [XX] days prior to the planned operation.

4. Verify the issuance of the appropriate NOTAMs.

5. No less than [XX] minutes in advance of a planned operation, notification will be given by [Operator] to [Controlling Facility] of intent for the [launch/hover-test] to take place.

6. During the operation, a [Operator] representative must participate on an FAA Hotline teleconference with [Controlling Facility] and ATO Space Operations (see Actions Timetable, Attachment C, for phone number). Communication on the FAA Hotline teleconference must be established no less than [XX] minutes prior to planned operation.

a) The [Operator] representative must be able to provide real-time verbal indications of the status of the operation, its progress along the launch/reentry trajectory, and occurrence of significant events.

b) Participation by representative(s) from [other stakeholders and affected facilities] is advised.

7. Notify [Controlling Facility] upon completion of the operation.

8. *(As needed)* Contact CARF and request that the appropriate ALTRVs be canceled.

9. In the event of an anomaly, a [Operator] representative must immediately notify [Controlling Facility], via FAA Hotline teleconference, of the occurrence of the anomaly. Information communicated should include, at a minimum:

a) The last known state of the vehicle.

b) The location of the off-nominal event (latitude and longitude, represented as degree-minute-second) (when available).

c) The predicted location(s) impacted (latitude and longitude, represented as degree-minute-second) (when available).

d) Projected time the hazard(s) will no longer be present (when known).

e) Other information that will provide estimated positions of hazards.

10. In the event of an emergency, [Operator] must immediately contact [Controlling Facility], via FAA Hotline teleconference and email all the parties listed in the Points of Contact Table (Attachment B). Information conveyed should include, at a minimum:

a) The last known state of the vehicle.

b) The location of the event (latitude and longitude, represented as degree-minute-second) (when available).

c) The predicted location(s) impacted (latitude and longitude, represented as degree-minute-second) (when available).

d) Projected time the hazard(s) will no longer be present (when known).

e) Other information that will provide estimated positions of hazards.

b. [Controlling Facility]:

1. Upon notification of a completed operation, [Controlling Facility] must cancel appropriate airspace restrictions and/or NOTAMs.

2. In the event when [Controlling Facility] becomes aware of a condition that would make the launch/reentry unsafe, [Controlling Facility] must immediately contact, via FAA Hotline, [Operator] and all other parties listed in the Points of Contact Table (Attachment B).

**6. Attachments**

a. Signatures

b. Points of Contact Table

c. Actions Timetable

d. Only include graphics that are applicable to this scenario:

• Launch/Reentry Site Description/Map

• Aircraft Hazard Area Description/Map

• Temporary Flight Restriction Description/Map

• Air Traffic Control Assigned Airspace Description/Map

e. Commercial Launch/Reentry Site LOA

**Attachment A: Signatures**

_____ _____

[Controlling Facility] [Operator]

_____

[ATO Space Operations]

_____

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

**Attachment B: Points of Contact Table**

The following table should be completed by the [Controlling Facility] and the information should be verified prior to every operation.

| Office | Phone # | Email | Responsibility |
|---|---|---|---|
| **[Operator]** | | | |
| **[Controlling Facility] Supervisor in Charge** | | | |
| **[Controlling Facility] Traffic Management Unit** | | | |
| **ATO Space Operations** | | | |
| **Central Altitude Reservation Function (CARF)** | | | |
| **National Traffic Management Office (NTMO)** | | | |

### Attachment C: Actions Timetable

The following table should be completed by [Controlling Facility]. In coordination with the [Controlling Facility], [Operator] must ensure that the following actions are completed at the defined intervals.

| Time | Event | Remarks | Date Completed |
|---|---|---|---|
| **T – [XX] months**<br>Suggestion:<br>T – 6 months | **Submit Launch/reentry Forecast Package** | **Operator should provide best estimate of all known launch/reentry dates for upcoming six months.** | |
| **T – [XX] calendar days**<br>Suggestion:<br>T – 30 – 60 calendar days | **Coordinate launch/ reentry corridor/hazard area(s)** | **Operator should coordinate with ATO Space Operations and as appropriate, other affected facilities.** | |
| **T – [XX] calendar days**<br>Suggestion:<br>T – 10 calendar days | **Submit Pre-Planning Package** | **Operator should provide a description of the Aircraft Hazard Area(s), along with date(s) and time(s) for launch/reentry.** | |

| Time | Event | Remarks | Date Completed |
|---|---|---|---|
| **T – [XX] calendar days**<br>Suggestion:<br>T – 5 - 14 calendar days | **File an Altitude Reservation (ALTRV) request with CARF (as needed)** | **Operator is responsible for coordinating all necessary ALTRV requests. Requests should be submitted via email to _____@FAA.gov A copy of the request should also be emailed to [Controlling Facility].**<br>**Contact:** | |
| **T – [XX] hours** | **Verify issuance of appropriate airspace notices (NOTAMs and TFRs)** | **Operator should contact [Controlling Facility] for issuance of TFR(s) and NOTAM(s) (as needed).**<br>**Per 14 CFR § 91.143, TFRs need to be issued at least ___ hours in advance of the scheduled operation.** | |
| **T – [XX] hours and repeat again at T – [XX] hours**<br>Suggestion: T – 24 hours and 3 hours | **Provide operational status report** | **Operator contacts [Controlling Facility] via [telephone/email] and provides operational status report, which includes confirmation of intent and specifics of operation.** | |
| **T – [XX] minutes**<br>Suggestion:<br>T – 60 - 30 minutes | **Establish Hotline connection** | **[FAA Hotline telephone #]**<br>**The operation will be delayed or terminated if the Operator does not establish communications via FAA Hotline teleconference.**<br>**Operator must have a representative on the FAA Hotline teleconference until the operation is complete.** | |

| Time | Event | Remarks | Date Completed |
|---|---|---|---|
| **T – [XX] minutes**<br>Suggestion: T – 30 minutes | **Provide operational status report** | **Operator provides operational status report. This report includes confirmation that the operation will take place as scheduled.**<br>**As necessary, Operator should continue to communicate any significant operational changes.** | |
| **T – [XX] minutes and repeat at T – [XX] minutes**<br>Suggestion: T – 10 minutes and T – 5 minutes | **Receive final clearance or confirmation of continued approved mission status** | **Operator must receive clearance or confirmation of continued approved mission status from [Controlling Facility] to proceed with operation.** | |
| **During operation** | **Maintain real-time communication via FAA Hotline teleconference** | **Operator must provide real-time verbal indications on the status of the vehicle.** | |
| **Post-operation or mission cancellation** | **Notify ATC and CARF (if applicable) of completion or cancellation of operation** | **ATC must be notified when operation is complete. TFR(s), ALTRV(s), and any other necessary notices should be canceled as soon as practicable.** | |
| | **Schedule post-operation debrief** | **A debrief should occur ideally within __ hours, but no later than __ hours of the completion of the operation. A debrief should be conducted even if no off-nominal activity occurred.** | |

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

Letter of Agreement

Effective:

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

7. **Purpose:**

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

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

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

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

**9. Scope:**
List the affected ATC facilities; Launch/Reentry Site Operator; and any additional stakeholders, including ATO Space Operations, Federal Ranges, and military facilities, as applicable.
State that this LOA does not guarantee the approval of operations from the Launch and Reentry Site. Once a Vehicle Operator has been identified and its operations approved, responsibilities and procedures will be outlined in a separate letter of agreement with each Vehicle Operator.
State that this LOA does not confer any proprietary, property, or exclusive right in the use of airspace or outer space referenced in Code of Federal Regulation (CFR) 420.41.
State distribution of the LOA. The distribution should include, at a minimum, all signatories.

*Sample text:*
This LOA is pertinent to [ATC facilities and stakeholders; including ATO Space Operations] and [Launch/Reentry Site Operator]. It does not guarantee the approval of operations from the Launch/Reentry Site. Once a Vehicle Operator has been identified and its operations approved, responsibilities and procedures will be outlined in a separate LOA with each Vehicle Operator.

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

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

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

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

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

**[Name(s) of affected Air Traffic Control Facilities (Controlling Facility listed first)], ATO Space Operations, [Launch and Reentry Site Operator]**

c. Plans and procedures for cancellations, contingencies, and emergencies.

d. Plans and procedures for any other measures deemed necessary by the FAA to ensure public health and safety.

*Sample text:*

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

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

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

**11. Attachments**

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

A. Signatures

B. Points of Contact Table

C. Graphics/Maps

• Physical Site Description/Map

• Airspace Description/Map(s)

**[Name(s) of affected Air Traffic Control Facilities (Controlling Facility listed first)], ATO Space Operations, [Launch and Reentry Site Operator]**

**Attachment A: Signatures**

_____ _____

[Controlling Facility] [Launch/Reentry Site Operator]

_____

[ATO Space Operations]

_____

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

**[Name(s) of affected Air Traffic Control Facilities (Controlling Facility listed first)], ATO Space Operations, [Launch and Reentry Site Operator]**

**Attachment B: Points of Contact Table**

The following table should be completed by the [Controlling Facility] and the information should be verified prior to every operation.

| Office | Phone # | Email | Responsibility |
|---|---|---|---|
| **[Controlling Facility] Airspace and Procedures Office** | | | |
| **[Controlling Facility] Traffic Management Unit** | | | |
| **ATO Space Operations** | | | |
| **[Launch and Reentry Site Operator]** | | | |

**Instructions for Letter of Agreement Template: Federal Range**

Letter of Agreement

Effective:

Subject: Operations at [Name of Federal Range]

**12. Purpose:**

State the purpose of the Letters of Agreement (LOA), name of Federal range. Facilities and stakeholders included in LOA.

*Sample text:*

This LOA establishes a framework for the coordination and planning of procedures for launch and reentry operations into the National Airspace System (NAS) from [name of Federal Range]. The following describes responsibilities and requirements for [list included facilities and stakeholders].

**13. Cancellation:**

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

*Sample text:*

This agreement cancels the [Subject and effective date of LOA being canceled].

This LOA will remain in effect until canceled by any signatory entity and will be reviewed annually or when modifications are required.

**14. Scope:**

List the affected ATC facilities; Federal Range site Operator; and any additional stakeholders, including ATO Space Operations, and military facilities, as applicable. State distribution of the LOA. The distribution should include, at a minimum, all signatories.

*Sample text:*

This LOA is pertinent to [ATC facilities and stakeholders, including ATO Space Operations] and [Federal range]. It does not guarantee the approval of operations from the [Federal range] This LOA does not confer any proprietary, property, or exclusive right in the use of airspace or outer space referenced in Code of Federal Regulation (CFR) 420.41.

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

**15. Responsibilities:**

State the responsibilities of the [Federal range], Controlling Facility, and as needed, any other stakeholders and/or affected facilities. All parties named within this letter of agreement will work collaboratively to develop the following:

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

b. Plans for communication between the [Federal range] and the FAA as necessary, before, during, and after a scheduled operation.

[Name(s) of affected Air Traffic Control Facilities (Controlling Facility listed first)], ATO Space Operations, [Launch and Reentry Site Operator]

c. Plans and procedures for cancellations, contingencies, and emergencies.

d. Plans and procedures for any other measures deemed necessary by the FAA to ensure public health and safety.

*Sample text:*

a. [Federal range] is responsible for the management, operation, and maintenance of all facilities and equipment at [Federal range]. This responsibility includes the coordination with users of its facility and the responsibility for ensuring all necessary information regarding operations is provided to the appropriate ATC facilities.

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

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

**16. Restrictions to Operations**

List any constraint to operations from Federal range.

*Sample text:*

a. None; Or

a. No launch or recovery operations between sunset and sunrise.

b. Launch vehicles limited to a max launch weight of 11,000,000 pounds.

**17. Attachments**

Must include at a minimum A. and B. but not limited to.

A. Signatures

B. Points of Contact Table

(examples of additional attachments)

- Physical Site Description/Map
- Airspace Description/Map(s)
- Launch/Reentry Site Description/Map
- Aircraft Hazard Area Description/Map
- Temporary Flight Restriction Description/Map
- Air Traffic Control Assigned Airspace Description/Map

• Action Timetable

**[Name(s) of affected Air Traffic Control Facilities (Controlling Facility listed first)], ATO Space Operations, [Launch and Reentry Site Operator]**

**Attachment A: Signatures**

_____

[Controlling Facility]

_____

[Federal Range]

_____

[ATO Space Operations]

_____

[As appropriate, other stakeholders and military facilities.]

**[Name(s) of affected Air Traffic Control Facilities (Controlling Facility listed first)], ATO Space Operations, [Launch and Reentry Site Operator]**

**Attachment B: Points of Contact Table example**

| Office | Phone # | Email | Responsibility |
|---|---|---|---|
| **[Operator]** | | | |
| **[Controlling Facility] Supervisor in Charge** | | | |
| **[Controlling Facility] Traffic Management Unit** | | | |
| **ATO Space Operations** | | | |
| **Central Altitude Reservation Function (CARF)** | | | |
| **National Traffic Management Office (NTMO)** | | | |

# BRIEFING GUIDE

**U.S. DEPARTMENT OF TRANSPORTATION**
**FEDERAL AVIATION ADMINISTRATION**

**Initiated By: AJV-0**
**Vice President, Mission Readiness Services**

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**1. PARAGRAPH NUMBER AND TITLE:**
1–2–4. ABBREVIATIONS
2–1–4. REFERENCE FILES
2–2–4. DUTY FAMILIARIZATION AND THE TRANSFER OF POSITION RESPONSIBILITY
3–1–1. BASIC EQUIPMENT
6–3–1. HANDLING OF SIGMETS, CWAS, AND PIREPs
6–3–2. RECEIPT OF NOTAM DATA
6–3–4. FLIGHT DATA UNIT

**2. BACKGROUND:** Enterprise Information Display System (E-IDS) provides air traffic personnel with a display for quick reference information necessary to safely and efficiently manage aircraft. E-IDS facilitates the organization and accessibility of different types of information through filtering, sorting, and searching. As E-IDS is installed in facilities beginning in 2026, the importance of providing facilities with guidance on the adaptation of E-IDS specifically and the use of Information Display System (IDS) in general is imperative. Since FAA Order JO 7110.65, paragraph 4–7–12, Airport Conditions, is being updated for clarity, updating paragraph 2–2–4 was necessary to promote the use of Status Information Areas (SIAs) and IDS to provide controllers with airport conditions that are easily accessible and accurate.

**3. CHANGE:**

| **OLD** | **NEW** |
|---|---|
| **1–2–4. ABBREVIATIONS** | **1–2–4. ABBREVIATIONS** |
| As used in this order, the following abbreviations have the meanings indicated: (See TBL 1–2–1.) | No Change |
| ***TBL 1–2–1*** **Abbreviations** | No Change |
| Add | **E-IDS** — **Enterprise Information Display System** |

| OLD | NEW |
|---|---|
| **2–1–4. REFERENCE FILES** | **2–1–4. REFERENCE FILES** |
| Air traffic managers must maintain current sets of orders, facility directives, Letters of Agreement (LOA), aeronautical charts, pertinent International Civil Aviation Organization (ICAO) documents and related publications so that they may be readily available for operational use and study by facility personnel. Also, the air traffic manager must maintain reference materials at appropriate work areas. These materials must consist of pertinent directives, agreements, emergency and overdue aircraft procedures, and a location listing of airports within the area of responsibility including runway alignment, lighting, surface, and length as a minimum. Current telephone numbers of user companies/organizations identifying the source who has the capability of contacting no radio (NORDO) aircraft may also be listed. Air traffic managers must determine the applicability of other materials to be included. | Air traffic managers must maintain current sets of orders, facility directives, Letters of Agreement (LOA), aeronautical charts, pertinent International Civil Aviation Organization (ICAO) documents and related publications so that they may be readily available for operational use and study by facility personnel. Also, the air traffic manager must maintain reference materials at appropriate work areas. These materials must consist of pertinent directives, agreements, emergency and overdue aircraft procedures, and a location listing of airports within the area of responsibility including runway alignment, lighting, surface, and length as a minimum. **The air traffic manager will ensure that the** telephone numbers of user companies/organizations**, which have** the capability **to** contact no radio (NORDO) aircraft **are kept current**. Air traffic managers must determine the applicability of other materials to be included. |
| ***NOTE–***<br>*The air traffic manager will ensure that the user list is kept current.* | Delete |

| OLD | NEW |
|---|---|
| **2–2–4. DUTY FAMILIARIZATION AND THE TRANSFER OF POSITION RESPONSIBILITY** | **2–2–4. DUTY FAMILIARIZATION AND THE TRANSFER OF POSITION RESPONSIBILITY** |
| **Title** through **c1** | No Change |
| **(a)** Items which should be included on the checklist, if relevant, are: | No Change |
| **(1)** STATUS INFORMATION AREA/S. | **(1)** STATUS INFORMATION AREA**s (SIAs)**. |
| **c1(a)(2)** through **c1(a)(15)** | No Change |
| **(b)** The checklist for a specific position need not include those items which are incorporated into the Status Information Area/s used by that position. | **(b)** The checklist for a specific position need not include those items which are incorporated into the **SIAs** used by that position. |
| **(c)** Status Information Area/s (SIA), when available, must be the first item listed on the position checklist. | **(c)** SIA**s**, when available, must be the first item listed on the position checklist. |

| | |
|---|---|
| **c1(d)** through **c1(e)** | No Change |
| **2.** To the extent possible, provide a SIA/s from which specialists may obtain the operational information relevant to the position being worked. The SIA/s may consist of a single or any combination of informational sources where status information can be recorded and displayed. These areas may include, but not be limited to, facility/area/position status boards, weather status boards, "hot item" binders, clip board information sheets, and designated areas for written notes. | **2. Unless other mitigations are in place**, provide SIAs from which specialists may obtain the operational information **and airport conditions** relevant to the position being worked. The SIAs may consist of a single or any combination of informational sources where status information can be recorded and displayed. These areas may include, but **are not** limited to, **Information Display System (IDS),** facility/area/position status boards, weather status boards, "hot item" binders, clip board information sheets, and designated areas for written notes. |
| Add | **(a) Prioritize airport conditions/status changes that have occurred within the last 24 hours.** |
| Add | **(b) Airport conditions information, in the provision of approach control services, does not include the following:** |
| Add | **(1) The airport surface environment other than the landing area(s) (e.g., TAXIWAY, APRON or SERVICE keyword NOTAMs).** |
| Add | **(2) Obstruction information (e.g., OBST NOTAMs) for aircraft that will be cleared for an instrument approach.** |
| Add | **(3) Information pertaining to cold temperature compensation.** |
| Add | ***REFERENCE–***<br>***FAA Order JO 7110.65, Para 4–7–12, Airport Conditions.*** |
| **3.** Designate, through a facility directive, the position/s having responsibility for the accuracy of the various items contained on the SIA/s. The designated position/s should be the focal point for the type of status information for which they are responsible and, except for the accuracy of written notes located at the position, should not be a specialist having primary and direct responsibility for the provision of service or separation to aircraft. | **3.** Designate, through a facility directive, the position**(**s**) responsible** for **ensuring** the accuracy of the various items contained on the SIAs. The designated position**(**s**)** should **serve as** the focal point for the type of status information for which they are responsible**. E**xcept for the accuracy of written notes located at the position, **this** should not be a specialist having primary and direct responsibility for **providing** service or separation to aircraft. |

**OLD**

**3–1–1. BASIC EQUIPMENT**

**Title** through **b3** ***NOTE***

**4.** Air traffic facilities that use electronic IDS must ensure that all displayed information is current. Facilities must ensure that any information with a scheduled expiration is removed from the controller display at the time of expiration. If the system is capable of automatically removing expired information, it must be configured to do so.

***NOTE–***
*This includes Notice to Airmen (NOTAM) information which may be viewed on the Aeronautical Information System Replacement (AISR) or at: https://notams.aim.faa.gov/notamSearch.*

**NEW**

**3–1–1. BASIC EQUIPMENT**

No Change

**4.** Air traffic facilities that use electronic IDS must ensure that all displayed information is current. Facilities must ensure that any information with a scheduled expiration is removed from the controller display at the time of expiration **unless operationally necessary**.

***NOTE–***
*This includes Notice to Airmen (NOTAM) information which may be viewed on the* ***Enterprise Information Display System (E-IDS),*** *Aeronautical Information System Replacement (AISR),* ***or at:*** *https://notams.aim.faa.gov/notamSearch.*

**OLD**

**6–3–1. HANDLING OF SIGMETS, CWAS, AND PIREPs**

**Title** through **a3** ***REFERENCE***

**4.** Terminal ATC facilities must relay the SIGMET and the CWA information to towers under their jurisdiction.

Add

**NEW**

**6–3–1. HANDLING OF SIGMETS, CWAS, AND PIREPs**

No Change

No Change

***NOTE–***
***When available, disseminate through E-IDS.***

**OLD**

**6–3–2. RECEIPT OF NOTAM DATA**

ARTCC air traffic managers must coordinate with other air traffic facilities in their area to ensure that adequate procedures are established for the receipt and distribution of NOTAMs. NOTAM distribution may be accomplished via the Aeronautical Information System Replacement (AISR) or accessed at https://notams.aim.faa.gov/notamSearch as a source for NOTAM information.

**NEW**

**6–3–2. RECEIPT OF NOTAM DATA**

ARTCC air traffic managers must coordinate with other air traffic facilities in their area to ensure that adequate procedures are established for the receipt and distribution of NOTAMs. NOTAM distribution may be accomplished via the **Enterprise Information Display System (E-IDS),** Aeronautical Information System Replacement (AISR)**,** or accessed at https://notams.aim.faa.gov/notamSearch as a source for NOTAM information.

| OLD | NEW |
|---|---|
| **6–3–4. FLIGHT DATA UNIT** | **6–3–4. FLIGHT DATA UNIT** |
| **Title** through **d2(c)** | No Change |
| **(d)** Provide backup services for terminal facility PIREP and METAR entries. | **(d)** Provide backup services for facility PIREP and METAR entries. |
| ***REFERENCE–***<br>*FAA Order JO 7110.65, Para 2−6−3, Weather Information, Subpara c.* | ***REFERENCE–***<br>*FAA Order JO 7110.65, Para 2−6−3, Weather Information, Subpara c.*<br>***FAA Order JO 7210.638, Enterprise Information Display System, Para 5, Subpara e.*** |
| **d3** through **d3(c)** | No Change |
| Add | **(d) Provide backup services for facility NOTAM entries.** |
| Add | ***REFERENCE–***<br>***FAA Order JO 7210.638, Enterprise Information Display System, Para 5, Policy.*** |

---

**1. PARAGRAPH NUMBER AND TITLE:** 2–1–27. COMBINE/RECOMBINE AN ATCT/TRACON

**2. BACKGROUND:** Review of paragraph 2–1–27 revealed an opportunity to make editorial changes reflecting current organizational structure.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **2–1–27. COMBINE/RECOMBINE AN ATCT/TRACON** | **2–1–27. COMBINE/RECOMBINE AN ATCT/TRACON** |
| Prior to consideration for any ATCT/TRACON to combine or recombine, a detailed staff study will be required from the facility explaining the benefit to the agency and the customer. After the Terminal Operations Service Area office review, the staff study must be forwarded to the Director of Terminal Planning. A decision to combine or recombine an ATCT/TRACON will require coordination with the ATO Chief Operating Officer. | **Combining an ATCT/TRACON requires a staff study from the facility explaining the benefit to the agency and the customer. The staff study must be routed through the General Manager, Service Area Director of Air Traffic Operations, and Director of Strategic Operations to the ATO Chief Operating Officer for approval.** |

---

**1. PARAGRAPH NUMBER AND TITLE:**
2–2–4. DUTY FAMILIARIZATION AND THE TRANSFER OF POSITION RESPONSIBILITY

**2. BACKGROUND:** FAA Order JO 7210.3, Facility Operation and Administration, introduced a requirement that operational personnel review and listen to a recorded Center Weather Service Unit (CWSU) briefing prior to working the first operational position of the day on October 12, 2017. The change associated with the requirement specified that it applied to “Air Traffic Control Specialists, Front Line Managers and Operations Managers.”

This language was not inclusive of System Operations Services’ David J. Hurley Air Traffic Control System Command Center (AJR-11), which uses the terms, “National Traffic Management Specialists,

National Traffic Management Officers, and National Operations Managers" for operational personnel. AJR-11 has determined recorded CWSU weather briefings are not necessary given the unique operational characteristics of the Command Center, which include National Weather Service meteorologists on staff and continuous access to real-time weather data and trends.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **2–2–4. DUTY FAMILIARIZATION AND THE TRANSFER OF POSITION RESPONSIBILITY** | **2–2–4. DUTY FAMILIARIZATION AND THE TRANSFER OF POSITION RESPONSIBILITY** |
| **Title** through **a** | No Change |
| **b.** All operational personnel, with the exception of Flight Service Specialists, prior to working their first control position of the duty day, must view and listen to the recorded Center Weather Service Unit (CWSU) briefing, when available. | **b.** All operational personnel, with the exception of Flight Service Specialists **and those assigned to the David J. Hurley Air Traffic Control System Command Center**, prior to working their first control position of the duty day, must view and listen to the recorded Center Weather Service Unit (CWSU) briefing, when available. |

---

**1. PARAGRAPH NUMBER AND TITLE:**
2–5–4. RELIEF PERIODS
2–6–6. RELIEF PERIODS

**2. BACKGROUND:** In July 2024, the FAA and National Air Traffic Controllers Association (NATCA) agreed to develop a policy that specifies a minimum duration for recuperative rest breaks for day, evening, and midnight shifts so that controllers can obtain a rest duration that also allows time for recovery. This includes permitting employees to nap during the recuperative rest break, staffing and workload permitting, and providing education on ensuring full alertness prior to returning to duty.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **2–5–4. RELIEF PERIODS** | **2–5–4. RELIEF PERIODS** |
| **Title** through **c** | No Change |
| **d.** Supervisors must not condone or permit individuals to sleep while on duty. Any such instance must be handled in accordance with Human Resource Policy Manual (HRPM), Standards of Conduct, or applicable corporate policy (for FCFSS contract facilities). | **d. Personnel performing watch supervision duties** must not condone or permit individuals to sleep **within operational areas where the control and separation of aircraft occurs**. Any such instance must be handled in accordance with **applicable Agency policy and the applicable collective bargaining agreement**, or applicable corporate policy (for FCFSS contract facilities). |

| OLD | NEW |
|---|---|
| **2–6–6. RELIEF PERIODS** | **2–6–6. RELIEF PERIODS** |
| **Title** through **b** | No Change |
| **c.** Personnel performing watch supervision duties must not condone or permit individuals to sleep during any period duties are assigned. Any such instance must be handled in accordance with applicable Agency policy and the applicable collective bargaining agreement. | **c.** Personnel performing watch supervision duties must not condone or permit individuals to sleep **within operational areas where the control and separation of aircraft occurs**. Any such instance must be handled in accordance with applicable Agency policy and the applicable collective bargaining agreement. |

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**1. PARAGRAPH NUMBER AND TITLE:**
2–6–1. WATCH SUPERVISION
2–10–7. HIGH BAROMETRIC PRESSURE

**2. BACKGROUND:** A requirement for high barometric pressure was put in paragraph 2-6-1 of FAA Order JO 7210.3, per Change 1. However, this placement did not reflect the operational specificity of the procedure, which directly relates to altimeter settings and wind/altimeter reporting. To improve clarity, accessibility, and consistency with other procedural guidance, this change relocates the Notice to Airmen (NOTAM) requirement to a more appropriate location under Section 10, Wind/Altimeter Information. This adjustment ensures that the requirement is properly categorized, easier to locate for operational use, and consistent with the structure of other pressure and weather-related procedures within the order.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **2–6–1. WATCH SUPERVISION** | **2–6–1. WATCH SUPERVISION** |
| **Title** through **d3** | No Change |
| **e.** When barometric pressure within an ARTCC area jurisdiction is greater than, or forecast to be greater than, 31.00 inches mercury (31”Hg), the affected ARTCC must request a “high barometric pressure procedures in effect” NOTAM for the geographical area affected. | Delete |
| ***EXAMPLE–***<br>*HIGH BAROMETRIC PRESSURE PROCEDURES ARE IN EFFECT FOR THE MEMPHIS CENTER AREA UP TO 17,999 FEET. SEE AERONAUTICAL INFORMATION MANUAL 7-2-3 AND AERONAUTICAL PUBLICATION ENR 1.7 SUBPARAGRAPH 3.3.1 FOR RESTRICTIONS AND SPECIAL REQUIREMENTS.* | Delete |

| OLD | NEW |
|---|---|
| Add | **2–10–7. HIGH BAROMETRIC PRESSURE** |
| Add | **When the barometric pressure within an ARTCC's area of jurisdiction is greater than, or forecast to be greater than, 31.00 inches of mercury (31"Hg), the affected ARTCC must request the U.S. NOTAM Office to issue a high barometric pressure restrictions NOTAM for the affected geographical area.** |
| Add | ***REFERENCE–***<br>***FAA Order JO 7930.2, Para 7–1–4, High Barometric Pressure Warning.***<br>***FAA Order JO 7210.3, Para 19–3–1, Authorizations and Exemptions from Title 14, Code of Federal Regulations (14 CFR).***<br>***AIM, Para 7–2–3, Altimeter Errors.***<br>***14 CFR Section 91.144, Temporary Restriction on Flight Operations During Abnormally High Barometric Pressure Conditions.*** |

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**1. PARAGRAPH NUMBER AND TITLE:**
2–6–3. OPERATIONS SUPERVISOR FATIGUE AND COVERAGE

**2. BACKGROUND:** A review of supervisory staffing practices identified instances where Operations Supervisors spent extended periods performing operational duties without relief or worked significant portions of shifts without additional supervisory support. These conditions may increase workload and contribute to fatigue-related performance degradation. To promote effective operational oversight and support fatigue mitigation efforts, Air Traffic Services developed guidance establishing expectations for supervisory breaks and facility coverage during periods of operational activity.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| Add | **2–6–3. OPERATIONS SUPERVISOR FATIGUE AND COVERAGE** |
| Add | **a. Except when operational requirements dictate otherwise, Operations Supervisors must not normally work more than 2 consecutive hours performing operational duties without a break away from operational areas.** |
| Add | **b. Facilities must maximize supervisory coverage between 0600 and 2300 local time, considering forecasted traffic demand and staffing availability.** |

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|---|---|
| Add | **c. En Route and Consolidated TRACON facilities with one Operations Supervisor scheduled for the midnight shift must maximize supervisory overlap with the evening and day shifts to reduce single supervisor staffing.** |
| Add | ***NOTE−***<br>***These requirements apply to FAA facilities staffed with Operations Supervisors and are not intended for FAA Contract Tower operations staffed by Controllers-in-Charge (CICs).*** |
| **2-6-3** through **2-6-13** | Renumber **2-6-4** through **2-6-14** |

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**1. PARAGRAPH NUMBER AND TITLE:**
4–3–4. REVIEW BY SERVICE AREA OFFICE
4–3–8. HELICOPTER/POWERED-LIFT LOAs
10–1–4. SECTIONAL AERONAUTICAL, TERMINAL AREA, AND OTHER CHARTS
Chapter 12, Section 4. Helicopter Route Chart Program
12–4–1. POLICY
12–4–2. CRITERIA
12–4–3. RESPONSIBILITIES
12–4–4. HELICOPTER/POWERED-LIFT CHART PUBLICITY AND FEEDBACK

**2. BACKGROUND:** To facilitate powered-lift NAS integration, the 14 CFR Part 194 Special Federal Aviation Regulation (SFAR) No. 120 is applied to VFR charts and Letter of Agreement development. In addition to powered-lift integration, further changes have been made to the helicopter chart policy, criteria, and responsibilities. Criteria to ensure the separation of helicopter/powered-lift routes from IFR departures and arrivals have been added. A new policy on chart notes and criteria is included to foster consistency of published products.

**3. CHANGE:**

| **OLD** | **NEW** |
|---|---|
| **4–3–4. REVIEW BY SERVICE AREA OFFICE** | **4–3–4. REVIEW BY SERVICE AREA OFFICE** |
| **Title** through **b2** | No Change |
| Add | **3. Those between an FAA facility and a helicopter/powered-lift operator that establish helicopter/powered-lift routes.** |

| OLD | NEW |
| --- | --- |
| Add | **4–3–8. HELICOPTER/POWERED-LIFT LOAs** |
| Add | **ATMs should develop helicopter/powered-lift LOAs with helicopter/powered-lift operators that define VFR routes and altitudes to reinforce positive control and increase airspace efficiency.** |
| Add | **a. The LOA must contain detailed route descriptions and/or graphic depictions of the routes.** |
| Add | **b. The LOA must include the following statement: "Helicopter/powered-lift altitude assignments in this LOA may not necessarily provide obstacle clearance protection. Pilots are responsible for seeing and avoiding terrain and obstacles."** |
| Add | ***NOTE–***<br>***Pilots may deviate from the route as necessary to avoid hazards and then rejoin the route.*** |
| Add | **c. LOAs must not contain blanket approval to enter Class B airspace. Clearance to enter Class B Airspace must be verbally issued by ATC.** |
| Add | **d. Routes within Class B, Class C, or TRSA airspace must provide the required lateral minima or target resolution from IFR arrival and departure corridors. Where helicopter/powered-lift routes cross an arrival or departure corridor, the LOA must specify altitudes or checkpoints that assist with providing required separation minima.** |
| Add | ***NOTE–***<br>***VFR helicopter/powered-lift aircraft may be assigned an altitude below the minimum vectoring altitude when complying with routes or altitudes specifically prescribed for helicopters/powered-lift aircraft.*** |
| Add | ***REFERENCE–***<br>***14 CFR Section 91.119, Minimum Safe Altitudes: General.***<br>***14 CFR Section 135.203, VFR: Minimum Altitudes.*** |
| Add | **e. Routes within Class D airspace must be designed to avoid conflict with arrival and departure corridors.** |

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| Add | **f. In terminal areas with high helicopter/powered-lift traffic volume, consideration should be given to develop a Helicopter/Powered-Lift Route Chart as specified in Chapter 12, Section 4, of this order.** |
| Add | **g. All letters of agreement addressing helicopter/powered-lift operations in Class B, Class C, TRSA, or Class D airspace must be approved by the Service Area Director of Air Traffic Operations.** |
| **4–3–8** through **4–3–10** | Renumber **4–3–9** through **4–3–11** |

| **OLD** | **NEW** |
|---|---|
| **10–1–4. SECTIONAL AERONAUTICAL, TERMINAL AREA, AND OTHER CHARTS** | **10–1–4. SECTIONAL AERONAUTICAL, TERMINAL AREA, AND OTHER CHARTS** |
| **a.** Air Traffic Managers (ATMs) must ensure current operational charts and publications, including, but not limited to, Terminal Area Charts (TACs), IFR Enroute Aeronautical Charts, Sectional Aeronautical Charts, and Helicopter Route Charts, if applicable, are immediately available in the operating quarters for reference. | **a.** Air Traffic Managers (ATMs) must ensure current operational charts and publications, including, but not limited to, Terminal Area Charts (TACs), IFR Enroute Aeronautical Charts, Sectional Aeronautical Charts, and Helicopter/**Powered-Lift** Route Charts, if applicable, are immediately available in the operating quarters for reference. |

| **OLD** | **NEW** |
|---|---|
| **Section 4. Helicopter Route Chart Program** | **Section 4. Helicopter/Powered-Lift Route Chart Program** |
| **12–4–1. POLICY** | **12–4–1. POLICY** |
| **a.** Helicopter Route Charts are graphic portrayals of discrete and/or common use helicopter routes and/or operating zones located in high density traffic areas. Their purpose is to facilitate helicopter pilot access into, egress from, or operation within charted areas. They generally will include associated altitude or flight ceiling information to facilitate traffic avoidance. The charts provide expanded, and in some cases unique, ground reference symbology to improve visual navigation. | **a.** Helicopter/**Powered-Lift** Route Charts are graphic portrayals of discrete and/or common use routes and/or operating zones located in high-density traffic areas. Their purpose is to facilitate helicopter **and powered-lift aircraft** pilot access into, egress from, or operation within charted areas. They **may** include altitude information to facilitate traffic avoidance. The charts provide **an** expanded, and in some cases unique, ground reference symbology to improve visual navigation. |

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| Add | **b. Routes developed under the Helicopter/Powered-Lift Route Chart Program may be designated for use exclusively for helicopters, exclusively for powered-lift aircraft, or may be shared by both aircraft types.** |
| **b.** Pilot adherence to charted helicopter routes and the recommended altitudes or flight ceilings associated with them will normally be voluntary. However, controllers may assign charted routes and altitudes and expect or request pilot compliance with them, provided such procedures are called for in specific FAA-operator Letters of Agreement, or are necessitated by traffic density and/or safety considerations; controllers also may restrict operations within designated operating zones when requested by local law enforcement officials and the restriction would not adversely affect other aircraft operations. | **c.** Pilot adherence to charted helicopter routes and the recommended altitudes or flight ceilings associated with them will normally be voluntary. However, controllers may assign charted routes **with** altitude **restrictions** and expect pilot compliance. |
| Add | **d. ATMs must retain all records of chart establishment/revision for a minimum of 5 years.** |

| **OLD** | **NEW** |
|---|---|
| **12–4–2. CRITERIA** | **12–4–2. CRITERIA** |
| Use the following criteria when determining the need for a new or revised Helicopter Route Chart: | Use the following criteria when **developing** a new or revised Helicopter**/Powered-Lift** Route Chart: |
| **a.** Routes: | No Change |
| **1.** Recommended altitudes/flight ceilings/floors must avoid restricted/military airspace requiring prior authorization or clearance to enter. | Delete |
| **2.** All routes depicted on a Helicopter Route Chart must, to the maximum extent practicable, reference ground objects that can be readily identified from the air under visual meteorological conditions (VMC). | **1.** All routes depicted on a Helicopter**/Powered-Lift** Route Chart must reference ground objects that can be readily identified from the air under **day and night** visual meteorological conditions (VMC). |

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|---|---|
| Add | **2. Routes within Class B, Class C, or TRSA airspace must provide the required lateral minima or target resolution from IFR arrival and departure corridors. Where helicopter/powered-lift routes cross an arrival or departure corridor, the chart must specify altitudes that provide separation or provide checkpoints that can be assigned to assist with obtaining required separation minima.** |
| Add | **3. Routes within Class D airspace must be designed to avoid conflict with arrival and departure corridors.** |
| Add | **4. The chart must indicate if a route is helicopter only, powered-lift only, or helicopter/powered-lift.** |
| **b.** Operating Zones: Airspace encompassed by a Helicopter Route Chart must, when necessary and required by operational considerations, be divided into a sufficient number of operating zones or sectors to permit local law enforcement agencies to operate within them on an exclusive basis. | **b.** Operating Zones: Airspace encompassed by a **c**hart must, when necessary and required by **the** operation, be divided into **enough** operating zones or sectors to permit local law enforcement agencies to operate **exclusively** within **a specific zone**. |
| **c.** Altitudes and Flight Ceilings/Floors: Each segment of a helicopter route may contain recommended altitudes or flight ceilings/floors. It is the discretion of the local air traffic tower if such altitudes will be depicted, or, assigned at a later date when the pilot contacts the tower. | **c.** Altitudes and Flight Ceilings/Floors: Each segment of a helicopter**/powered-lift** route may contain recommended altitudes or flight ceilings/floors. |
| **1.** Recommended altitudes/flight ceilings/floors must avoid airspace requiring prior authorization or clearance to enter. | **1. All published altitudes must be designated as recommended in the route description or chart note.** |
| **2.** Care should be exercised to avoid recommending altitudes or flight ceilings/floors which could cause helicopters operating on a designated route to encounter inflight wake turbulence generated by large, heavy, or super aircraft. | **2. To assist with wake turbulence avoidance, large, heavy, or super aircraft flight paths must be considered when developing routes and any altitudes.** |
| Add | ***NOTE–*** ***When altitude changes are charted, a climb/descent rate of 250-350 feet per nautical mile should be assumed.*** |
| **3.** When altitude/flight ceiling changes are required, they should be based on a descent rate of 250-350 feet per nautical mile. | Delete |

| | |
|---|---|
| Add | **d. Geographical features and/or obstructions within the chart area should be considered when designing routes and associated altitude(s).** |
| **d.** Communications Information: Each Helicopter Route Chart must include sufficient radio communications information to permit pilot compliance with all pertinent regulatory requirements and facilitate the acquisition and dissemination of air traffic advisory information. | **e.** Communications Information: Each Helicopter/**Powered-Lift** Route Chart must include sufficient radio communications information to **ensure** pilot compliance with all regulatory requirements and facilitate the acquisition and dissemination of air traffic information. |
| **e.** Military considerations: Avoid establishing helicopter routes or operating zones which would conflict with military ground control radar approach paths. When charting a route or operating zone which crosses or is located in close proximity to a MTR, include communications instructions that will permit pilots to determine the status of the MTR. | **f.** Military **C**onsiderations: Avoid establishing routes or operating zones **that** conflict with military ground control radar approach paths. When **a** chart**ed** route crosses or is located in close proximity to a **Military Training Route (**MTR**) or Special Activity Airspace (SAA)**, include communications **information of the controlling agency for** pilots to determine the status of the MTR **or SAA**. |
| Add | **g. Route Descriptions and Chart Notes must:** |
| Add | **1. Not contain blanket approval to enter Class B airspace. Clearance to enter Class B airspace must be verbally issued by ATC.** |
| Add | **2. Include a note that contains the following: "Caution, routes depicted and associated altitudes do not necessarily provide obstacle clearance protection. Pilots are responsible for seeing and avoiding terrain and obstacles. Route and altitude assignments do not relieve pilots from their duty to comply with 14 CFR sections 91.119 and 135.203(b). Pilots are expected to request alternate ATC instructions if necessary for compliance."** |

| OLD | NEW |
| --- | --- |
| **12–4–3. RESPONSIBILTIES** | **12–4–3. RESPONSIBILTIES** |
| **a.** Helicopter Route Chart development: ATMs are responsible for determining the need for chart development or revision, and for compliance with the following: | **a. ATMs must review Helicopter/Powered-Lift Charts annually. The review must include occurrence reports, Aviation Safety Reporting System (ASRS) data, Air Traffic Safety Action Program (ATSAP) reports, and user feedback, including reports received from AJV-A's Aeronautical Inquiries webpage. If no changes are needed, document the findings of the review and the continued utility of the routes and forward these results to the Air Traffic Service Area Director for approval.** |
| **1.** Initial action: The requesting ATM must establish a task force comprised of local air traffic, FSDO, military, law enforcement, and helicopter operator personnel to recommend the area of chart coverage and the paths, routes, and operating zones that will comprise it. | Delete |
| **2.** Justification: As a minimum, the ATM must address in writing: | Delete |
| **(a)** Background information pertinent to chart development or revision, including the composition of the task force; | Delete |
| **(b)** The airspace areas and proposed routes, operating zones, and altitude/flight ceiling/floor considerations examined; | Delete |
| **(c)** Special VFR procedural implications; | Delete |
| **(d)** Task force recommendations; and | Delete |
| **(e)** Supporting rationale. | Delete |
| **3.** Charts and description: ATMs must provide a narrative description or drawing of the chart area, including: | Delete |
| **(a)** Identification of all integral routes or operating zones, with named visual checkpoints and elevations, and associated altitude or flight ceiling limitations; | Delete |
| **(b)** Any IFR routes that fall within the charted area; | Delete |

| | |
|---|---|
| **(c)** Procedural notes pertinent to operations within the charted area or an operating zone, and on designated routes; and | Delete |
| **(d)** Traffic advisory radio communications frequencies and ATC facility names associated with area, route, or zone operations. | Delete |
| **b.** Helicopter Route Chart Approval and Publication: The ATM will send the proposed or revised chart to the Service Area Director of Air Traffic Operations for approval. The approved chart must be forwarded to the OSG for review and submission to Aeronautical Information Services (AIS) for publication. | **b. If changes are required, the ATM must convene a local development team composed of representatives from local air traffic, the OSG, the AJV-A Aeronautical Charting Group, the FSDO, military and/or law enforcement agencies (if applicable), and helicopter and/or powered-lift operators.** |
| ***REFERENCE−***<br>*FAA Order JO 7210.3, Para 4−1−6, Preliminary Environmental Review.* | Delete |
| **c.** Annual Review: The ATM is responsible for reviewing Helicopter Route Charts on an annual basis. | **c. The development team must provide recommendations to the ATM that include:** |
| Add | **1. Helicopter/powered-lift routes suitable for publication.** |
| Add | **2. Visual landmarks, obstacles, and checkpoints suitable for publication.** |
| Add | **3. Recommended altitudes where helicopter/powered-lift routes cross arrival and departure corridors in Class B, Class C, or TRSA airspace.** |
| Add | **4. The narrative route descriptions and chart notes to be included on the chart.** |
| Add | **5. Frequencies and ATC facility names suitable for publication.** |
| **d.** Revisions to Helicopter Route Charts: The ATM initiates revisions to Helicopter Route Charts and should propose changes to the established task force for collaboration. The following are considered sufficient justification for a revision: | Delete |
| **1.** Changes, additions, or deletions to area coverage, designated routes or operating zones, controlling agencies and/or frequencies, procedural notes, or airport/heliport/helistop status; | Delete |

| | |
|---|---|
| **2.** Changes in IFR routes within the chart coverage area; and | Delete |
| **3.** Additions or deletions to visual checkpoints. | Delete |
| **e.** Publicity: ATMs must seek the cooperation of local FSDO personnel in informing local aviation interests about the Helicopter Route Chart Program. Special emphasis should be placed on: | Delete |
| **1.** The voluntary nature of pilot adherence to designated routes, operating zones, altitudes/flight ceilings, and procedural notes; | Delete |
| **2.** The importance of chart use to operational safety and IFR traffic avoidance; and | Delete |
| **3.** The "see and avoid" nature of operations within the chart area. | Delete |

| **OLD** | **NEW** |
|---|---|
| Add | **12–4–4. HELICOPTER/POWERED-LIFT CHART PUBLICITY AND FEEDBACK** |
| Add | **a. ATMs must work with FSDO personnel to inform local aviation stakeholders about the helicopter/powered-lift route chart program. Emphasis should be placed on:** |
| Add | **1. Routes, altitudes, and procedural notes;** |
| Add | **2. The importance of chart use for operational safety and IFR traffic avoidance; and** |
| Add | **3. The "see and avoid" nature of VFR operations in the chart area, as published routes and recommended or ATC-assigned altitudes do not provide terrain and obstruction clearance.** |
| Add | ***REFERENCE–***<br>***FAA Order JO 7210.3, Para 4–2–4, Coordination of ATC Procedures.*** |

| | |
|---|---|
| Add | **b. Feedback on or suggestions for Helicopter/Powered-Lift Charts must be directed to AIS's Aeronautical Inquiries webpage (https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Aeronautical_Inquiries/). AJV-A will act on editorial corrections and forward helicopter/powered-lift route suggestions to the facility ATM.** |

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**1. PARAGRAPH NUMBER AND TITLE:** 8–2–1. THREE MILE OPERATIONS

**2. BACKGROUND:** Micro En Route Automation Radar Tracking System (Micro-EARTS) has supported Fusion since 2017. FAA Order JO 7110.124, Micro-processor En-Route Automated Radar Tracking System (Micro-EARTS) Fused Display Mode (FDM) for 3NM and 5NM separation throughout the National Airspace System (NAS), provides guidance for adapting Micro-EARTS to 3 NM use while in FDM. However, guidance for 3 NM separation using Micro-EARTS while in FDM is not available in FAA Order JO 7110.65, Air Traffic Control, 5-5-4 Minima. Adding 3 NM use guidance to paragraph 5-5-4 will facilitate Micro-EARTS use of the 3 NM separation standard FL230 and below.

**3. CHANGE:**

| **OLD** | **NEW** |
|---|---|
| **8–2–1. THREE MILE OPERATIONS** | **8–2–1. THREE MILE OPERATIONS** |
| Facilities may adapt airspace to permit the use of 3 NM separation as defined in FAA Order JO 7110.65, Air Traffic Control, subparagraph 5–5–4c, subparagraph 5–5–4d, or subparagraph 5–5–4e, provided all of the following are met: | Facilities may adapt airspace to permit the use of 3 NM separation as defined in FAA Order JO 7110.65, Air Traffic Control, subparagraph 5–5–4c, subparagraph 5–5–4d, **subparagraph 5–5–4e,** or subparagraph 5–5–4**f**, provided all of the following are met: |
| **a** through **c4** | No Change |
| **5.** When the facility is operating in track-based display mode. | No Change |
| ***NOTE–***<br>**1.** *ADS−B allows the expanded use of 3 NM separation in approved areas. It is not required for and does not affect the use of radar for 3 NM separation.* | Delete |
| **2.** *The Surveillance Services Directorate provides maps to facilities depicting the geographic areas and altitudes where ADS−B has been validated for 3 NM separation.* | Delete |
| Add | **d. MEARTS. *EN ROUTE.* Fused Display Mode (FDM):** |
| Add | **1. The 3 NM separation area is displayable on the video map.** |

| | |
|---|---|
| Add | **2. The fusion target symbol must be used at displays utilizing 3 NM separation areas.** |
| Add | **3. FDM surveillance data may be used for 3 NM and 5 NM separation in terminal and enroute environments using Micro-EARTS when an operational advantage and an increase in safety and efficiency are realized. Facility directive must specify 3 NM FDM airspace using the most operationally advantageous combination of available surveillance sources and in accordance with the provisions of FAA Order JO 7110.65, paragraph 5-5-4, Minima. 3 NM FDM is not allowed when the only surveillance input is long range radar.** |
| Add | **4. 3 NM FDM airspace may be enabled or disabled as needed. Once disabled, the affected airspace must use 5 NM FDM separation.** |
| Add | **5. The entire facility must be in either FDM or Sensor/Mosaic Display Mode. All facility displays will return to Mosaic Display Mode, with all single sensor polygons disabled, when FDM is exited.** |
| **d.** MEARTS: All sort boxes within 40 NM of the sensor or within 60 NM of the sensor when using an MSSR and with the single site indicator set to permit the use of 3 NM radar separation. | **e.** MEARTS **Mosaic Mode**: All sort boxes within 40 NM of the sensor or within 60 NM of the sensor when using an MSSR and with the single site indicator set to permit the use of 3 NM radar separation. |

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**1. PARAGRAPH NUMBER AND TITLE:** 10–1–11. MOBILE CONTROL TOWERS

**2. BACKGROUND:** Review of FAA Order JO 7210.3, Facility Operation and Administration, paragraph 10-1-11, revealed that procedures to request and deploy an FAA mobile and/or temporary tower are contained in FAA Order JO 7110.315, Mobile Airport Traffic Control Tower Siting Criteria. Procedures related to the deployment of DoD assets and ATC services provided by the military are covered in FAA Order JO 7610.14, Non-Sensitive Procedures and Requirements for Special Operations, and is introduced as a note to the paragraph. To avoid duplicity between orders, the paragraph has been revised to provide a broad overview of the topic and direct users to applicable Service Center procedures and the FAA order covering mobile control tower deployment.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **10–1–11. MOBILE CONTROL TOWERS** | **10–1–11. FAA MOBILE/TEMPORARY AIRPORT TRAFFIC CONTROL TOWERS** |
| Add | **A mobile or temporary airport traffic control tower may be requested by an FAA facility to provide interim air traffic services due to events that render a fixed tower uninhabitable or unable to provide airport traffic control tower service. External entities, such as flying organizations, cities, airport operators, may request an FAA mobile or temporary tower to assist in the operation of fly-ins, air races, wildfire response, etc., at non-towered locations. ATMs must consult Service Center procedures and FAA Order JO 7110.315, Mobile Airport Traffic Control Tower Siting Criteria, for guidance on mobile or temporary airport traffic control tower implementation and responsibilities.** |
| Add | ***NOTE–***<br>***Procedures for the deployment of ATC services and/or assets by the DoD, including mobile airport traffic control towers, are contained in FAA Order JO 7610.14, Non-Sensitive Procedures and Requirements for Special Operations, Chapter 2, Section 1, ATC Services by the Military.*** |
| **a.** Mobile control towers must be used at FAA locations: | Delete |
| **1.** To provide services during a move from an old tower structure into a new tower. | Delete |
| **2.** When repairs, rehabilitation, or installation of new equipment make the tower structure temporarily uninhabitable. | Delete |
| **3.** During periods of natural emergency; e.g., the tower structure has been damaged by fire, accident, or wind. | Delete |
| **4.** During national emergencies as required by the DoD at FAA and non-FAA locations. | Delete |

| | |
|---|---|
| **b.** Mobile control towers may be used at non-FAA locations when requested by flying organizations, cities, or other political entities to assist in the operation of fly-ins, air races, etc., provided: | Delete |
| **1.** The Terminal Operations Area Office, after careful consideration of a request to use FAA personnel and/or equipment, determines that the service is required and can be made available without: | Delete |
| **(a)** Jeopardizing FAA activities. | Delete |
| **(b)** Interfering with the gainful employment of competent non-Federal personnel. | Delete |
| **2.** Non-Federal personnel selected to support the event are properly certificated and rated in accordance with 14 CFR part 65 for the airport. | Delete |
| **3.** The requesting organization is apprised that the mobile unit is subject to immediate recall should an emergency arise. | Delete |

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**1. PARAGRAPH NUMBER AND TITLE:**
10–1–12. PARTICIPATION IN LOCAL AIRPORT DEICING PLANS (LADP)

**2. BACKGROUND:** A review of paragraph 10-1-12 identified an opportunity to enhance the content by including an update on the organization's structure and operation.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **10–1–12. PARTICIPATION IN LOCAL AIRPORT DEICING PLANS (LADP)** | **10–1–12. PARTICIPATION IN LOCAL AIRPORT DEICING PLANS (LADP)** |
| **Title** through **c1(a)** | No Change |
| **(b)** Assignment of responsibility to notify air traffic of implementation and cessation of the LADP. | No Change |
| ***NOTE–***<br>*Air traffic facilities should not become the triggering mechanism except in rare circumstances. If air traffic is designated as the triggering mechanism, submit the proposed LADP to the Terminal Operations Service Area office for approval.* | Delete |

| | |
|---|---|
| Add | **(c) Air traffic facilities should not normally become the triggering mechanism. If air traffic is designated as the triggering mechanism, submit the proposed LADP to the Service Area Director of Air Traffic Operations for approval.** |

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**1. PARAGRAPH NUMBER AND TITLE:**
10–4–10. SIMULTANEOUS INDEPENDENT APPROACHES
10–4–11. GLIDESLOPE OUTAGE CONTINGENCY PLANS AND AUTHORIZATION

**2. BACKGROUND:** In early 2025, a review of FAA Order JO 7210.3, paragraph 10–4–10, revealed an opportunity to update the policy concerning contingency plans and authorization for simultaneous independent approaches glideslope outages to a distinct paragraph. Previous instructions for approval were contained in a note and did not provide sufficient information for routing and approval. Due to the length of time necessary to process this change, an interim change affected the numbering of the paragraph. Contingency plan development procedures are now located in the new paragraph 10–4–11, Glideslope Outage Contingency Plans and Authorization.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **10–4–10. SIMULTANEOUS INDEPENDENT APPROACHES** | **10–4–10. SIMULTANEOUS INDEPENDENT APPROACHES** |
| **Title** through **c** | No Change |
| **d.** Equipment required to maintain communication, navigation, and surveillance systems is operational with the glideslope exception as noted below. | **d.** Equipment required to maintain communication, navigation, and surveillance systems is operational with the glideslope exception as **detailed in paragraph 10–4–11**. |
| **e.** During glide slope outages, facilities may continue to conduct simultaneous independent approaches without vertical guidance for a period of no more than 29 days, provided the following requirements are identified in an Air Traffic Safety Oversight Service (AOV) approved contingency plan. Submit glide slope outage contingency plans for approval to the Director, Strategic Operations, AJT−1, for processing. At a minimum, the following special provisions, conditions, and limitations must be identified in the plan, if applicable, along with any other facility-specific requirements: | Delete |

**1.** An LOA with the ATCT (or facility directive for a combined facility) must contain a description of the procedures, requirements, and any limitations as specified in the facility contingency plan for glide slope out of service procedures. Delete

**2.** The ATC facility must notify Technical Operations personnel of the glide slope outage. Delete

***REFERENCE–***
*FAA Order JO 7210.3, Para 3–5–2, System Component Malfunctions.* Delete

**3.** The ATC facility must notify arriving pilots that the glide slope is out of service and that the Chart Note stating "LNAV Procedure NA during simultaneous operations" is NOTAMed not applicable. This can be accomplished via the ATIS broadcast. Delete

**4.** When informed of a full ILS or glideslope outage, ATC facilities that conduct simultaneous approaches must include in a facility directive to notify the Flight Procedure NOTAM center at 405–954–8260 to issue a NOTAM for the RNAV (GPS) approach for the runway with the outage. The NOTAM informs users to disregard the LNAV procedure NA chart note. The facility must also inform the Flight Procedure NOTAM center to cancel the NOTAM when appropriate. Delete

**5.** Any other requirements specified in the local facility contingency plan for glide slope out procedures must be complied with before conducting simultaneous independent approach procedures. Delete

**6.** Controllers must be trained and provided annual refresher training concerning the application of these procedures. Delete

**7.** The ATC facility must record when the glide slope outage occurs and any adverse impact on the operation on FAA Form 7230–4, Daily Record of Facility Operation. Delete

**8.** Any loss of separation or break out associated with operations under a contingency plan for glide slope out or RNAV approaches to LNAV minimums must be reported to the Director, Strategic Operations, AJT–1. Delete

| | |
|---|---|
| **9.** The facility must have radar coverage down to the decision altitude or minimum descent altitude, as applicable. | Delete |
| **10.** Approaches must be terminated to the runway without a glide slope or RNAV approach to LNAV minima whenever the reported visibility is below the straight-in localizer or RNAV approach to LNAV minimum for that runway. | Delete |
| **11.** Any required equipment for the approach with the glide slope out of service must be operational, such as DME or VORTAC. | Delete |
| **f.** Simultaneous approaches with the glide slope unusable must be discontinued after 29 days unless granted a Letter of Authorization by AOV. (See Appendix 4.) | Delete |
| **g** through **h** | Re-letter **e** through **f** |

| **OLD** | **NEW** |
|---|---|
| Add | **10–4–11. GLIDESLOPE OUTAGE CONTINGENCY PLANS AND AUTHORIZATION** |
| Add | **a. During glideslope outages, facilities with an approved glideslope outage contingency plan may continue conducting simultaneous independent approaches without vertical guidance for a period of no more than 29 days. The ATM is responsible for developing the glideslope outage contingency plan with assistance from the OSG, if needed. At a minimum, the plan must identify the following special provisions, conditions, and limitations listed below:** |
| Add | **1. An LOA with the ATCT (or facility directive for a combined facility) must contain a description of the procedures, requirements, and any limitations as specified in the facility contingency plan for glideslope out of service procedures.** |
| Add | **2. The ATC facility must notify Technical Operations personnel of the glideslope outage.** |

Add ***REFERENCE–***
***FAA Order JO 7210.3, Para 3–5–2, System Component Malfunctions.***

Add **3. The ATC facility must notify arriving pilots that the glideslope is out of service and that the Chart Note stating "LNAV Procedure NA during simultaneous operations" is NOTAMed not applicable. This can be accomplished via the ATIS broadcast.**

Add **4. When informed of a full ILS or glideslope outage, ATC facilities that conduct simultaneous approaches must include in a facility directive to notify the Flight Procedure NOTAM center at 405–954–8260 to issue a NOTAM for the RNAV (GPS) approach for the runway with the outage. The NOTAM informs users to disregard the LNAV procedure NA chart note. The facility must also inform the Flight Procedure NOTAM center to cancel the NOTAM when appropriate.**

Add **5. Any other facility-specific requirements specified in the local facility contingency plan for glideslope out procedures must be complied with before conducting simultaneous independent approach procedures.**

Add **6. Controllers must be provided with annual refresher training concerning the application of these procedures.**

Add **7. The ATC facility must record when the glideslope outage occurs and any adverse impact on the operation on FAA Form 7230–4, Daily Record of Facility Operation.**

Add **8. Any loss of separation or breakout associated with operations under a contingency plan for glideslope out or RNAV approaches to LNAV minimums must be reported to the District General Manager.**

Add **9. The facility must have radar coverage down to the decision altitude or minimum descent altitude, as applicable.**

| | |
|---|---|
| Add | **10. Approaches must be terminated to the runway without a glideslope or RNAV approach to LNAV minima whenever the reported visibility is below the straight-in localizer or RNAV approach to LNAV minimum for that runway.** |
| Add | **11. Any equipment required for the approach with the glideslope out of service must be operational, such as DME or VORTAC.** |
| Add | **b. New/revised glideslope outage contingency plan approval process:** |
| Add | **1. The ATM must ensure the contingency plan is reviewed and approved by their District General Manager. If approved, the plan is routed through the OSG to the Service Area Director of Air Traffic Operations for approval.** |
| Add | **2. Once approved at the Service Area Level, the OSG submits the plan to Air Traffic Services, Headquarters, Strategic Operations (AJT-1) for approval via email to 9-ajt-hq-correspondence@faa.gov.** |
| Add | **3. If approved by AJT-1, the OSG forwards the plan to the Service Area's applicable Air Traffic Safety Oversight Service (AOV), Operations Branch (AOV-210/220/230) for AOV approval.** |
| Add | **4. Once AOV has approved the contingency plan, the OSG returns the final document to the initiating facility, and any other impacted facilities.** |
| Add | **c. For facilities to conduct simultaneous independent approaches without vertical guidance for a period greater than 29 days, a Letter of Authorization must be processed through Mission Readiness Services, Operational Policy, AJV-P, as outlined in Appendix 4. An approved glideslope outage contingency plan as described in subparagraph b above, is required to request this authorization.** |
| **10–4–11** through **10–4–14** | Renumber **10–4–12** through **10–4–15** |

**1. PARAGRAPH NUMBER AND TITLE:**
10–6–2. OPERATION OF LIGHTS WHEN TOWER IS CLOSED
10–6–5. VISUAL APPROACH SLOPE INDICATOR (VASI) SYSTEMS
10–6–6. PRECISION APPROACH PATH INDICATOR (PAPI) SYSTEMS

**2. BACKGROUND:** FAA Order JO 7210.3, Chapter 10, Section 6, currently references the "Terminal Operations Service Area Office" as the authority responsible for coordination. However, this terminology is outdated and does not reflect the current structure of the Air Traffic Organization (ATO). Due to realignment within the ATO, responsibilities previously assigned to the Terminal Operations Service Area Office have transitioned to the Service Area Director of Air Traffic Operations. This update ensures the order reflects the current titles and reporting structure within the organization, reducing ambiguity and aligning with established lines of authority. The current requirement in paragraph 10–6–2 that air traffic facilities are responsible for issuing lighting NOTAMs when the tower is closed is being removed from the order as the facility cannot be held accountable for airport lighting status when closed.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **10–6–2. OPERATION OF LIGHTS WHEN TOWER IS CLOSED** | **10–6–2. OPERATION OF LIGHTS WHEN TOWER IS CLOSED** |
| **Title** through **e** | No Change |
| **f.** Unless otherwise directed by the Terminal Operations Service Area Office, the air traffic facility responsible for controlling or monitoring lighting aids must originate NOTAMs concerning the aids. | Delete |

| OLD | NEW |
|---|---|
| **10–6–5. VISUAL APPROACH SLOPE INDICATOR (VASI) SYSTEMS** | **10–6–5. VISUAL APPROACH SLOPE INDICATOR (VASI) SYSTEMS** |
| **Title** through **c** | No Change |
| **1.** The basic VASI as described in subparagraph b, except at locations where the system was installed with an on–off remote switch in the control tower. If an on–off switch is provided, it is intended that the VASI be operated on a continuous basis when the runway it serves is in use. Airport operators at some locations may request the facility air traffic manager to operate this system only during certain hours and/or conditions. When this occurs, facility air traffic managers must contact the Terminal Operations Service Area Office for guidance. | **1.** The basic VASI as described in subparagraph b, except at locations where the system was installed with an on–off remote switch in the control tower. If an on–off switch is provided, it is intended that the VASI be operated on a continuous basis when the runway it serves is in use. Airport operators at some locations may request the facility air traffic manager to operate this system only during certain hours and/or conditions. **Procedures for part-time or conditional VASI operation must be contained in an LOA.** |

***NOTE−***
*When VASI systems are installed under the FAA's Airport Improvement Program, the sponsor may negotiate a letter of agreement with the regional Airports Division for a part-time VASI operation. Terminal Operations Service Area Offices should consult with the regional Airports Division on such matters.*

***NOTE−***
*When VASI systems are installed under the FAA's Airport Improvement Program, the sponsor may negotiate a letter of agreement with the* ***ATO through the*** *regional Airports Division for a part-time VASI operation.*

**OLD**

**10–6–6. PRECISION APPROACH PATH INDICATOR (PAPI) SYSTEMS**

**Title** through **b**

**1.** The basic PAPI system as described in subparagraph a, except at locations where the system was installed with an on–off remote switch in the control tower. If an on–off switch is provided, it is intended that the PAPI be operated on a continuous basis when the runway it serves is in use. Airport operators at some locations may request the facility air traffic manager to operate this system only during certain hours and/or conditions. When this occurs, facility air traffic managers must contact the Terminal Operations Service Area office for guidance.

**2.** Systems that are operated remotely from the control tower may be five-step. It is intended that these systems be operated on a continuous basis when the runway they serve is in use.

***NOTE−***
*When PAPI systems are installed under the FAA's Airport Improvement Program, the sponsor may negotiate a letter of agreement with the regional Airports Division for a part-time PAPI operation. Terminal Operations Service Area offices should consult with the regional Airports Division on such matters.*

**NEW**

**10–6–6. PRECISION APPROACH PATH INDICATOR (PAPI) SYSTEMS**

No Change

**1.** The basic PAPI system as described in subparagraph a, except at locations where the system was installed with an on–off remote switch in the control tower. If an on–off switch is provided, it is intended that the PAPI be operated on a continuous basis when the runway it serves is in use. Airport operators at some locations may request the facility air traffic manager to operate this system only during certain hours and/or conditions. **Procedures for part-time or conditional PAPI operation must be contained in an LOA.**

No Change

***NOTE−***
*When PAPI systems are installed under the FAA's Airport Improvement Program, the sponsor may negotiate a letter of agreement with the* ***ATO through the*** *regional Airports Division for a part-time PAPI operation.*

**1. PARAGRAPH NUMBER AND TITLE:**
11–1–2. FAA HEADQUARTERS
11–2–2. FAA STAFFING FOR SPECIAL EVENTS
11–3–1. TESTING AND CERTIFICATION
11–4–2. PROVISION OF INFORMATION AND DATA

**2. BACKGROUND:** An Air Traffic Services (AJT) reorganization in early 2025 has affected certain organizational names and functional responsibilities, requiring update to FAA Order JO 7210.3, Facility Operation and Administration, Chapter 11, FAA Contract Tower Operation and Administration. Updates to FAA Contract Tower Program administration are made where needed to align with current organizational responsibilities. Additionally, a requirement for FAA and FCT personnel line authority previously located under a note has now been brought into the body of paragraph 11–2–2.

**3. CHANGE:**

| **OLD** | **NEW** |
|---|---|
| **11–1–2. FAA HEADQUARTERS** | **11–1–2. FAA HEADQUARTERS** |
| **a.** The Vice President of Air Traffic Services (AJT) is responsible for the FCT Program**, and** the AJT Technical Advisory Group (AJT-22) provides guidance and direction for Headquarters, Service Area, and FCT personnel, in the provision of air traffic control services at FCT locations. AJT-22 must provide: | **a.** The **Program Management Organization, Enterprise Services (AJM-3),** is responsible for **oversight of** the FCT Program**. T**he AJT**-1200 Policy Team** provides guidance and direction for Headquarters, Service Area, and FCT personnel in the provision of air traffic control services at FCT locations. |
| **1**. The name of the Contracting Officer Representative (COR) for the FCT national contracts to the Contracting Officer (CO). | Delete |
| **2.** Timely assistance and technical guidance to FAA and contractor personnel on operational issues. | Delete |
| **b.** The Director, FAA Acquisition and Contracting (AAQ-1) must designate a CO for the FCT national contracts. | **b.** The FAA Acquisition and Contracting (AAQ-1) **Office designates** a **Contracting Officer (**CO**)** for the FCT national contracts. |
| **1.** The CO has sole responsibility for modifications and/or changes to the contract. Other FAA personnel that deal directly with contractor personnel must be familiar with the terms of the contract and must use caution not to require actions of the contractor that fall within the purview of the CO. | No Change |
| **2.** The CO must coordinate all contract modifications with AJT−22 prior to execution. | **2. AJT-1200 must review all contract modifications with the CO prior to execution**. |

| OLD | NEW |
| --- | --- |
| **11–2–2. FAA STAFFING FOR SPECIAL EVENTS** | **11–2–2. FAA STAFFING FOR SPECIAL EVENTS** |
| AJT district offices must coordinate with AJT-22 whenever FAA staffing for special events (for example, Sun 'n Fun, EAA AirVenture Oshkosh, etc.) will be needed at an FCT, and provide staffing and supervisory schedules for the tower during the event. | Delete |
| ***NOTE–*** *At no time can an FAA controller act in a supervisory capacity (OM/OS/CIC/Trainer, etc.) over an FCT controller, nor can an FCT controller act in a supervisory capacity over an FAA controller.* | Delete |
| Add | **a. AJT district offices must coordinate with AJT-1200 through the Service Area Office whenever FAA staffing for special events (for example, Sun 'n Fun, EAA AirVenture Oshkosh, etc.) will be needed at an FCT. Staffing and supervisory schedules must be reviewed by the District Office.** |
| Add | **b. At no time must an FAA controller act in a supervisory capacity (OM/OS/CIC/Trainer, etc.) over an FCT controller, nor must an FCT controller act in a supervisory capacity over an FAA controller.** |

| OLD | NEW |
| --- | --- |
| **11–3–1. TESTING AND CERTIFICATION** | **11–3–1. TESTING AND CERTIFICATION** |
| **a.** The AJT district must ensure that facility rating, control tower operator (CTO) certification, or FAA Air Traffic Safety Oversight Credentials are performed. The FCT ATM must contact the district in a timely manner to schedule CTO certification. | **a.** The AJT district must ensure that facility rating, control tower operator (CTO) certification, or FAA Air Traffic Safety Oversight Credential **actions** are performed. The FCT ATM must contact the district in a timely manner to schedule CTO certification **with a designated Control Tower Operator Examiner (CTO-E)**. |
| **b.** At Limited Aviation Weather Reporting Stations (LAWRS) designated FCTs, the FCT ATM must arrange initial LAWRS observer training and testing and coordinate certification or certificate transfer with AJT-22 via email requests to 9-AJT-HQ-ASWO@faa.gov. | **b.** At Limited Aviation Weather Reporting Stations (LAWRS) designated FCTs, the FCT ATM must arrange initial LAWRS observer training and testing and coordinate certification or certificate transfer with **Aviation Weather Observation Program (AWOP) via email to: 9-AJO-AJR-FS-AWOP@faa.gov**. |

| OLD | NEW |
| --- | --- |
| **11–4–2. PROVISION OF INFORMATION AND DATA** | **11–4–2. PROVISION OF INFORMATION AND DATA** |
| **a.** The Service Center and/or district may request operational information from FCTs and/or ask for access to operational data. Voluminous or unusual requests should be routed to AJT-22, through the Service Area POC, for direct coordination with contractor management personnel. | **a.** The Service Center and/or district may **require** operational information from FCTs and/or ask for access to operational data. Voluminous or unusual requests should be routed to AJT-**1200**, through the Service Area POC, for direct coordination with contractor management personnel. |

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**1. PARAGRAPH NUMBER AND TITLE:**
11–2–6. FAA CONTRACT TOWER (FCT) AIR TRAFFIC CONTROLLER ELIGIBILITY

**2. BACKGROUND:** Per discussion with the FAA Contract Tower (FCT) program office, AJM-3, a policy decision to afford greater hiring flexibility for FCTs was made. The change made herein increases air traffic controller eligibility to be hired into an FCT.

**3. CHANGE:**

| OLD | NEW |
| --- | --- |
| **11–2–6. FAA CONTRACT TOWER (FCT) AIR TRAFFIC CONTROLLER ELIGIBILITY** | **11–2–6. FAA CONTRACT TOWER (FCT) AIR TRAFFIC CONTROLLER ELIGIBILITY** |
| Add | **To be eligible to be employed as an air traffic controller at an FAA Contract Tower, a person must meet the requirements of 14 CFR part 65 and part 67, and** |
| **a.** A person must meet the requirements of Title 14 Code of Federal Regulations (14 CFR), Aeronautics and Space, part 65 and part 67, and have held a previous Control Tower Operator (CTO) certificate or FAA Air Traffic Safety Oversight (AOV) credential with a tower rating. | **a**. **H**ave held a previous Control Tower Operator (CTO) certificate or FAA **Office of Aviation Safety Management (ASM)** credential with a tower rating**, or** |
| **b.** Persons not holding a previous CTO certificate or AOV credential with a tower rating must have a valid Enhanced Air Traffic Collegiate Training Initiative (E-CTI) tower endorsement letter or graduated from an FAA-approved Control Tower Operator Partnership (CTO-P) school. | **b. H**ave a valid Enhanced Air Traffic Collegiate Training Initiative (E-CTI) tower endorsement letter or graduated from an FAA-approved Control Tower Operator Partnership (CTO-P) school**, or** |
| **c.** There is no maximum age restriction for FCT air traffic controllers. | **c**. **Have been a DoD radar-certified controller or an FAA radar-certified controller. In such cases, the FCT vendor must ensure the employee satisfies CTO requirements.** |

| | |
|---|---|
| Add | ***NOTE−***<br>***There is no maximum age restriction for FCT air traffic controllers.*** |

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**1. PARAGRAPH NUMBER AND TITLE:**
18–10–3. BACKGROUND
18–10–5. VARIABLES IN GDPs
18–10–6. ATCSCC PROCEDURES
18–10–10. CANCELLATION PROCEDURES

**2. BACKGROUND:** It has been identified that the current Flight Schedule Monitor (FSM) data fields do not align with the current language in the 7210.3EE. This prevents specialists from operating IAW the current 7210.3EE as the FSM data fields have been updated/renamed while the 7210.3 language has remained unchanged. The 7210.3EE also does not delineate between Airport Arrival Rate (AAR) and Program Rate (PR). Changes requested will eliminate possible confusion and ensure current technology and regulation coincide.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **18–10–3. BACKGROUND** | **18–10–3. BACKGROUND** |
| In the past, GDPs were issued manually, followed by software called Groverjack. These systems were based on the Official Airline Guide data, and did not take into account dynamic changes the system users made to their schedule. The Flight Schedule Monitor (FSM) was developed through the collaborative decision making (CDM) process with system users to provide a dynamic method of implementing and managing GDPs. System users submit schedule changes to FSM, which keeps a current up-to-the-minute schedule of flights. The Flight Schedule Analyzer (FSA) is used to monitor and review the effectiveness of GDPs. | The Flight Schedule Monitor (FSM) was developed through the collaborative decision making (CDM) process with system users to provide a dynamic method of implementing and managing GDPs. System users submit schedule changes to FSM, which keeps a current up-to-the-minute schedule of flights. The Flight Schedule Analyzer (FSA) is used to monitor and review the effectiveness of GDPs. |

| OLD | NEW |
|---|---|
| **18–10–5. VARIABLES IN GDPs** | **18–10–5. VARIABLES IN GDPs** |
| GDPs may be modified and affected due to changing conditions. Some of those variables include, but are not limited to, GDP Adjustments, Diversion Recovery, and User Options. | GDPs may be modified and affected due to changing conditions. |

| | |
|---|---|
| **a.** GDP Adjustments. The ATCSCC may make revisions and compressions to the GDP as conditions at the airport or within the airspace change. | No Change |
| **b.** Diversion Recovery. During periods where there are a large number of diverted flights, the GDP may be adjusted to provide priority for the recovery of aircraft diversions over non-diverted flights. | Delete |
| **c.** User Options. Users are permitted to exchange and substitute Controlled Times of Arrival (CTA) congruent with CDM agreements concerning substitutions. | **b.** User Options. Users are permitted to exchange and substitute Controlled Times of Arrival (CTA) congruent with CDM agreements concerning substitutions. |

| **OLD** | **NEW** |
|---|---|
| **18–10–6. ATCSCC PROCEDURES** | **18–10–6. ATCSCC PROCEDURES** |
| Upon receipt of information that traffic flows have been or are expected to be impacted and that significant delays will result, the ATCSCC must: | No Change |
| **a.** Conference affected facilities and system users, as appropriate, to determine AARs and review system demand and other known or anticipated factors. | **a.** Conference affected facilities and system users, as appropriate, to determine AARs **and program rates,** and review system demand and other known or anticipated factors. |
| **b.** Determine when implementation of a GDP is appropriate and the flow rate to be used. Consideration will be given to the impact on other air traffic control facilities and user groups. | **b.** Determine when implementation of a GDP is appropriate and the **program** rate to be used. Consideration will be given to the impact on other air traffic control facilities and user groups. |
| **c.** Transmit an ATCSCC advisory providing information to air traffic control facilities and user groups about the implementation, revision, compression, and cancellation of a GDP. Except for the cancellation of a GDP, the ATCSCC advisory must include the following items: | No Change |
| **c1** through **c14** | No Change |
| **15.** Reason. | **15. Impacting Condition.** |
| **16.** Remarks. | **16. Comments.** |
| **d** through **i** | No Change |
| **j.** Obtain arrival and departure counts from affected facilities, as appropriate. | Delete |
| **k** through **l** | Re-letter **j** through **k** |

| OLD | NEW |
|---|---|
| **18–10–10. CANCELLATION PROCEDURES** | **18–10–10. CANCELLATION PROCEDURES** |
| **Title** through **a1** | No Change |
| **2.** Transmit an ATCSCC advisory stating the GDP has been cancelled. The advisory must include the following items: | No Change |
| **a2(a)** through **a2(b)** | No Change |
| **(c)** Reason. | **(c) Comments.** |
| **(d)** Remarks. | Delete |

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**1. PARAGRAPH NUMBER AND TITLE:**
20–7–3. DEGREE OF RESTRICTIONS

**2. BACKGROUND:** 14 CFR section 91.143 states "When a Notice to Airmen (NOTAM) is issued in accordance with this section, no person may operate any aircraft of U.S. registry, or pilot any aircraft under the authority of an airman certificate issued by the Federal Aviation Administration, within areas designated in a NOTAM for space flight operation except when authorized by ATC." The added language in section 20–7–3 is more permissive than the regulation and thus, inappropriate.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **20–7–3. DEGREE OF RESTRICTIONS** | **20–7–3. DEGREE OF RESTRICTIONS** |
| No person may operate an aircraft of U.S. registry, or pilot an aircraft under the authority of an airman certificate issued by the FAA within areas designated in a NOTAM for space flight operations except when authorized by ATC, or the aircraft is supporting the space flight operation. | No person may operate an aircraft of U.S. registry or pilot an aircraft under the authority of an airman certificate issued by the FAA within areas designated in a NOTAM for space flight operations except when authorized by ATC. |

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**1. PARAGRAPH NUMBER AND TITLE:**
21–4–8. UAS SGI ADDENDUM REQUEST PROCESS AND COORDINATION
21–5–4. UAS SGI ADDENDUM REQUEST PROCESS AND COORDINATION

**2. BACKGROUND:** Recent changes to UAS Special Governmental Interest (SGI) operations request processes require an update to provide current information and relocation for a more logical access and flow of information.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| Add | **21–4–8. UAS SGI ADDENDUM REQUEST PROCESS AND COORDINATION** |
| Add | **a. SGI Qualifying Requirements. Prior to processing a UAS SGI request, the System Operations Support Center (SOSC) must ensure the requestor meets the following conditions:** |
| Add | **1. The proponent is operating under the authority of an active certificate of waiver or authorization (COA), including Blanket COAs, or in compliance with part 107.** |
| Add | **2. The UAS operations to be authorized would be conducted within a timeframe incompatible with the processing time required for regular COA or 14 CFR part 89/part 107 processes.** |
| Add | **3. The requested operations will be flown by a governmental (public) entity or sponsored/supported by a governmental (public) entity.** |
| Add | **4. The operations directly support an active (e.g., not demonstration) homeland security, law enforcement, or emergency operations effort, or some other response, relief, or recovery activity benefiting a critical public good, such as restoration of an electrical grid or some other critical infrastructure, or media coverage. The fulfillment of this requirement is determined by the SOSC in consultation, as needed, with the FAA's interagency partners.** |
| Add | **b. Refer UAS SGI requests to the SOSC at 202–267–8276 for revisions to COAs for time-critical requirements related to national defense, homeland security, law enforcement and emergency operations objectives. If the SGI request does not meet the qualifying requirements for an SGI Addendum, the SOSC will direct requestors to the FAA website at https://www.faa.gov/uas/. For non-time-critical request, direct requestors to AAP website at https://waivers.faa.gov.** |

| | |
|---|---|
| Add | **c. Civil UAS Operations. The SOSC requires qualifying proponents of civil UAS operations to secure support from a governmental entity participating in the response relief or recovery effort, to which the proposed UAS operations will contribute, prior to submitting its request for an SGI Addendum.** |
| Add | **d. DC FRZ Operations. The SOSC requires qualifying proponents of public UAS SGI operations inside the Washington DC Flight Restricted Zone (DC FRZ) to apply for an FAA/TSA airspace waiver and SGI Addendum at https://waivers.faa.gov.** |
| Add | **1. In support of the FAA/TSA airspace waiver request, the requestor will upload all pertinent documents, and a request for an FAA REQUEST FORM FOR EXPEDITED SGI WAIVER OR AUTHORIZATION FOR UAS OPERATION.** |
| Add | **2. If the FAA/TSA airspace waiver request is approved, the requestor will receive an Airspace Access Program (AAP) airspace approval waiver and an SGI Addendum.** |
| Add | **e. The SOSC will review and coordinate the SGI Addendum requests as follows:** |
| Add | **1. Conduct a review of the proposed operation and determine any amendments necessary to the current COA requirements (e.g., operating area, altitudes, class of airspace, transponder usage) or any authorizations or waivers under part 107 processes.** |
| Add | **2. Determine if the request meets all necessary SGI criteria.** |
| Add | **3. Coordinate with affected ATC facilities and determine and implement any needed mitigations (e.g., the application of Temporary Flight Restrictions) to reach an acceptable level of safety risk and to minimize impacts on other air traffic operations.** |

| | |
|---|---|
| Add | **f. These mitigations and other authorizations, including deviations from the operator's current COA or 14 CFR part 89/part 91/part 107 authorization/waiver, will be implemented through COA addendum or 14 CFR part 89/part 91/part 107 authorization/waiver, and other operational measures (e.g., coordinated ATC action and/or the application of Temporary Flight Restrictions).** |
| Add | ***NOTE−***<br>***LOAs may be used in conjunction with airspace authorizations/waivers when the ATM deems it necessary; they cannot be used in lieu of the SGI process.*** |

| OLD | NEW |
|---|---|
| **21–5–4. UAS SGI ADDENDUM REQUEST PROCESS AND COORDINATION** | Delete |
| **a.** SGI Qualifying Requirements. Prior to processing a UAS SGI request, the System Operations Support Center (SOSC) must ensure the requestor meets the following conditions: | Delete |
| **1.** The proponent is operating under the authority of an active COA (including Blanket COAs) or in compliance with part 107. | Delete |
| **2.** The UAS operations to be authorized would be conducted within a timeframe incompatible with the processing time required for regular COA or 14 CFR part 89/part 107 processes. | Delete |
| **3.** The requested operations will be flown by a governmental (public) entity or sponsored/supported by a governmental (public) entity. | Delete |
| **4.** The operations directly support an active (e.g., not demonstration) homeland security, law enforcement, or emergency operations effort, or some other response, relief, or recovery activity benefiting a critical public good (for example, restoration of an electrical grid or some other critical infrastructure, or media coverage). The fulfillment of this requirement is determined by | Delete |

| | |
|---|---|
| the SOSC in consultation, as needed, with the FAA's interagency partners. | |
| **b.** If the SGI request does not meet the qualifying requirements for an SGI Addendum, the SOSC will direct requestors to the FAA website at https://www.faa.gov/uas/. | Delete |
| **c.** Civil UAS Operations. The SOSC requires qualifying proponents of civil UAS operations to secure support from a governmental entity participating in the response relief or recovery effort, to which the proposed UAS operations will contribute, prior to submitting its request for a SGI Addendum. | Delete |
| **d.** DC FRZ Operations. The SOSC requires qualifying proponents of public UAS SGI operations inside the Washington DC Flight Restricted Zone (DC FRZ) to apply for an FAA/TSA airspace waiver at https://waivers.faa.gov prior to submitting the request for a SGI Addendum. | Delete |
| **1.** In support of the FAA/TSA airspace waiver request, the requestor will upload all pertinent documents, including a completed "FAA REQUEST FORM FOR EXPEDITED SGI WAIVER OR AUTHORIZATION FOR UAS OPERATION". | Delete |
| **2.** If the FAA/TSA airspace waiver request is approved, the requestor will receive an Airspace Access Program (AAP) airspace approval waiver. | Delete |
| **e.** The SOSC requires all qualifying proponents of UAS operations to request a SGI Addendum as follows: | Delete |
| **1.** Submit a completed "FAA REQUEST FORM FOR EXPEDITED SGI WAIVER OR AUTHORIZATION FOR UAS OPERATION" to the SOSC via email at 9-ATOR-HQ-SOSC@faa.gov. | Delete |
| ***NOTE−***<br>*The "FAA REQUEST FORM FOR EXPEDITED SGI WAIVER OR AUTHORIZATION FOR UAS OPERATION" is located on the FAA website at https://www.faa.gov/uas/advanced_operations/emergency situations/ then via the link for "Emergency Operation Request Form."* | Delete |
| **2.** Confirm receipt of the request with the SOSC via phone at (202) 267−8276. | Delete |

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|---|---|
| **f.** The SOSC will review and coordinate the SGI Addendum requests as follows: | Delete |
| **1.** Conduct a review of the proposed operation and determine any amendments necessary to the current COA requirements (e.g., operating area, altitudes, class of airspace, transponder usage) or any authorizations or waivers under the part 107 processes. | Delete |
| **2.** Determine if the request meets all necessary SGI criteria. | Delete |
| **3.** Coordinate with affected ATC facilities and determine and implement any needed mitigations (e.g., the application of Temporary Flight Restrictions) to reach an acceptable level of safety risk and to minimize impacts on other air traffic operations. | Delete |
| **g.** These mitigations and other authorizations, including deviations from the operator's current COA or 14 CFR part 89/part 107 authorization or waiver, will be implemented through COA addendum or 14 CFR part 89/part 107 authorization/waiver, and other operational measures (e.g., coordinated ATC action and/or the application of Temporary Flight Restrictions). | Delete |
| ***NOTE−***<br>*LOAs may be used in conjunction with airspace authorizations/waivers when the ATM deems it necessary; they cannot be used in lieu of the SGI process.* | Delete |