**U.S. DEPARTMENT OF TRANSPORTATION**
FEDERAL AVIATION ADMINISTRATION
Air Traffic Organization Policy

**ORDER**
**JO 7210.3Y**

Effective Date:
April 3, 2014

**SUBJ:** Facility Operation and Administration

This order provides direction and guidance for the day-to-day operation of facilities and offices under the administrative jurisdiction of the Federal Aviation Administration's Air Traffic Organization. All concerned personnel shall familiarize themselves with the provisions about their responsibilities. When a situation arises that is not adequately covered, exercise good judgment.

This order consists of the following parts:

**a.** Part 1 contains information generally applicable to two or more types of facilities.

**b.** Parts 2, 3, and 4 contain instructions unique to center, terminal, or flight service facilities.

**c.** Part 5 contains information applicable to traffic management systems.

**d.** Part 6 contains regulatory information concerning waivers, authorizations, exemptions, and flight restrictions.

**e.** Part 7 provides the overview concerning System Operations Security, Strategic and Tactical Operations, which are further delineated in FAA Order JO 7610.4, Special Operations.

Elizabeth L. Ray for
Vice President, Mission Support Services
Air Traffic Organization

Date: FEB 19 2014

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Initiated By: AJV-0
Vice President, System Operations Services

# RECORD OF CHANGES

DIRECTIVE NO **JO 7210.3Y**

| CHANGE TO BASIC | SUPPLEMENTS | | | OPTIONAL | CHANGE TO BASIC | SUPPLEMENTS | | | OPTIONAL |
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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. 2–3–1. GENERAL**
**2–3–2. APPLICATION**
**2–3–3. REQUIREMENTS**
**2–3–5. TRACKING**

The new requirements better align employee primary job functions with the numbers of currency positions and enhance time per position requirements. A draft new policy and tool to assist in monitoring compliance were circulated to the field to solicit feedback. Compliance verification requires increased facility administration efforts, depending on facility type, level, and prior local policy. Facility managers are also tasked to establish quality control measures to track and report compliance with the new currency requirements. Lastly, a new report/tool was developed to assist facility managers in this effort.

**b. 6-3-5. MTR (IR) AND CHANGES TO PUBLISHED MOA ACTIVITY SCHEDULES**

This change removes obsolete references and procedures from FAA JO 7210.3, Paragraph 6-3-5, and adds a new reference for changing MTR and MOA published activity schedules. References to FAA JO 7110.10, Flight Services, Paragraph 6-5-1, are removed and replaced with a reference to FAA JO 7930.2, Notices to Airmen (NOTAM), Paragraph 6-1-2.

**c. 6–9–6. EQUIPMENT SUFFIX AND DISPLAY MANAGEMENT**

This change eliminates /Q as a valid NAS equipment suffix, adds other suffixes that include RVSM capability, indicates how RVSM capability is filed in an ICAO Flight Plan, and clarifies how the system uses and displays RVSM information.

**d. 10-4-7. SIMULTANEOUS INDEPENDENT CLOSE PARALLEL APPROACHES – HIGH UPDATE RADAR NOT REQUIRED**

This change provides the guidance required for facility air traffic managers to apply reduced runway centerline to runway centerline spacing during simultaneous independent close parallel approaches without the use of high update radar. This change cancels and incorporates N JO 7210.848, Simultaneous Independent Close Parallel Approaches - High Update Radar Not Required, effective August 19, 2013.

**e. 19-2-5. ISSUING TFRs**
**19-2-7. RESPONSIBILITIES**

This change replaces TSA with the DEN ATSC as the necessary coordinating unit when hijacking situations are involved.

**f. 19-8-4. DEFINITIONS**

This change corrects the definitions of ADIZ and Defense Area to align with the definitions as written in 14 CFR 99.3.

**g. 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.

**a.** Part 1 contains information generally applicable to two or more options.

**b.** Part 2, Part 3, and Part 4 prescribe instructions unique to each discipline:

**1.** Air Route Traffic Control Centers (ARTCC).

**2.** Terminal Air Traffic Control Facilities.

**3.** Flight Service Stations.

**c.** Part 5 prescribes the instructions for traffic management applicable to the David J. Hurley Air Traffic Control System Command Center (ATCSCC), center, and terminal facilities.

**d.** Part 6 is regulatory information concerning waivers, authorizations, exemptions, and flight restrictions.

**e.** Part 7 provides the overview concerning System Operations Security, Strategic and Tactical Operations, which are further delineated in FAAO JO 7610.4, Special Operations. Part 7 explains Air Traffic's role in the security realm, military activities, and other events which have impact on facilities and the NAS.

### 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 Web site at http://faa.gov/air_traffic/publications and http://employees.faa.gov/tools_resources/orders_notices/.

### 1–1–4. WHAT THIS ORDER CANCELS

FAA Order 7210.3X, Facility Operation and Administration, dated February 9, 2012, 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. SUBMISSION CUTOFF AND EFFECTIVE DATES

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

| Publication Schedule | | |
|---|---|---|
| **Basic or Change** | **Cutoff Date for Submission** | **Effective Date of Publication** |
| JO 7210.3Y | 8/22/13 | 4/3/14 |
| Change 1 | 4/3/14 | 7/24/14 |
| Change 2 | 7/24/14 | 3/5/15 |
| Change 3 | 3/5/15 | 8/20/15 |
| JO 7210.3Z | 8/20/15 | 2/4/16 |

### 1–1–7. DELIVERY DATES

If an FAA 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.

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

Any recommended changes to this order must be submitted to the Vice President, Mission Support Services, Attn: ATC Procedures Office.

**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.

## 1–1–9. CONSTRAINTS GOVERNING SUPPLEMENTS AND PROCEDURAL DEVIATIONS

**a.** Exceptional or unusual requirements may dictate procedural deviations or supplementary procedures to this order. The written approval of the Vice President of System Operations Services must be obtained prior to issuing a supplemental or procedural deviation to this order which decreases the level, quality, or degree of service required by this order.

**b.** Prior approval by the following appropriate military headquarters is required for subsequent interface with the Federal Aviation Administration (FAA) if military operations or facilities are involved. (See TBL 1–1–1.)

*TBL 1–1–1*
**Military Headquarters**

| *Branch* | *Address* |
|---|---|
| U.S. Air Force | HQ AFFSA/A3A<br>7919 Mid–America Blvd<br>Suite 300<br>Oklahoma City, OK 73135 |
| U.S. Army | Director<br>USAASA (MOAS–AS)<br>9325 Gunston Road<br>Suite N–319<br>Ft. Belvoir, VA 22060–5582 |
| U.S. Navy | Department of the Navy<br>Chief of Naval Operations<br>(N885F)<br>2000 Navy Pentagon<br>Washington, DC 20350–2000 |

## 1–1–10. SAFETY MANAGEMENT SYSTEM (SMS)

Every employee is responsible to ensure the safety of equipment and procedures used in the provision of services within the National Airspace System (NAS). Risk assessment techniques and mitigations, as appropriate, are intended for implementation of any planned safety significant changes within the NAS, as directed by FAA Order 1100.161, Air Traffic Safety Oversight. Direction regarding the Safety Management System (SMS) and its application can be found in the FAA Safety Management System Manual and FAA Order 1100.161. The Safety Management System will be implemented through a period of transitional activities. (Additional information pertaining to these requirements and processes can be obtained by contacting the service area offices.)

## 1–1–11. REFERENCES TO FAA NON–AIR TRAFFIC ORGANIZATION

When references are made to regional office organizations that are not part of the ATO (i.e., 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.

## 1–1–12. DISTRIBUTION

This order is distributed to selected offices in Washington headquarters, Service Area offices, regional offices, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, all air traffic field facilities, international aviation field offices, and interested aviation public.

# 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 its provisions and those in other agency issuances, supervisors must request clarification from their respective En Route and Oceanic Operations Area, Terminal Operations Area or Flight Services Operations Area Office. In the event a conflict arises between instructions in this order and the terms of a labor union contract, supervisors must abide by the contract.

## 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.** "Shall" or "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.** "Shall not" or "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 |
|---|---|
| AAR | Airport arrival rate |
| ACD | ARTS Color Displays |
| ACDO | Air Carrier District Office |
| ACE–IDS | ASOS Controller Equipment–Information Display System |
| ACID | Aircraft identification |
| ADC | Aerospace Defense Command |
| ADIZ | Air defense identification zone |
| ADL | Aggregate demand list |
| ADR | Airport departure rate |
| ADS–A | Automatic Dependant Surveillance–Addressable |
| ADS–B | Automatic Dependent Surveillance–Broadcast |
| A/FD | Airport/Facility Directory |
| 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 |
| AIT | Automated information transfer |
| ALD | Available landing distance |
| ALS | Approach light system |
| ALTRV | Altitude reservation |
| AMASS | Airport Movement Area Safety System |
| APREQ | Approval request |
| ARFF | Airport rescue and fire fighting |
| ARINC | Aeronautical Radio, Inc. |
| ARO | Airport Reservations Office |
| ARP | Airport reference point |
| ARSR | Air route surveillance radar |

| Abbreviation | Meaning |
|---|---|
| ART | ATO Resource Tool |
| ARTCC | Air route traffic control center |
| ARTS | Automated radar terminal system |
| 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 |
| 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 |
| 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 |
| ATREP | Air Traffic representative |
| ATTS | Automated Terminal Tracking Systems |
| AWC | Aviation Weather Center |
| AWIS | Automated weather information service |
| AWOS | Automated Weather Observing System |
| BAASS | Bigelow Aerospace Advanced Space Studies |
| CA | Conflict alert |
| CAP | Civil Air Patrol |
| CARF | Central Altitude Reservation Function |
| CARTS | Common ARTS |
| CAS | Civil Aviation Security |
| 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 |
| CERAP | Combined center/RAPCON |
| CFR | Code of Federal Regulations |
| CIC | Controller–in–charge |
| CIRNOT | Circuit Notice |
| COB | Close of business |

| Abbreviation | Meaning |
|---|---|
| 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 | ARTCC Weather Service Unit |
| DARC | Direct access radar channel |
| DAS | Delay assignment |
| DASI | Digital altimeter setting indicator |
| DCCWU | ATCSCC Weather Unit |
| DEDS | Data entry display system |
| 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 |
| DVA | Diverse vector area |
| DVRSN | Diversion |
| E–MSAW | En Route Minimum Safe Altitude Warning |
| EASL | Existing automation service level |
| EDCT | Expect departure clearance time |
| EFAS | En route flight advisory service |
| EI | Early Intent |
| ELT | Emergency locator transmitter |
| EOVM | Emergency obstruction video map |
| EPIC | El Paso Intelligence Center |
| ERIDS | En Route Information Display System |
| ESL | Emergency service level |
| ESP | En Route sequencing program |
| FAA | Federal Aviation Administration |
| FCA | Flow Constrained Area |
| FDEP | Flight data entry and printout |
| FDIO | Flight data input/output |
| FEA | Flow Evaluation Area |
| FIAO | Flight inspection area office |
| FLM | Front–Line Manager |
| FOIA | Freedom of information act |
| FOUO | For Official Use Only |
| FP | Flight plan |
| FPL | Full performance level |
| FRD | Fixed Radial Distance |

| Abbreviation | Meaning |
|---|---|
| FSA | Flight schedule analyzer |
| FSDO | Flight Standards district office |
| FSL | Full service level |
| FSM | Flight Schedule Monitor |
| FSS | Flight service station |
| FW | Flight watch |
| FWA | Flight watch area |
| FWCS | Flight watch control 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 |
| ICAO | International Civil Aviation Organization |
| ICR | Integrated Collaborative Rerouting |
| ICSS | Integrated communication center |
| IDS | Information Display System |
| IFR | Instrument flight rules |
| IFSS | International flight service station |
| ILS | Instrument landing system |
| INS | Immigration and Naturalization Service |
| IR | IFR MTR |
| ITWS | Integrated Terminal Weather System |
| LAA | Local airport advisory |
| 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 |
| 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 |

| Abbreviation | Meaning |
|---|---|
| MEARTS | Micro En Route Automated Radar Tracking System |
| METAR | Aviation Routine Weather Report |
| MIA | Minimum IFR altitude |
| MIAWS | Medium Intensity Airport Weather System |
| MIT | Miles–in–trail |
| MLS | Microwave landing system |
| MOA | Military operations area |
| MOCA | Minimum obstruction clearance altitude |
| MOU | Memorandum of understanding |
| MSL | Mean sea level |
| MTI | Moving target indicator |
| MTR | Military training route |
| MVA | Minimum vectoring altitude |
| NAA | National aeronautical association |
| NADIN | National airspace data interchange network |
| NAR | National Automation Request |
| NAS | National Airspace System |
| NASA | National Aeronautics and Space Administration |
| NASE | National Airway Systems Engineering |
| NAVAID | Navigational aid |
| NCIC | National crime information center |
| NFDC | National Flight Data Center |
| NFDD | National Flight Data Digest |
| NHOP | National hurricane operations plan |
| NM | Nautical mile |
| 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 storm operations plan |
| OASIS | Operational and Supportability Implementation System |
| OM | Operations Manager |
| OPR | Office of primary responsibility |
| OS | Operations Supervisor |
| OSIC | Operations Supervisor–in–Charge |
| P–ACP | Prearranged coordination procedures |
| PAR | Precision approach radar |

| Abbreviation | Meaning |
|---|---|
| PB | Pilot briefing |
| PCS | Power Conditioning System |
| PDC | Pre–Departure Clearance |
| PIC | Pilot–in–command |
| PIREPS | Pilot reports |
| POC | Point of Contact |
| PVD | Planned view display |
| QAR | Quality assurance review |
| 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) |
| RATCF | Radar Air Traffic Control Facility associated with the United States Navy |
| RCAG | Remote communications 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 |
| RVV | Runway visibility value |
| SAA | Special activity airspace |
| SAMS | Special Use Airspace Management System |
| SATCOM | Satellite Communication(s) |
| SAWS | Stand Alone Weather System |
| SE | Systems engineer |
| SIA | Status information area |
| SID | Standard Instrument Departure |
| SIGMET | Significant meteorological information |
| SMGCS | Surface movement guidance and control 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 |
| SVFR | Special visual flight rules |

| Abbreviation | Meaning |
|---|---|
| SWAP | Severe weather avoidance plan |
| T&A | Time and attendance |
| TAC | Terminal area chart |
| TACAN | Tactical air navigation aid |
| TCA | Tactical Customer Advocate |
| TCAS | Traffic alert collision and avoidance system |
| TCDD | Tower cab digital display |
| TDLS | Terminal Data Link System |
| TDW | Terminal display workstation |
| TDWR | Terminal Doppler weather radar |
| TEC | Tower en route control |
| TELCON | Telephone Conference |
| TEL–TWEB | Telephone–transcribed weather broadcast |
| TERPS | Terminal instrument procedures |
| TFMS | Traffic Flow Management System |
| TFR | Temporary flight restriction |
| TIBS | Terminal information broadcast system |
| TM | Traffic management |
| TMC | Traffic management coordinator |
| TMI | Traffic management initiatives |
| TMU | Traffic management unit |
| TRACAB | Terminal radar approach control in tower cab |
| TRACON | Terminal radar approach control |
| TRSA | Terminal Radar Service Area |
| TSD | Traffic situation display |
| TWEB | Transcribed weather broadcast |
| UFO | Unidentified flying object |
| UHF | Ultrahigh frequency |
| UPT | User Preferred Trajectory |
| URET | User Request Evaluation Tool |
| USAF | United States Air Force |
| USN | United States Navy |
| UTC | Coordinated universal time |
| 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 |
| WARP | Weather and Radar Processing |

| Abbreviation | Meaning |
|---|---|
| WC . . . . . | Weather coordinator |
| WFO . . . . . | Weather Forecast Office |
| WINGS . . . . . | Weather Information and Navigational Graphics System |
| WMSCR . . . . . | Weather Message Switching Center Replacement |
| WSD . . . . . | Web Situation Display |
| WSO . . . . . | Weather Service Office |
| WSP . . . . . | Weather System Processor |

# Chapter 2. Administration of Facilities

## Section 1. General

### 2–1–1. INTERREGIONAL REQUIREMENTS

**a.** An air route traffic control center (ARTCC) is responsible to an En Route and Oceanic Operations Area Office. Terminal and Flight Services facilities located within an ARTCC operational area must comply with the En Route and Oceanic Operations Area Office directives governing interfacility operational requirements. Although these facilities are not under its administrative jurisdiction, the En Route and Oceanic Operations Area Office responsible for the administration of the ARTCC must provide these directives to the appropriate facilities in ARTCC operational areas. These facilities must coordinate directly on mutual procedural or operational requirements.

**b.** When resolution of procedural or operational problems is not possible or when the En Route and Oceanic Operations Area Office directives are incompatible with those published by the administratively responsible area office, the facility must notify its own Terminal Operations Area or Flight Services Operations Area Office for resolution.

### 2–1–2. FACILITY STANDARD OPERATING PROCEDURES DIRECTIVE

The air traffic manager must issue a Standard Operating Procedures Directive. The directive must specify, as a minimum, the required procedures for maintaining a safe and efficient operation and the jurisdictional boundaries for each operational position/sector.

***REFERENCE–***
*FAAO JO 7210.3, Para 4–1–1, Correspondence Standards.*

### 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 which 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 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. 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.

***NOTE–***
*The air traffic manager will ensure that the user list is kept current.*

### 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.** Except as provided in this and other FAA orders, or when specifically authorized to do so by the Secretary of Transportation or the Administrator, no agency employee must release information from any National Airspace System (NAS) database regarding the position, altitude, heading, flight plan, origination or destination of a single aircraft ("Flight Track Data") upon the oral request of an individual outside of the FAA.

**1.** No request for Flight Track Data must be granted unless it is first determined that the request is being made in the interest of aviation safety or efficiency, or for an official purpose by a United States Government agency or law enforcement organization with respect to an ongoing investigation.

**2.** No Flight Track Data on aircraft conducting military, law enforcement, presidential, or other sensitive flights must be released except as operationally required to assist such flights.

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

**(a)** The agency employee must positively identify the requestor by name, organization or affiliation, and point–of–contact (including a telephone call–back number).

**(b)** The agency employee must inquire about the purpose of the request so as to determine whether the request is being made in the interest of aviation safety or efficiency, or for an official purpose.

**(c)** Except for requests received from any United States Government agency or law enforcement organization, the agency employee must enter into the facility Daily Record of Facility Operation, FAA Form 7230–4, a record of the request, including:

**(1)** The information obtained under subparas b3(a) and b3(b) above; and

**(2)** A summary of any information provided to the requestor, including the flight number or registration number of the aircraft in question.

**(d)** For requests received from any United States Government agency or law enforcement organization, the only information entered into the local facility log must be that called for by subpara b3(a) above, with a brief notation as to whether the request was granted or not.

**4.** If the request is from an individual and it is determined that the request, if granted, would not further aviation safety or efficiency, the employee 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, ARC–40, 800 Independence Avenue, S.W., Washington, DC 20591, or by email to 7–AWA–ARC–FOIA@faa.gov.

**5.** If it cannot be ascertained whether the purpose of the request, if from an individual, is in furtherance of aviation safety or efficiency, or if from a United States Government agency or law enforcement organization, is for an official purpose, the agency employee must contact facility management for guidance. If local management is unable to determine whether or not a request should be granted, the official should contact the Quality Assurance Investigator on–call in Washington headquarters. En Route and Oceanic Operations, Terminal Operations, and Flight Services Operations Area Offices may elect to process after–hour requests through the appropriate Service Area office Quality Assurance on–call specialist.

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

Air traffic managers and air traffic representatives (ATREPs) must, upon receipt of official publications, review data pertaining to their facilities and areas of concern to ensure accuracy and completeness. They must also initiate corrections as required.

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

Facilities must develop and maintain guidelines to provide continuity of required services during planned (for example, radar out for maintenance, frequency out for repair) or unplanned outages (for example, power failures, natural disasters).

**a.** For planned outages, facilities must maintain a checklist that provides guidance on approving shutdowns. This checklist should be maintained at an operational manager's position (for example, OMIC desk, FLM desk). Facilities should consider the following for inclusion on the checklist:

**1.** Traffic volume and complexity.

**2.** Weather.

**3.** Alternate means of providing air traffic services.

**4.** Procedures to notify affected facilities when planned outage begins and ends.

**5.** Other information related to the planned outage, as appropriate.

**b.** Facilities must develop and maintain operational plans for unplanned outages that provide continuity of services to the extent dictated by the outage (for example, power failures, fire, flood, storm damage, breakdown of critical system components, facility wide outages). The plans must be in accordance with JO 1900.47.

## 2–1–8. HANDLING BOMB THREAT INCIDENTS

Air Traffic facilities must establish procedures to carry out their functions in accordance with FAAO 1600.6, Physical Security Management Program. The following provisions must be incorporated into facility plans:

**a.** All air traffic facilities must notify 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.

**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. FAAO 1600.6, Physical 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–***
*FAAO 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."

## 2–1–9. 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 level 2 or 3 MANPADS alerts via ATIS and/or controller–to–pilot transmissions. Report MANPADS threat/attack/post–event activity until notified otherwise by FAA national headquarters.

***REFERENCE–***
*FAAO JO 7110.65, Para 2–9–3, Content.*
*FAAO JO 7110.65, Para 10–2–13, MANPADS Alert.*

## 2–1–10. 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 150/5210–7C, 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 150/5210–7C, Airport Rescue and Fire Fighting Communications.*

## 2–1–11. 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.

## 2–1–12. 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 Airport Facility Directory (A/FD) 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 A/FD 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.

## 2–1–13. AIRCRAFT IDENTIFICATION PROBLEMS

To alleviate 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 operations supervisors report those occurrences to a facility officer and that the following actions be 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.** In the case of carriers listed in Appendix 2, Air Carrier Points of Contact for Aircraft

Identification Problems, contact the appropriate airline office or officer.

**2.** If other than one of the carriers listed in Appendix 2, contact the operator or the chief pilot of the carrier concerned.

**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 Support Services, Aeronautical Information Management, 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 and provide feedback to operations supervisors. That record should include:

**1.** Date/time of occurrence.

**2.** Location (e.g., RUS VORTAC, sector 90, Shannon Airport).

**3.** Call signs involved in the occurrence.

**4.** Date occurrence is reported by facility.

**5.** Office/person that facility contacted.

## 2–1–14. APPROACH CONTROL CEILING

The airspace ceiling of areas within which approach control service is provided should not exceed 10,000 feet AGL. Exceptions require a staff study and specific approval of the Vice President of System Operations Services.

***NOTE–***
*Although en route ATS is a center function, terminal facilities may be expected to provide some en route service. There are some areas in which a center 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, centers may have radar coverage,and better service would be provided if some approach control airspace is recalled to the center. At certain locations, the center may be able to absorb all the airspace of a nonradar approach control. The Area Directors of En Route and Oceanic Operations and Terminal Operations must weigh all factors and provide optimum resolutions.*

## 2–1–15. 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 Area Director of Terminal 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 para 10–5–3, Functional Use of Certified Tower Radar Displays.

**c.** An authorization for towers to provide separation services other than those prescribed in subparas a and b must be supported by a staff study prepared by the authorizing facility or the Terminal Operations Service Area office which 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.

**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 the Terminal Operations Service Area review and concurrence, be forwarded to Terminal Services through System Operations Planning, and System Safety and Procedures for approval. System Operations Planning will coordinate with all affected Technical Operations Services Area Service Directors prior to finalizing their comments and recommendations.

## 2–1–16. 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.

## 2–1–17. 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. In recognition of the fact that prohibited/restricted areas and stationary ALTRVs may be established for security reasons or to contain hazardous activities not directly involving aircraft operations, provision is made for exempting these areas from vertical and radar separation minima if the areas have been identified by facility management. The intent in prescribing separation requirements from special use, ATC-assigned airspace, and stationary ALTRVs is to establish a buffer between nonparticipating aircraft and aircraft operations inside special use, ATC assigned airspace, and stationary ALTRVs. As such, the buffer serves as an extra safety margin in consideration of possible operational, procedural, or equipment variances. Application of the separation prescribed in FAA Order JO 7110.65 is not considered necessary whenever the prohibited/restricted airspace and stationary ALTRV does not contain aircraft operations because these areas typically provide an internal buffer based upon the exact type of activity taking place. 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 Area office during the analysis of area utilization.

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

**1.** Explosives detonation.

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

**3.** Aircraft operations associated with the above in a safety, observer, or command and control capacity only; i.e., the aircraft is not directly engaging in activity for which the airspace was designated and is operating visual flight rules (VFR).

**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.

## 2–1–18. WASHINGTON, DC, SPECIAL FLIGHT RULES AREA (DC SFRA)/ATC SECURITY SERVICES

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 FLM/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 FAAO JO 7110.65 para 9–2–1, Aircraft Carrying Dangerous Materials, subpara 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 FAAO 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.

## 2–1–19. AIRPORT TRAFFIC PATTERNS

**a.** The Area Directors of Terminal 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, Recommended Standard Traffic Patterns and Practices for Aeronautical Operations at Airports without Operating Control Towers.

**b.** FAAO 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.

## 2–1–20. OBSTACLE IDENTIFICATION SURFACES, OBSTACLE FREE ZONES, RUNWAY SAFETY 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, or 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 guidelines to ensure that this airspace is not penetrated by aircraft utilizing other runways or taxiways. Proposed solutions should be developed in conjunction with local airport authorities and coordinated with appropriate FAA offices to confirm their validity; e.g., Flight Standards and Airports.

## 2–1–21. FACILITY IDENTIFICATION

**a.** Service Area Directors are the focal point to review/approve requests for waivers for facility identification changes in FAAO JO 7110.65, Air Traffic Control, para 2–4–19, Facility Identification, subparas a, b, and c, and FAAO JO 7110.10, Flight Services, para 14–1–14, Facility Identification, subparas a, b, and c. If the waiver request is approved, the Service Area Director must ensure that all aeronautical publications are changed to reflect the new identification, and that a Letter to Airmen is published notifying the users of the change.

**b.** Service Area Directors must forward a copy of the approval to System Operations Services.

## 2–1–22. 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.

## 2–1–23. OUTDOOR LASER DEMONSTRATIONS

**a.** The Area Directors of Terminal Operations Services are the focal point for reviewing/approving requests for outdoor laser demonstrations.

**b.** FAAO JO 7400.2, Procedures for Handling Airspace Matters, is the source for processing outdoor laser demonstration requests.

## 2–1–24. 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.

## 2–1–25. SUBMISSION OF AIR TRAFFIC CONTROL ASSIGNED AIRSPACE (ATCAA) DATA

Submit data on all ATCAAs used on a continuing/constant basis, and any subsequent changes to the ATCAA database to System Operations Security; and 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.** An En Route and Oceanic Operations Area Office transmittal memorandum containing a brief overview of the ATCAA, and/or changes to, FAA headquarters, System Operations Security; and System Operations Airspace and Aeronautical Information Management. 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.*

## 2–1–26. 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.

## 2–1–27. REPORTING UNAUTHORIZED LASER ILLUMINATION OF AIRCRAFT

All FAA Air Traffic Control facilities, Federal Contract Towers and Flight Service Stations must report unauthorized laser illumination incidents through the Domestic Events Network (DEN), providing the following information:

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

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

**c.** Type of aircraft.

**d.** Nearest major city.

**e.** Altitude.

**f.** Location of event (e.g., latitude/longitude and/or Fixed Radial Distance (FRD)).

**g.** Brief description of the event.

**h.** Any other pertinent information.

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

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

## 2–1–28. SUSPICIOUS AIRCRAFT/PILOT ACTIVITIES

Facility air traffic managers must ensure that processes are in place to direct prompt notification to the DEN of any suspicious aircraft/pilot activities as prescribed in FAA Order JO 7610.4, paragraph 7–3–1.

## 2–1–29. 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 (202) 493–4170.*

**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–***
*FAAO JO 7110.65, Para 10–2–19, REPORTING DEATH, ILLNESS, OR OTHER PUBLIC HEALTH RISK ON BOARD AIRCRAFT*

## 2–1–30. OPPOSITE DIRECTION OPERATIONS

**a.** The provisions of this paragraph are applicable to areas where radar service is provided. Nonradar procedures are contained in FAA Order JO 7110.65, Air Traffic Control, Chapter 6.

**b.** At locations that conduct opposite direction operations for aircraft receiving IFR separation services, facility directives must define minimum cutoff points identified by distances or fixes for same runway operations between:

**1.** An arrival and a departure.

**2.** An arrival and an arrival.

**c.** The cutoff points established under subparagraph b. must ensure that required longitudinal or lateral separation exists before any other type of separation is applied:

**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.

***NOTE–***
*If terrain and obstructions allow, the initial heading should meet the provisions of FAA Order JO 7110.65, Paragraph 5-5-7, Passing or Diverging.*

***REFERENCE–***
*FAAO 7110.65, Para 1-2-2, Course Definition*
*FAAO7110.65, Para 3-8-2, Touch and Go or Stop and Go or Low Approach*
*FAAO 7110.65, Para 3-8-4, Simultaneous Opposite Direction Operations*
*FAAO 7110.65, Para 4-8-11, Practice Approaches*
*FAAO 7110.65, Para 5-5-1, Application*
*FAAO 7110.65, Para 5-5-4, Minima*
*FAAO 7110.65, Para 5-5-7, Passing or Diverging*
*FAAO 7110.65, Para 5-6-3, Vectors Below Minimum Altitude*
*FAAO 7110.65, Para 7-2-1, Visual Separation*

**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.** Facility directives must:

**1.** Require traffic advisories to both the arriving and departing aircraft.

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

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

**3.** Ensure that opposite direction operations conducted from parallel runways provide for a turn away from the opposing traffic when inside of the cutoff point to the other runway.

**4.** Specify that towers not delegated separation responsibility are responsible to apply the cutoff points between arriving and departing aircraft.

**f.** Facility directives must contain the following minimum coordination requirements:

**1.** Define the position that is responsible for initiating coordination.

**2.** All coordination must be on a recorded line, state "opposite direction," and include call sign, type, and arrival or departure runway.

**3.** The tower must verbally request opposite direction departures with the TRACON/ARTCC.

**4.** The TRACON/ARTCC must verbally request opposite direction arrivals with the tower.

***NOTE–***
*Facilities that use opposite direction operations as a standard operation due to terrain constraints or noise abatement may be exempted from the provisions of subparagraph f. by the approval process in subparagraph g.*

**g.** Terminal standard operating procedures orders and all letters of agreement addressing opposite direction operations must be approved by the Service Area Director of Terminal Operations.

## 2–1–31. 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.

# 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

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.*

## 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.** 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.

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

**(1)** STATUS INFORMATION AREA/S.

**(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 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 Status Information Area/s used by that position.

**(c)** Status Information Area/s (SIA), 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.

**(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.** 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.

**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.

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

**d.** Specialists manning the positions identified under subpara 2–2–4b, requiring the maintenance of operational continuity, must conduct a position relief briefing in accordance with FAAO JO 7110.65, Air Traffic Control, Appendix D, Standard Operating Practice (SOP) for the Transfer of Position Responsibility, or FAAO JO 7110.10, Flight Services, para 1–3–3, Duty Familiarization and Transfer of Position Responsibility.

**e.** 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 tapes, 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/HOST/NTML/FSS operational system or other Agency or local programs. Facilities may use Common ARTS/HOST/NTML/FSS operational system 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)/front–line managers (FLM)/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/FLM/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/FLM/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 FAA Headquarters, Terminal Safety and Operations Support by the most expeditious means available.

**b.** FSS air traffic managers must provide CIRNOTs to the Terminal Operations Service Area office 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 GENOT initiated by headquarters ATO organizations, requiring distribution to air traffic facilities, must be transmitted to all Service Area offices, Flight Service Stations (FSS), and ARTCCs.

**a.** Terminal Operations Service Area office must distribute GENOTs to the following using the most expeditious means available:

**1.** FAA contract and non–Federal towers.

**2.** FAA military ATREPS assigned to the service area.

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

**b.** The FSS must distribute the GENOT to all FAA field facilities addressed, except ARTCCs, within their designated areas as determined by the respective Service Area office using the most expeditious means available.

***REFERENCE–***
*FAAO JO 7210.3, Para 2–2–8a2 Note.*

**c.** Terminal Hub facilities distribute all GENOTs in plain language format to all non–Federal and contract ATCTs which are located within their Hub Area. The GENOT must be distributed in the most expeditious means available.

***REFERENCE–***
*FAAO JO 7210.3, Para 2–2–8a2 Note.*

**d.** Air traffic managers at all facilities must:

**1.** Disseminate GENOT information to concerned facility personnel. The content of the message will dictate the priority of the distribution.

**2.** Ensure that all employees with a need to know are thoroughly briefed on the change prior to performing their duties.

**3.** Ensure that the appropriate entry is made in the employee's Training and Proficiency Record, Form 3120–1.

## 2–2–9. PERSONNEL BRIEFINGS REGARDING AIR TRAFFIC BULLETIN ITEMS

The Air Traffic Bulletin is a means of communication between headquarters and field facilities. It is routinely published and distributed quarterly. In addition, special issues are published and distributed as necessary. It is not a directive, nor is it to implement new procedures. Its intent is to transmit "reminders" concerning proper application of procedures and other instructions. To provide continuity of communication, facility air traffic managers must:

**a.** Ensure that the facility is on the distribution list for the Air Traffic Bulletin. Any corrections/additions/deletions should be directed thru the regional distribution officer.

**b.** Ensure that Air Traffic Bulletin items with operational/procedural impacts are verbally discussed/briefed with facility personnel. These briefings must take place within 30 days after receipt of the bulletin. Once the briefings are given, a notation must be inserted in each individual's FAA Form 3120–1, including the certification signature provided by the staff specialist/supervisor and the employee's initials.

**1.** The option/s for which a briefing is required will be indicated by an asterisk followed by one or more letter designators; i.e.:

**(a)** *T – Tower, combined tower/approach control;

**(b)** *R – TRACON;

**(c)** *F – FSS;

**(d)** *E – ARTCC (En Route);

**(e)** *EF – ARTCC and FSS; etc.

**2.** The option/s for which briefings are recommended but not required will follow the option/s for which briefings are required, separated by a slash; i.e., /*T/E, indicates that for the en route option the briefing is recommended.

**c.** Solicit suggested Air Traffic Bulletin items, having operational/procedural impact from facility personnel at regular personnel or crew briefings; evaluate and forward those considered appropriate for Service Area office review. Service area offices must evaluate and forward to System Safety Procedures those proposals considered significant and national in scope.

## 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 FAAO 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 ORDER CHANGES

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

## 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 are normally delivered by air traffic personnel to Technical Operations Control

Center personnel in person or by telephone. Locally developed procedures that are agreed to jointly by the air traffic and Technical Operations managers may be used for trouble reporting. In the absence of locally developed procedures, the following must apply: Trouble reports must specify the facility, sector and 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 air/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 Facility Directives Repository (FDR) provides a centralized, automated web–based library for FAA employees to access all Letters of Agreement (LOA), Standard Operating Procedures (SOP), and FAA Facility Orders (FO) for Air Traffic Facilities throughout the National Airspace System.

***NOTE–***
*Directive information for Flight Service Stations (LOAs, SOPs, FOs) will only be required for those located in Alaska.*

**a.** The Vice President's responsibility includes:

**1.** The Vice President for En Route and Oceanic Services must develop processes within the service unit to ensure repository entry functions are discharged effectively.

**2.** The Vice President for Terminal Services must develop processes within the service unit to ensure repository entry functions are discharged effectively.

**3.** The Vice President for System Operations Services must administer user functions and develop processes within the service unit to ensure repository entry functions are discharged effectively.

**4.** The Vice President for Operations Planning Services must administer system functions, provide access to the internet mirror site, and oversee the site operation and maintenance.

**5.** The Vice President for Safety Services oversees compliance.

**b.** Facility Managers must:

**1.** Ensure that current LOAs, SOPs and FOs are posted to the repository site.

**2.** Ensure that new and revised LOAs, SOPs and FOs are posted to the repository site before the effective date of the document.

**3.** Establish an internal administrative process to ensure the posting, completeness, and accuracy of their facility's documents.

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

**5.** Ensure that all outdated and cancelled documents are removed from the FDR database.

**c.** District 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 Propriety, 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, SOPs and FOs in the repository site in facility evaluation checklists.

**e.** The repository database is an intranet site within the FAA automation network firewall at https://loa.-faa.gov.

**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/District 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/District 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 e–mail.

**(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), front line managers (FLM), 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, FLM, STMC, NTMO) and support specialists (who maintain currency) must maintain currency on a minimum of two and a maximum of eight operational/control positions.

***NOTE–***
*Hand-off, Tracker, and CAB/TRACON coordinator positions do not count towards the minimum of two and maximum of eight 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 and a maximum of eight operational/control positions outside the TMU.

**(d)** Waivers to any requirements contained in paragraph 2-3-3b(1), may only be approved by the respective Director of Operations, who is required to forward all waiver requests and dispositions to the Director of Operations Support for tracking and oversight.

**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. Except for flight service station (FSS) and air traffic assistants, time working the assistant controller, flight data communications, flight data, and clearance delivery positions is not counted toward total currency time requirements; however, the one-hour minimum time per position is required to maintain currency.

***NOTE–***
*Hand-off, Tracker, CAB/TRACON coordinator, Final Monitor, FLM/FLMIC, 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)** FLMs/OSs (including facility managers who also serve as first-level supervisors).

**(1)** TERMINAL. Radar/tower operational/control positions (excluding the FLM/FLMIC 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 (ARTCC) and at New York TRACON (N90), Potomac TRACON (PCT), Northern California TRACON (NCT), and Southern California TRACON (SCT) are required to maintain currency only within the TMU. All other TMCs/STMCs 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 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, is not counted toward operational/control position currency.

**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<br>ATCSTMC/ Developmental TMC<br>FSS Specialist/Dev<br>FSS Spec NTMS/Dev<br>NTMS/ATA | Min 16 hours/month<br>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/Max 8 positions | 8 hours |
| FLM/OS<br>STMC/NTMO<br>FSS OS | Min 8 hours/month<br>Min 1 hr per position<br>Min 2/Max 8 positions | 8 hours |
| TMC - Dual Currency | Within TMU:<br>Min 16 hours/month<br>Min 1 hr per position<br><br>Outside TMU:<br>Min 8 hours/month<br>Min 1 hr per position<br>Min 2/Max 8 positions | 24 hours |
| STMC – Dual Currency | Within TMU:<br>Min 8 hours/month<br>Min 1 hr per position<br>Min 2/Max 8 positions<br><br>Outside TMU:<br>Min 8 hours/month<br>Min 1 hr per position<br>Min 2/Max 8 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 exercised and EFAS 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 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.

**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 on the multi–channel recorder, any one of the listed standard frequency and time radio stations or other time generating device.

***REFERENCE–***
*FAAO JO 6670.4, Maintenance of MultiChannel Recorder Equipment, Chapter 4.*

## 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 Class Delta services 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 subpara b1. This information need not be forwarded when the sector controller advises no arriving traffic.

**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 part–time 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 8 hours between watches.

## 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 for that watch. Specialists so designated may be required to perform specialist duties in addition to those associated with watch supervision. The CIC 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 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 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.** 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.

## 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

Hours of duty of facility air traffic managers and administrative staffs should conform with the duty hours of their respectice Service Area office.

## 2–5–9. 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.

## 2–5–10. CONTROLLER–IN–CHARGE (CIC) TRAINING

**a.** Prior to being designated as CIC, specialists must have been facility/area rated/certified for 6 months, except as provided in paragraph 2–6–3c. The specialist must also have completed an agency–approved and established CIC training course for the assigned option (that is, En Route CIC, Course 55072; National Flight Service CIC, Course 55025; or Terminal CIC, Course 55073). The Director of Flight Services Operations 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 Operations 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 to provide midwatch coverage, all facility/area rated/certified specialists that provide such coverage must complete an agency–approved and established CIC training course for the assigned option as described above, within 30 days of final certification/rating.*

**b.** Specialists that have completed the CIC course, who have performed CIC duties, and who 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 duties, except as provided in paragraph 2–6–3. They must not be required to fulfill the 6 months experience requirement at the new facility.

**c.** Upon completion of the CIC course, record an entry noting this in the specialist's Training and Proficiency Record, FAA Form 3120–1, section 3, or TRAX, Automated Training Record.

# Section 6. Watch Supervision–Terminal/En Route

## 2–6–1. WATCH SUPERVISION

**a.** Watch supervision requires maintaining situational awareness (defined below) of traffic activity and operational conditions in order to provide timely assistance to specialists and that ensure available resources are deployed for optimal efficiency. Watch supervision may be performed by a manager, supervisor, or controller–in–charge (CIC). The objectives and tasks of watch supervision must be specified in a facility directive, which is focused on operational requirements. The directive must specify, as a minimum, the required tasks for maintaining a safe and efficient operation. These tasks must include, but are not limited to:

**1.** The requirement to provide guidance and goals for the shift.

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

**3.** Position assignments.

**4.** Position relief.

**5.** Training assignments.

**6.** Processing leave requests (e.g., leave approval).

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

**8.** Data collection and reporting.

**9.** Monitoring presidential aircraft and reporting security requirements.

**10.** 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. Simply put, situational awareness means knowing what is going on around you.

**11.** Management of the operational environment with a goal toward eliminating distractions.

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

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

**b.** 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.

***NOTE–***
*On–the–spotcorrections are not considered an evaluation of performance and are required as part of CIC duties.*

## 2–6–2. WATCH SUPERVISION ASSIGNMENTS

**a.** Efficient air traffic services require watch supervision regardless of the number of people assigned. Facilities must establish local procedures for watch supervision assignments.

**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, front line manager–in–charge (FLMIC), 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–chage (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 in an activity which will interfere with or preclude the performance of watch supervision duties, then another qualified individual must be designated to supervise the watch.

## 2–6–3. CONTROLLER–IN–CHARGE (CIC) DESIGNATION

**a.** Prior to being designated as a CIC, specialists must meet the following prerequisites:

**1.** Have been certified for 6 months in the area/facility CIC duties to be performed. (The Director of En Route and Oceanic Operations Area Office or Terminal Operations Service Area Office may issue a facility waiver for the 6 month requirement where a more immediate assignment is needed. Waivers to facilities will be for 1 year, with renewals based on the result of a yearly evaluation by the area office director.)

**2.** Be operationally current.

**3.** Be selected by the air traffic manager or his/her designee.

**4.** Successfully complete CIC training.

**b.** Specialists who have been designated as a CIC and subsequently transfer to another facility are not required to fulfill the requirement of subpara 2–6–3a1 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.

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

## 2–6–4. CONTROLLER–IN–CHARGE (CIC) SELECTION PROCESS

**a.** All eligible employees who meet the prerequisites of subparas 2–6–3a1 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.*

## 2–6–5. 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–***
*FAAO JO 7210.3, Para 10–3–8, Line Up and Wait (LUAW) Operations*

## 2–6–6. 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.

**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 during any period duties are assigned. Any such instance must be handled in accordance with applicable Agency policy and the applicable collective bargaining agreement.

## 2–6–7. 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 an 8–hour break from the time work ends to the start of any shift, except as follows:

**(a)** Employees are required to have a minimum of 9 consecutive hours off duty preceding the start of a day shift. For purposes of this paragraph only, a day shift is generally defined as a shift where the majority of hours fall between 7:00 a.m. and 4:00 p.m.

**(b)** 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 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.** Do not work more than six shifts without taking a regular day off.

**7.** Authorized leave, compensatory time used, and credit hours used are considered hours of work.

**8.** These criteria apply to shift adjustments, including the exchange of shifts and/or days off and the change of shifts and/or days off.

## 2–6–8. 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.

## 2–6–9. 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.

## 2–6–10. 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.

## 2–6–11. 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.

## 2–6–12. CONSOLIDATING TOWER/TRACON FUNCTIONS

**a.** At facilities where both tower and radar/non-radar approach control services are provided, the air traffic manager must ensure, to the maximum extent possible, that these functions are not consolidated during non–midwatch operations unless unforeseen circumstances or emergency situations arise which would preclude compliance with this paragraph.

**b.** 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.

**c.** 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. In the event circumstances result in an operation with staffing of only one fully–certified and current operational person, coordination must be accomplished with an adjacent facility before the operational person can leave the operational quarters for physiological breaks. This should be accomplished during periods of light to zero traffic.

## 2–6–13. SINGLE PERSON TRACON/ TOWER MIDNIGHT OPERATIONS

In the event circumstances result in shift staffing of only one fully–certified and operationally–current person, coordination must be accomplished as follows:

**a.** Single–person TRACON operations.

**1.** This type of operation must include some form of challenge or response to aircraft hand–offs between two facilities/functions.

**2.** Automated coordination cannot be silent hand–offs that do not include human interaction. It must be either manually coordinated (verbally via landline) or positively acknowledged via automation (acceptance of the handoff by keystroke entry).

**3.** In the event verbal coordination on inbound flights is required, it should be completed before communications transfer. If there is no response from the single–staffed facility controller, immediate action must be taken to determine the status of the unresponsive controller and begin appropriate notifications.

**4.** In all cases where a facility midnight shift is staffed with a single person, the following additional communication checks must take place:

**(a)** The approach control facility must initiate a communications check on the hour and at 30 minutes past the hour with the en route facility providing service to the TRACON, unless procedures are established locally with another FAA facility to accomplish this task.

**(b)** The servicing en route facility or FAA facility must initiate a communications check with

the TRACON at 15 and 45 minutes past the hour to ensure communications can be verified with the single–staffed operation, unless procedures are established locally with another FAA facility to accomplish this task.

**b.** Single–person tower operations.

**1.** This type of operation must include some form of challenge or response to aircraft hand–offs between two facilities/functions.

**2.** This type of operation must include verbal coordination on all ATIS changes. For example, when there is a change to the ATIS, a call to the TRACON or en route facility providing approach control services advising them of the change must be on a recorded line.

**3.** Verbal coordination over established communication lines to the departure controller confirming that they are prepared to accept the flight should be completed before issuing takeoff clearance when the receiving facility is a single–staffed TRACON. If there is no response from the single–staffed facility controller, immediate action must be taken to determine the status of the unresponsive controller and begin appropriate notifications.

**4.** In all cases where a facility midnight shift is staffed with a single person, the following additional communication checks must take place:

**(a)** The tower must initiate a communications check with the facility providing approach control services on the hour and at 30 minutes past the hour, unless procedures are established locally with another FAA facility to accomplish this task.

**(b)** The servicing approach control facility or FAA facility must initiate a communications check with the tower at 15 and 45 minutes past the hour to ensure communications can be verified with the single–staffed operation, unless procedures are established locally with another FAA facility to accomplish this task.

***NOTE–***
*The requirement for challenge/communications checks can be accomplished through the exchange of traffic or information, either verbally or through automation.*

**c.** Up/Down facilities during midnight shifts.

**1.** When operations permit, it is expected that functions will be consolidated to facilitate breaks.

**2.** If the facility is not working with both functions in the cab and has a single–staffed operation in either operating quarters, the single–staffed operation practices apply.

**3.** Single–staffed challenge checks can be applied between tower/TRACON in up/down facilities rather than through the overlying en route facility.

# 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 except when the FSS is collocated with an ARTCC.

**b.** When an ARTCC and a FSS are collocated, a LOA must be implemented to define the respective areas of security responsibility assigned to each facility.

***REFERENCE–***
*FAAO JO 7210.3, Subpara 4–3–2e, Appropriate Subjects.*

**c.** 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.

**d.** In no case must ARTCC buildings be used as public fallout shelters.

## 2–7–6. SUSPICIOUS ACTIVITIES

FAA personnel must report suspicious activities to the nearest law enforcement agency, FBI, airport manager, aircraft operator, or any combination thereof as appropriate. These activities include, but are not limited to, unauthorized use of aircraft, tampering with aircraft or other property around airports or FAA facilities, placing packages or other objects in unusual locations, and performing in a manner that is suspect of malice. 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.

## 2–7–7. COOPERATION WITH LAW ENFORCEMENT AGENCIES

**a.** FAA personnel must cooperate in every reasonable way with law enforcement agencies. Theft of aircraft and use of aircraft for illegal purposes have complicated the task of the Federal law enforcement agencies. The FBI and Department of Homeland Security (DHS) have requested the FAA to assist them by furnishing information of suspicious activities regarding use of aircraft.

**b.** Any inquires from airport managers, aircraft owners, or others to initiate an alert message must be directed to the El Paso Intelligence Center(EPIC). EPIC is interfaced with the National Crime Information Center (NCIC), which gives them access to any stolen aircraft report entered by law enforcement agencies. FAA facilities must not volunteer to relay this information to EPIC. Assistance must be limited to providing the EPIC phone number, (915) 564–2220, or advising the inquiring party to go through normal law enforcement channels.

**c.** Reports of suspected human trafficking must be reported on the Domestic Events Network (DEN). If the ATC facility is not actively monitoring the DEN or does not have a dedicated line to the DEN, they must immediately report the above referenced activity on the DEN via (202) 493–4170.

***NOTE–***
*"Blue Lightning" is a code word used by the DEN and law enforcement agencies to refer to human trafficking activities.*

## 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 FAAO 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 FAAO 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 FAAO 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 FAAO 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, para 2–8–5 through para 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 FAAO 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 National Weather Service (NWS).

***REFERENCE–***
*FAAO JO 7210.3, Para 14–1–2, Certificates of Authority.*

## 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 NWS.

**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 use the AWOS operator interface device (OID) to generate a manual hourly 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/Automated Weather Sensor System (AWSS).

## 2–9–3. LIMITED AVIATION WEATHER REPORTING STATION (LAWRS) HOURS OF OPERATION

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.

## 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 non–aviation weather activity. Refer requests for this type of weather information to the nearest WSO.

## 2–9–5. NATIONAL WEATHER RECORDS CENTER

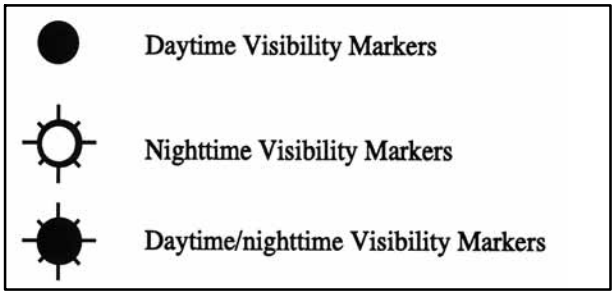
Refer requests for surface weather observations from non–aviation sources; e.g., requests from insurance companies for weather data relative to storm damage, to the National Weather Records Center, Environmental Data Service, Federal Building, Asheville, N.C., 28801.

## 2–9–6. VISIBILITY CHARTS

Where facilities provide backup/augmentation of automated weather observations, or manual observations, the facility air traffic manager, in conjunction with NWS personnel, must prepare and maintain visibility charts in accordance with the following:

**a.** 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.

**b.** Daytime/Nighttime combination charts must use the following legend for each marker:




**c.** 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.

## 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 VALUE (RVV) AND RUNWAY VISUAL RANGE (RVR) EQUIPMENT

**a.** FAA is responsible for checking and determining the operational status of RVV/RVR systems. Air traffic personnel must report all actual or suspect RVV/RVR malfunctions to Technical Operations Control Center personnel who are responsible for:

**1.** All checks and adjustments to the RVV/RVR systems.

**2.** Determining the operational usability of all portions of the systems in accordance with applicable performance criteria in FAAO 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 RVV or RVR values for that runway. During such conditions, weather observing personnel will relay RVV or RVR information to tower personnel as long as equipment at the weather observing facility is known to be operating correctly and, in the case of RVR, 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 or RVV 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 or exceed:

**(a)** RVV $^1/_2$ mile or 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 aneroid altimeter setting indicators (ASI) or one ASI and a traceable pressure standard are required in a TRACON, radar approach control (RAPCON), terminal radar approach control in tower cab (TRACAB), combined center/RAPCON (CERAP), radar ATC facility (USN) (RATCF), tower cab, and a FSS that takes weather observations and/or provides LAA. When two or more facilities (or a NWS commissioned/certified automated weather observing system) are located on the same airport, the requirement may be reduced to one aneroid ASI per facility. Aircraft altimeters must not be used in reporting altimeter settings.

***NOTE–***

**1.** *Stand alone RADAR approach control facilities (TRACON, RAPCON, RATCF, CERAP) not associated with a control tower are only required to maintain altimeter settings for those airports under their jurisdiction.*

**2.** *A digital ASI (DASI) system is considered as one aneroid ASI instrument for the purpose of this paragraph.*

**b.** At locations with commissioned ASOS or commissioned dual transducer AWOS units, the ASOS/AWOS becomes the pressure standard. If the ASOS/AWOS is inoperative, a Stand Alone Weather System (SAWS) or DASI may be considered as the pressure standard.

## 2–10–4. COMPARISON CHECKS

**a.** Facilities equipped only with aneroid instruments:

**1.** Compare the reading of each aneroid instrument (ASI) daily and each nonpressure standard digital instrument (DASI) monthly with the altimeter setting issued by an associated facility having a traceable pressure standard located either on the airport or within the distances set forth in subparas d and e.

**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 subpara 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 digital ASI (DASI) systems, post the correction factor on or near the display/s. Local facility procedures may be developed in coordination with the associated airway facilities office to adjust the DASI to display the corrected altimeter setting.

**b.** Facilities equipped with aneroid instruments and a traceable pressure standard:

**1.** Make two comparisons at least 6 hours apart, but not more than 8 hours, on the same day of the week. Enter all comparison data on the appropriate form. Every week, determine the mean of the 10 last comparisons, and use this figure as the posted correction to apply to the reading of the ASI.

**2.** Additional comparison procedures are described in handbooks applicable to the facility.

**c.** At locations with commissioned ASOS or commissioned dual transducer AWOS units, the ASOS/AWOS becomes the pressure standard. Compare the reading of each aneroid ASI to the pressure standard daily and each digital ASI (SAWS/DASI) monthly. In the event of a failure of the pressure standard instruments, a comparison must be made within 36 hours. Tolerances and posting procedures are contained in subparas a2 and a3.

**d.** At locations not served by a weather reporting station, make a comparison against an adjacent weather service office, commissioned dual transducer AWOS or ASOS systems, a FSS or a LAWRS facility having a traceable pressure standard.

**1.** At locations where precision approaches are conducted, the weather reporting station is not more than 10 NM away, and at both locations the wind speed is 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 speed must 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:*

| |
|---|
| 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 from aneroid instruments when the difference exceeds ±0.02 in. Hg. at precision approach locations or ±0.05 in. Hg. at all other locations.

**e.** A traceable pressure standard is required for routine altimeter setting comparison checks at all facilities that exceed the requirements of subpara d

## 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, transcribed weather broadcast (TWEB, Alaska only), or automatic terminal information service (ATIS) as appropriate. Use the following table to determine broadcast applicability: (See TBL 2–10–1.)

*TBL 2–10–1*

**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 |

# Chapter 3. Facility Equipment

## Section 1. General

### 3–1–1. BASIC EQUIPMENT

**a.** The basic operating equipment for ARTCCs consist of flight progress boards, radar displays, communications, automation, and, where applicable, URET equipment. At facilities utilizing Ocean21, 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 master plans maintained in the En Route and Oceanic Service Area offices. 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 master plans maintained in Terminal Service Area offices. 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, etc.

*TBL 3–1–1*
**Certified and Uncertified Systems**

| Uncertified | Certified |
|---|---|
| Systems Atlanta Information Display System 4 (IDS–4) | ACE–IDS |
| | NAS IDS (NIDS) |

**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. If the system is capable of automatically removing expired information, it must be configured to do so.

**c.** The basic operating equipment for FSSs consist of radio and landline communications equipment, flight progress boards, pilot briefing equipment, recorders, "data communication" equipment, displays of aeronautical and meteorological information, direction–finding equipment, aircraft orientation plotting boards, "orientation, direction–finding equipment and aircraft orientation" arranged according to master plans maintained in Flight Service Area offices. 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.

**d.** Upon facility acceptance of any URET system, that system becomes a component of the air traffic system for the purposes of requests from Technical Operations personnel for approval to shut down that system for periodic maintenance.

**e.** Notification of any planned or unplanned outage of URET must be coordinated following the guidelines in Chapter 8, NAS En Route Automation, and guidelines developed and maintained by URET facilities.

## 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; FAAO JO 6030.31, National Airspace System Failure Response; FAAO 6980.5, Engine Generator Transfer Procedures for Anticipated Power Failure; 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–***
*FAAO JO 6030.31, National Airspace System Failure Response;*
*FAAO 6980.5, Engine Generator Transfer Procedures for Anticipated Power Failure.*

# 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.** Remove the voice tape from service at the normal tape change interval and record the pertinent information on a cassette in accordance with FAAO 8020.11, subpara 76c, Retention of Original Voice Recordings.

**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 FAAO 6050.32, Spectrum Management Regulations and Procedures):

**a.** Control instructions must not be issued.

**b.** Transmission can be interrupted when required to continue ATC services.

***REFERENCE–***
*Advisory Circular AC 150/5210–7C, Airport 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 para 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. SERVICE "F" COMMUNICATIONS

Facility air traffic managers must establish procedures to provide interim communications in the event that local or long–line standard Service "F" fail. These must include the use of telephone conference circuits and the use of airline or other facilities.

## 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 with flight–crews or other appropriate persons regarding any aircraft accident, incident, and/or ATC services on a recorded line.

## 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.** Normally, ARTCC emergency frequency capability must be limited to the transmitter/receiver site nearest the ARTCC.

**c.** 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.

**d.** 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.

**e.** 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.

**f.** 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.

**g.** 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.

**h.** 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.

**i.** 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 that they are maintained in a state of readiness. Transceivers must be checked at least once a week.

## 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 FAAO 7900.2, Reporting of Electronic Navigation Aids and Communication Facilities Data to the NFDC. 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 para 2–1–7, Air Traffic Service (ATS) Continuity, are adhered to.

# Section 4. Recorders

## 3–4–1. USE OF RECORDERS

**a.** Air traffic facilities must record operational communications to the maximum extent practicable.

**b.** 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.

**c.** If combined positions are periodically split into individual positions, record them on separate channels when so used.

**d.** Supervisors must ensure that the proper FAA/telephone company (TELCO) "jacks" are used to obtain the required recording at facilities with dual capability.

**e.** 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.

**f.** Operational voice recorders must be provided a time source.

**g.** Except as noted in para 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.

**h.** Reserve one channel of each recorder for recording time; except two channels must be reserved on the FA5394, 30–channel recorder. If a coded time source and a time code reader are available, record the coded time source in preference to voice time announcements. Recording more than one time source on any recorder is prohibited.

**i.** Each FSS collocated with an ARTCC will use the center's voice recorder system resources to minimize requirements for spare parts, test equipment, and routine maintenance.

**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 15 days if a recorded channel is not available.

**3.** FSSs:

**(a)** Flight watch.

**(b)** Inflight.

**(c)** Preflight.

**(d)** Flight data.

**(e)** 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 and changing recorder tapes, digital audio tapes (DAT), and Digital Audio Legal Recorders (DALR).

***REFERENCE–***
*(Analog) FAAO JO 6670.4, Maintenance of Multichannel Recorder Equipment,*

*or*

*(Digital) FAAO JO 6670.13, Maintenance of Digital Voice Recorder (DVR) Equipment and FAAO JO 6670.15, Maintenance of Digital Voice Recorder System Series II (DVR II) Equipment.*

**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 and changing recorder tapes, DATs, and DALRs.

**2.** Where recorders are convenient to operating quarters, air traffic personnel must perform recorder checks.

**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 monitor operation checks on analog voice recorder systems must be performed daily and must not exceed 26 hours between checks. Procedures for monitoring operations in analog recorders are described in FAAO JO 6670.4, Maintenance of Multichannel Recorder Equipment.

**1.** On a daily basis (not to exceed 26 hours), validate the Nicelog supervision window for alarms, and verify normal operation of equipment on digital audio tapes.

**2.** Indicate accomplishments of checks on FAA Form 7230–4, Facility Record of Operation.

**e.** At facilities using DALR:

**1.** 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.

**2.** Document the accomplishment of the check on FAA Form 7230–4, Facility Record of Operation.

## 3–4–4. HANDLING RECORDER TAPES, DATs, OR DALR STORAGE

**a.** Place the following information on each reel or DAT storage case before storage:

**1.** The recorder number.

**2.** The date and the time UTC.

**3.** The initials of the person changing the reel.

**b.** Retain the tapes or DATs for 45 days, and ensure the DALR .wav file is set to retain recordings for 45 days, except:

**1.** En route facility utilizing system analysis recording tapes as their radar retention media (regardless of the type of voice recorder system being used) must retain voice recordings for 15 days.

**2.** Those facilities utilizing an analog voice recorder system must retain voice recordings for 15 days.

**3.** The David J. Hurley Air Traffic Control System Command Center must retain voice recordings for 15 days.

**4.** Accidents: Retain the tapes, DATs, or DALRs in accordance with FAAO 8020.11, Aircraft Accident and Incident Notification, Investigation and Reporting.

**5.** Incidents: Retain the tapes, DATs, or DALRs in accordance with FAAO 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting; and FAAO 1350.15, Records Organization, Transfer, and Destruction Standards.

**6.** Hijacking: Retain all relevant tapes, DATs, or DALRs 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 tapes, DATs, or DALRs. In every case, a release from System Safety and Procedures is required to return hijack tapes, DATs, or DALRs to service.

**7.** 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.

## 3–4–5. VSCS DATA RETENTION

**a.** Retain the VSCS cassette, disc, and tape recordings and data communications/console typewriter printouts for 15 days unless they are related to an accident/incident as defined in accordance with FAAO 1350.15, Records Organization, Transfer, and Destruction Standards, Chapter 11, Section 8020.

**b.** If a request is received to retain the VSCS communications traffic listings and the system configuration and/or mapping data following an accident, the printout of the relative data will suffice, and the VSCS cassette, disc, and/or tape 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 VSCS cassette, disc, and tape recordings 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 VSCS 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 is available and contained on VSCS cassette, disc, and/or tape, the VSCS cassette, disc, and/or tape must be retained in its entirety. If the data requested is contained on several different media (e.g., VSCS cassette, disc, and/or tape media), the facility may transfer all pertinent data to a common media and label the media a Duplicate Original. After successful transfer, the original VSCS cassette, disc, and/or tape may be returned to service through the normal rotational cycle. However, if a specific request is received to retain the original VSCS cassette, disc, and/or tape, the original VSCS cassette, disc, and/or tape must be retained in its entirety.

**d.** Treat the VSCS cassette, disc, tape, duplicate originals, and data communications/console typewriter printouts related to hijack aircraft the same as voice recorder tapes. (See para 3–4–4, Handling Recorder Tapes or DATs).

# 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 subpara 4–6–5h, Preparation of FAA Form 7230–4.

**3.** If a monitor Category 2 exists:

**(a)** Take appropriate action as indicated in FAAO JO 7110.65, Air Traffic Control, para 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, MLS, 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 subpara 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 subpara 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/MLS:

**1.** Check the ILS/MLS monitor panel at the beginning of each watch and record the system status in accordance with subpara 4–6–5h, Preparation of FAA Form 7230–4.

**2.** Apply the procedures described in para 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 FAAO JO 7110.65, para 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 subparas 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 FAAO 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–***
*FAAO JO 7210.3, Para 3–5–1, NAVAID Monitoring.*
*FAAO 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

Forward all information gathered as per FAAO JO 7110.65, Air Traffic Control, subpara 2–1–10b, through the TMU to the ATCSCC and the local MCC.

***NOTE–***
*The NMCC in Warrenton, Virginia is the focal point for upward reporting and response coordination for all GPS anomalies.*

## 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. Radar Use

## 3–6–1. COMMISSIONING RADAR FACILITIES

**a.** Electronic Commissioning:

**1.** Subsequent to the initial installation of an ARSR/ASR system, the provisions of FAAO 8200.1, United States Standard Flight Inspection Manual, para 215 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 subpara 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 FAAO 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 of the memoranda/aeronautical information message sent to System Operations Airspace and Aeronautical Information Management Office for inclusion in the Notices to Airmen publication and/or the Airport/Facility Directory must be addressed to Manager of Publications, Manager of System Safety and Procedures, Manager of Flight Services Administration, and the appropriate Service Area offices.

## 3–6–2. RADAR USE

**a.** Approved radar systems 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 radar systems may also be used for:

**1.** Conducting precision or surveillance approaches.

**2.** Formulation of clearances and control intructions based on runways and movement areas observable on the ASDE.

***NOTE–***
*In accordance with FAAO JO 7110.65, Chapter 3, Airport Traffic Control – Terminal, Section 6, Airport Surface Detection Procedures.*

## 3–6–3. ATC RADAR BEACON SYSTEM DECODER CONTROL BOX CHECKS

***NOTE–***
*Not Applicable to STARS.*

Facility air traffic managers must ensure that radar controllers perform daily performance checks of the decoder control box as follows:

**a.** Each controller is responsible for determining on a day–to–day basis if the operation of his/her decoder control box is satisfactory for ATC purposes. Decoder control box performance can be determined by checking all switches, thumbwheel code selectors, and selected channels to ensure that they are functioning properly. The actual operation of each channel should be checked by decoding a known target sequentially on each channel and observing it on both double and single slash. Notify the OMIC/OSIC if a malfunction is observed.

**b.** OMICs/OSICs must make an entry on FAA Form 7230–4 of any malfunctions and report same to the Technical Operations personnel on duty.

**c.** At sites equipped with automatic beacon decoders, such as ARTS and the TPX–42, the radar beacon control decoder box need not be checked daily. The requirements of subpara a above must be met as soon as possible after reverting to broadband beacon information.

## 3–6–4. 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 FAAO 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.

## 3–6–5. RADAR TARGET SIZING

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.*

## 3–6–6. 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.** Permanent beacon target (Parrot) used for map alignment location.

**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.** The air traffic manager and Technical Operations SMO 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.

## 3–6–7. 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 standard 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 NAS Stage A (en route) or ATTS (terminal) systems are fully operational.

**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 is a heavy or B757 when separating aircraft operating directly behind, or directly behind and less than 1,000 feet.

**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–***
*FAAO JO 7110.65, Para 5–4–10, Prearranged Coordination.*

# 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 FAAO 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 subpara o, facility air traffic managers may delete items not required):

**a.** Airports/heliports.

**b.** Runway centerline extension and/or final approach course.

***REFERENCE–***
*FAAO 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.** For sites equipped with STARS, facility air traffic managers must specify in a facility directive procedures for using optional maps.

***NOTE–***
*The intent of subpara 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–***
*FAAO 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. FAAO 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 determine the location and the method for the display of vectoring altitude charts to provide controllers with the minimum vectoring altitudes as follows:

**a.** Where the system is configured to display single radar sensors, provide:

**1.** An MVAC that accommodates the largest separation minima of all available sensors; or

**2.** Unique MVACs that accommodate the appropriate separation minima of each available sensor.

**b.** Where the system is configured to simultaneously display multiple radar sensors, provide an MVAC that accommodates the largest separation minima of all available sensors; or

**c.** Where the system is utilizing FUSION mode, develop an MVAC that provides:

**1.** Three-mile separation minima or more from obstacles, except when applying the provision in paragraph 3-8-1c2. 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. As a minimum, this may be accomplished by using the existing single-sensor MVAC for the predominant radar sensor; and

**2.** Five–mile separation minima from obstacles for use whenever the FUSION system cannot provide 3–mile separation due to degraded status or system limitations.

**d.** At locations adding FUSION, provided the facility uses existing MVA charts with 3–mile buffers and an MVAC with 5–mile buffers, additional charts do not need to be developed to support FUSION.

***NOTE–***
*Mission Support Services–Aeronautical Products, ATC Products Group should be contacted if assistance is required. (See FAAO 8260.3, United States Standard for Terminal Instrument Procedures (TERPS) Chapter 10.)*

***REFERENCE–***
*FAAO JO 7110.65, Para 5–5–4, Minima.*

## 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 Sector Design and Analysis Tool (SDAT). Facility Managers may request assistance in the development and maintenance of their MVAC or request SDAT user support by soliciting the Mission Support Services, Geographic 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 Support Services, ATC Products Group upon certification.

***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 1720, 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 subparas e2 and 3 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 ATC Products Group 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 Terminal Safety and Operations Support for review.*

**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 ATC Products Group 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 subpara 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, and in no event will requested reductions result in an MVA that does not comply with 14 CFR 91.177.

**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.** Where an operational need is demonstrated and documented, managers are permitted to round a resulting MVA with an AAO additive to the nearest 100–foot increment, provided the minimum ROC is maintained for other non–AAO obstacles. For example, 3,049 feet rounds to 3,000 feet to support glide slope intercept requirements.

**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 ATC Products Group through the Service Center OSG. Upon completion of the ATC Products Group 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 Terminal Safety and Operations Support.

**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 ATO Terminal Safety and Operations Support 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 ATC Products Group for processing.

**m.** Each request must indicate the MVAC was accomplished in SDAT and stored in the SDAT repository.

**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 both ROC reduction and AAO additive rounding requests. The MVA request with Form 7210–9 may be electronically forwarded to the OSG but must be followed with a hard copy with original signatures. However, when the capability of electronic signatures is developed within SDAT, Form 7210–9 will be transmitted electronically between the facility, Service Center, and ATC Products Group in lieu of the paper process. SDAT will automatically store the approved MVAC package in the National Airspace System Resource (NASR).

**o.** For those facilities that use the SDAT program office for the development and maintenance of their MVACs, the SDAT program office personnel must be notified to complete the final submission step of the project within the repository when sending the MVAC request to the OSG.

**p.** 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.

**q.** 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.

**r.** 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.

**s.** Air traffic managers must ensure that MVACs are periodically reviewed for chart currency and simplicity and forwarded for certification to the ATC Products Group 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–***
*FAAO JO 7110.65, Para 7–5–4, Altitude Assignment.*
*FAAO 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 and an available channel in their video mappers. 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. (See FIG 3-9-1.)

***NOTE–***
*Appropriate terrain/obstacle clearance minimum altitudes may be defined as MIA, MEA, Minimum Obstruction Clearance Altitude (MOCA), or MVA.*

**b.** Alternatives, such as combining existing maps, eliminating a lower priority map or, as a least desirable alternative, merging the EOVM with the MVA map, must be considered when necessary to accommodate the EOVM.

**c.** 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.

**d.** 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)** Satellite airports and other airports which could serve in an emergency.

**(e)** MVA if the EOVM must be merged with the MVA map for the former to be accommodated.

**(f)** 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.

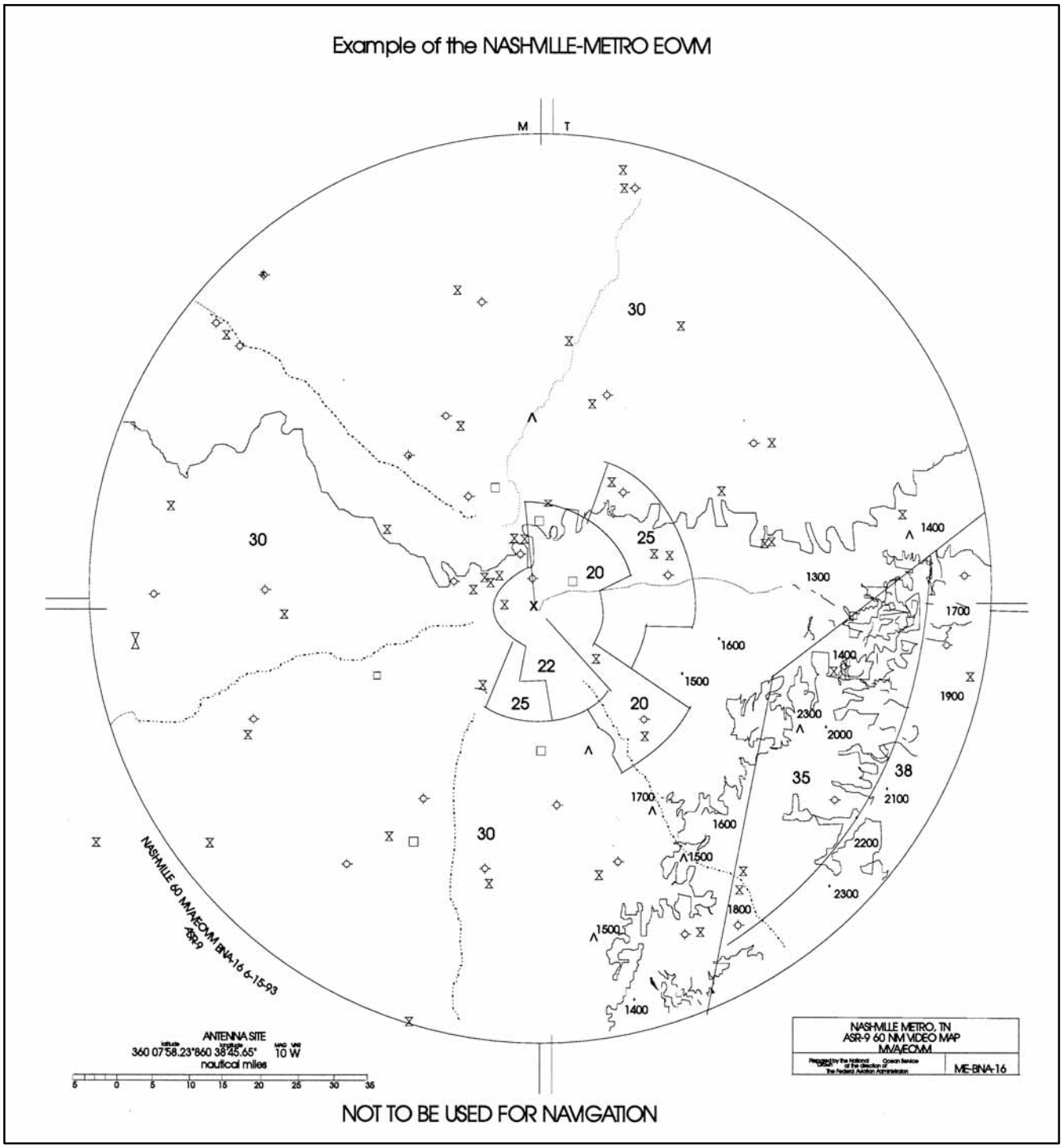
***NOTE–***
*To avoid unnecessary map clutter, the last two digits are not required.*

***EXAMPLE–***
*2=200, 57=5700, 90=9000, 132=13200*

**e.** EOVM Production: The preparation and procurement of the EOVM must be accomplished in accordance with FAAO 7910.1, Aeronautical Video Map Program.

**f.** EOVM Verification: The original EOVM procurement package must be checked for adequacy and then coordinated with the Mission Support Services, Terminal Procedures and Charting Group through the Service Area Operations Support Group, Flight Procedures Team (FPT) to verify the accuracy of its information. At least once every 2 years, the EOVM must be reviewed for adequacy and coordinated with the Terminal Procedures and Charting Group through the FPT for accuracy.

*FIG 3–8–1*
**EOVM**


Example of the NASHVILLE-METRO EOVM
M
T
30
30
25
20
22
25
20
1400
1300
1700
1600
1400
1500
1900
2300
2000
35
38
2100
1700
1600
2200
1500
2300
1800
1500
1400
30
NASHVILLE 60 NM/MEOVM BNA-16 6-15-93
ASR-9
ANTENNA SITE
360 07 58.23"860 38 45.65"
10 W
nautical miles
5 0 5 10 15 20 25 30 35
NASHVILLE METRO, TN
ASR-9 60 NM VIDEO MAP
MVA/EOVM
ME-BNA-16
NOT TO BE USED FOR NAVIGATION

## 3–8–5. ESTABLISHING DIVERSE VECTOR AREA/S (DVA)

**a.** DVAs may be established at the request of the ATM and coordinated jointly with the appropriate Service Area OSG and Mission Support Services, Terminal Procedures and Charting Group for candidate airports within the facility's area of jurisdiction. DVAs should be considered when an obstacle(s) penetrates the airport's diverse departure obstacle clearance surface (OCS). The OCS is a 40:1 surface and is intended to protect the minimum climb gradient. If there are no obstacle penetrations of this surface, then standard takeoff minimums apply, obstacle clearance requirements are satisfied and free vectoring is permitted below the MVA. When the OCS is penetrated, the Terminal Procedures and Charting Group procedural designer will develop an obstacle departure procedure (ODP). An ODP may consist of obstacle notes, non–standard takeoff minimums, a specified departure route, a steeper than normal climb gradient, or any combination thereof. If an ODP is developed for a runway, it is a candidate for a DVA. The ATM should consider whether a DVA is desired and then consider if development would provide operational benefits exceeding existing practices. This is done after determining that sufficient radar coverage exists for any given airport with a published instrument approach. When established, reduced separation from obstacles, as provided for in TERPS diverse departure criteria, will be used to radar vector departing IFR aircraft below the MVA. To assist in determining if obstacles penetrate the 40:1 surface, ATMs may request the Terminal Procedures and Charting Group provide them with a graphic depiction of any departure penetrations in addition to completing the following steps:

**1.** 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 obstacle notes appear, then a DVA is not necessary. If a DP appears, development of a DVA becomes an option.

**2.** If the location is not listed, query the NFDC Web site at http://nfdc.faa.gov, 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.*

**3.** If the ATM elects to request a DVA, use the sample memorandum below as a guide (see FIG 3–9–2). 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, 330 CW 030), 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–9 with Mode S beacon system.

**(f)** Facility Hours of Operation.

*FIG 3–8–2*
**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 Terminal Procedures and Charting Group through the appropriate Service Area OSG Manager.

**c.** When a DVA is established, it will be documented and provided to the facility by the Terminal Procedures and Charting Group on FAA Form 8260–15D, Diverse Vector Area (DVA). The ATM must then prepare a facility directive describing procedures for radar vectoring IFR departures below the MVA 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 radar vectors are provided to aircraft below the MVA.

**3.** Free vectoring areas, in which random vectoring may be accomplished below the MVA.

**d.** IFR aircraft climbing within a DVA must not be assigned an altitude restriction below the MVA. When leaving the confines of the DVA, ensure the aircraft reaches the MVA or has reported leaving the altitude of the obstacle(s) for which the MVA was created, climbing to an altitude at least 1,000 feet above the obstacle.

**e.** Headings must not be assigned beyond those authorized by the DVA prior to reaching the MVA.

**f.** Ensure all controllers are familiar with the provisions of the facility directive before vectoring aircraft in accordance with DVA procedures.

# Section 9. Color Displays–Terminal

## 3–9–1. COLOR USE ON ATC DISPLAYS

Color use on terminal systems was developed jointly with the Terminal Safety and Operations Support Office 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 must be developed jointly with the Terminal Safety and Operations Support Office, the appropriate Service Area Director, 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, range rings, maps A and B must be dim gray.

**4.** Coordination rundown list as follows:

**(a)** Unsent must be green.

**(b)** Unacknowledged must be blinking green.

**(c)** Acknowledged must be steady green.

**5.** Geographic restriction border, fill, and text must be yellow.

**6.** Data blocks owned must be white.

**7.** Limited or partial data blocks unowned must be green.

**8.** Search target symbol must be blue.

**9.** Beacon target extent must be green.

**10.** History trails must be blue.

**11.** Predicted track line must be white.

**12.** 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 danger and yellow for warning.

**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.** Ensure no more than two colors are assigned to a single data block.

**g.** Use of color in general should be kept to a minimum. When color is used to denote a specific meaning, e.g., yellow means caution, the number of colors used on a single display must be no more than six and should be constrained to the primary colors of red, yellow, green, blue, orange, and cyan. The optimum number of colors used for coding should be limited to four.

**h.** The specific colors that are selected for a display must take into account the ambient environment and the capabilities of the specific monitor.

**i.** Any implementation of color is to be tested in the context and environment to which it was designed.

**j.** Color use needs to be consistent across all of the displays that a single controller will use.

**k.** Facility air traffic managers must make all requests for any color changes to color baseline through the Director, Terminal Safety and Operations Support.

# Chapter 4. Correspondence, Conferences, Records, and Reports

## Section 1. General

### 4–1–1. CORRESPONDENCE STANDARDS

Prepare and issue facility correspondence in accordance with:

**a.** FAAO 1360.16, FAA Correspondence Policy, which prescribes basic correspondence standards.

**b.** FAAO 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, Reno 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, Denver FSS."

### 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 Terminal Operations Area Operations Air Traffic Environmental Protection Specialist (EPS), facilities must conduct and document a preliminary environmental review of new or revised ATC procedures in accordance with FAAO 1050.1, Environmental Impacts: Policies and Procedures, concurrent with initial airspace planning. The facility's review requires the documentation necessary to determine foreseeable noise impacts and controversies.

**a.** Particular attention must be made to determine whether procedures, either new or modified, will potentially impact noise sensitive areas as defined in FAAO 1050.1, Policies and Procedures for Considering Environmental Impacts.

**b.** For air traffic modifications to procedures at or above 3,000 feet (above ground level), the Air Traffic Noise Screening Procedure (ATNS) should be applied.

**c.** Modifications to procedures below 3,000 feet (above ground level) require additional analysis. Facilities must contact the EPS for further guidance.

**d.** If the preliminary environmental review indicates that an Environmental Assessment or an Environmental Impact Statement is not required, the documentation must be retained in the facility with copies of all documentation forwarded to the EPS. The directive resulting from the air traffic procedure must contain a statement that a preliminary environmental review has been accomplished and that a Categorical Exclusion has been approved by the responsible official.

# Section 2. User Coordination/Conferences/Publicity

## 4–2–1. LOCAL CONFERENCES

**a.** Facility air traffic managers must call local 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 appropriate Service Area office and one to each conference member.

**b.** 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 Service Area office.

## 4–2–2. PILOT EDUCATION

Air traffic facilities should maintain an aggressive pilot education program whereby facility personnel provide briefings and conduct seminars for pilot groups. In addition to briefings on local airspace and procedures, information on national programs should be provided. Emphasis should be placed on operations within Class B and Class C airspace and on the FSS Modernization Program. The following are examples of the type of voluntary programs that may be offered:

**a.** Operation Rain Check.

***REFERENCE–***
*FAAO 7230.16, Pilot Education Program – Operation Rain Check.*

**b.** Operation Takeoff.

***REFERENCE–***
*FAAO 7230.17, Pilot Education Program – Operation Takeoff.*

**c.** Facility sponsored pilot/controller forums.

**d.** FSDO accident prevention safety meetings.

## 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.** Inter–facility 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

**a.** Air traffic managers must negotiate a LOA when operational/procedural needs require the cooperation and concurrence of other persons/facilities/organizations. A LOA must be prepared when it is necessary to:

**b.** Supplement established operational/procedural instructions.

**c.** Define responsibilities and coordination requirements.

**d.** Establish or standardize operating methods.

**e.** Specify special operating conditions or specific air traffic control procedures.

**f.** 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.

**g.** Establish responsibilities for:

**1.** Operating airport equipment.

**2.** Providing emergency services.

**3.** Exchange braking action reports with the airport management. As a minimum, procedures must provide for the prompt exchange of reports which indicate runway braking conditions have deteriorated to "fair," "poor," or "nil" or have improved to "good."

**4.** Reporting operating limitations and hazards.

**h.** Describe procedures that supplement those contained in FAAO JO 7110.65, Air Traffic Control, or FAAO JO 7110.10, Flight Services, to satisfy a requirement of a military service.

***REFERENCE–***
*FAAO JO 7110.65, Para 1–1–10, Constraints Governing Supplements and Procedural Deviations.*

**i.** Define stereotyped flight plans used for special operations, such as training flights or flight test activities.

**j.** Describe airspace areas required to segregate special operations.

**k.** Establish aircraft radiotelephony call signs to be used by the tower and the local operators.

**l.** 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."

## 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: Define areas of security responsibility. (See para 2–7–5, Facility Security.)

**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–***
*FAAO 7210.3, Para 2-1-30, 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 "nil" and "poor" are to be immediately transmitted to the airport operator, 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 150/5200–30C, Airport Winter Safety and Operations.*

**4.** Control of vehicular traffic on airport movement areas.

***NOTE–***
*The intent of these LOAs is to use them where airports have standard routes that traverse movement areas on a long term basis. These LOAs are not intended to allow short term operations, single situations, or "open– field" clearances.*

**5.** 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.

## 4–3–3. DEVELOPING LOA

Air traffic managers must take the following action when developing a LOA: (See FIG 4–3–1 and FIG 4–3–2.)

**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.

**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.

**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 FAAO JO 7110.65, Air Traffic Control, unless appropriate military authority has authorized application of reduced separation between military aircraft; or

***REFERENCE–***
*FAAO JO 7110.65, Para 1–1–9, Procedural Letters of Agreement.*

**2.** Those between an IFR facility and a tower to authorize the separation services prescribed in para 2–1–15, Authorization for Separation Services by Towers, and para 10–5–3, Functional Use of Certified Tower Radar Displays.

## 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.

**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–***
*FAAO JO 7210.3, Para 2–2–14, Facility Directives Repository (FDR).*

## 4–3–6. ANNUAL REVIEW/REVISIONS

**a.** Review LOAs 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.

**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.

## 4–3–7. 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.

*FIG 4–3–1*

**Format for a Control Facility/FSS Letter of Agreement**

(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:
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,
or
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:
VISIBILITY (value). A–T–C UNABLE TO ISSUE DEPARTURE/ENTRY CLEARANCE.

(3) To suspend operations:
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:
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

*FIG 4–3–2*

**Format for an ARTCC/Air Division Letter of Agreement**

(Name) Air Route Traffic Control Center and (Name) Air Division

**LETTER OF AGREEMENT**

EFFECTIVE:_____

SUBJECT: Inter–Facility 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)

## 4–3–8. 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–***
*FAAO JO 7110.65, Para 5–4–11, 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 FAAO JO 7110.65, Air Traffic Control, para 2–1–14, Coordinate Use of Airspace, para 2–1–15, Control Transfer, para 5–4–5, Transferring Controller Handoff, para 5–4–6, Receiving Controller Handoff, or para 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.*

**c.** Due to system design, the transfer of data stored in the fourth line of the DSR FDB will not be displayed to the controller when operating on the backup system in either DARC/Host or DARC only modes.

**1.** When switching from the primary system to either mode of the backup system, ensure that the interfacility DSR fourth line data transfer is disabled.

**2.** When notified that an adjacent facility has transitioned from their primary system to either mode of the backup system, ensure that the interfacility DSR fourth line data transfer to that facility is disabled.

**3.** After successfully completing the transition back to the primary system, coordinate a time to enable interfacility DSR fourth line data transfer.

**4.** The air traffic manager must ensure that these procedures are incorporated into a Standard Operating Procedure.

# 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 Preseident for Terminal Services, or the Administrator).*

## 4–4–2. USE OF AIRCRAFT CALL SIGNS

**a.** Facility air traffic managers must ensure that LOAs concerning the use of aircraft call signs by local flight operators conform with the following standards:

**1.** FCC Regulations (87.115) are followed.

**2.** Proposed call signs are coordinated with and approved by System Safety and Procedures before assignment to avoid possible duplication or conflict with air–ground call signs assigned on a national basis to other aircraft operators.

**3.** Call signs are only used for:

**(a)** Communications with the local tower.

**(b)** Local VFR operations.

**4.** Call signs are not used in filing flight plans.

**b.** A copy of each LOA covering local aircraft call signs must be forwarded to Terminal Safety and Operations as soon as practicable after receipt of the approval letter for said call sign.

## 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 subpara 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 subpara 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 issue 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 prepared in accordance with FIG 4–5–1.

**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.** Letters to airmen must be numbered consecutively on an annual basis; i.e., 03–1, 03–2, etc.

**5.** Each letter to airmen must contain an effective date and a cancellation date and must not remain in effect beyond the time the information contained in the letter becomes obsolete or more than 24 months, whichever occurs first.

**6.** Issue a new letter on the same subject at the end of the 24–month period if the information contained in a letter to airmen requires continued exposure. (See FIG 4–5–1.)

*FIG 4–5–1*
**Letters to Airmen**

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
(Name of Facility)
(Address of Facility)
(City, State)

ISSUED: (Date) EFFECTIVE: (Date)

(Name of Facility) LETTER TO AIRMEN NO. ( )

SUBJECT: (Subject of Letter)

CANCELLATION: (Date: Not to exceed 24 months)

(Text of Letter)

(Signature)

(Name of Facility Air Traffic Manager)
Air Traffic Manager: (Name of Facility)

## 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 FAAO 1350.15, Records Organization, Transfer, and Destruction Standards.

## 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 subpara 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, excluding Federal contract towers (FCT) and FAA flight service stations, must use the Comprehensive Electronic Data Analysis and Reporting (CEDAR) program to complete an automated version of FAA Form 7230–4.

**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.

***NOTE–***
*A National Workgroup has been established to develop methods to exchange pertinent data between CEDAR and NTML that is needed to complete FAA Form 7230–4. This method will enable a single method of completing an automated version of the FAA Form 7230–4 while maintaining the unique program functionality capability of both CEDAR/NTML programs.*

**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, FLMIC, 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.** Use of a typewriter, 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, e.g., "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 para 4–6–5, Preparation of FAA Form 7230–4.*

**h.** FAA Order 7210.56, Air Traffic Quality Assurance, defines situations requiring a Quality Assurance Review (QAR) and the procedures to be followed to accomplish the review. Promptly notify personnel responsible for conducting the review upon identifying the need for a QAR. Record QARs with the minimum detail necessary in order to identify the initiating incident (for example, unusual go–around, 3–hour tarmac delay) and how it was identified (for example, in–flight evaluation).

**1.** En Route and Oceanic facilities must use the CEDAR tool to record and disseminate QARs. En Route and Oceanic facilities must also use CEDAR to document the resolutions of QARs.

**2.** Terminal facilities and flight service stations may utilize an automated version of FAA Form 7230–4 or establish local forms and procedures for recording, disseminating, and documenting the resolution of QARs. 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 subpara 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.** Place a large letter "Q" in the left hand margin beside QAR entries. Resolution of QARs, made in accordance with FAAO 7210.56, Air Traffic Quality Assurance, must be indicated by either the responsible person initialing and dating the original "Q" entry, or by a second "Q" entry identifying the incident and person responsible for accomplishing its review. It is not necessary to document the details of the review or corrective actions taken in these log entries provided the persons resolving the QAR maintain adequate notes and records so as to reasonably explain the QAR at a later date. The "Q" is not required for facilities using local forms if procedures are established in accordance with subpara h.

**k.** When this form is used to describe the operation of radioteletypewriter and radiotelegraph circuits, record the following information:

**1.** Frequencies being used and type of watch (continuous or scheduled) being maintained on each frequency.

**2.** A record of each communication, test transmission, or attempted communication except when such information is recorded elsewhere in the facility, the time the communication is completed, the station communicated with, and the frequency used.

**l.** Employees other than the person responsible for the watch who make an entry must initial or enter initials for each of their own entries.

**m.** Use additional forms as necessary to complete the reporting of the day's activity.

**n.** Make an entry closing out FAA Form 7230–4 at the close of business.

**o.** 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 a position 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.

**(a)** *ARTCCs:* ARTCCs must use sector identifiers which have been approved by the En Route and Oceanic Area Office.

**(b)** *TERMINALS and FSSs:* When there is more than one position of a particular type, establish and use individual identifiers for each position. When only one position of a particular type exists, this field may 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 | Non–Radar 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 |
| 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 | Non–Radar 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* |
|---|---|
| AA | Airport Advisory |
| AE | Service A Edit |
| BC | Broadcast |
| BE | Service B Edit |
| CO | Coordinator |
| FD | Flight Data |
| FW | Flight Watch |
| IF | Inflight |
| NO | NOTAM |
| OT | Other |
| PF | Preflight |
| TT | Teletype |
| WC | Weather Coordinator |
| 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 1350.15, Records Organization, Transfer, and Destruction Standards. 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 para 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 En Route and Oceanic Operations Area or Terminal Operations Area office approval and must verify the accuracy of the automated sign on/off procedure by conducting a 30−day trial period. After successfully 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 ~~V4~~ 67 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)

FAA Form 7230-4 (4-82) Supersedes previous edition
**(1–94)**

**NSN: 0052–00–024–5002**

*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

FAA Form 7230-10 (6-94) NSN: 0052-00-024-6102 Page 1

# 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, as well as receiving summary reports and information from System Operations in FAA Headquarters. For more detailed information on OPSNET reporting policies and procedures, consult FAAO 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 17–5–13, 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, FAAO 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting, and other appropriate directives.

## 4–7–4. UNIDENTIFIED FLYING OBJECT (UFO) REPORTS

**a.** Persons wanting to report UFO/unexplained phenomena activity should contact a UFO/unexplained phenomena reporting data collection center, such as the National UFO Reporting Center, etc.

**b.** If concern is expressed that life or property might be endangered, report the activity to the local law enforcement department.

# Section 8. Freedom of Information Act (FOIA)

## 4–8–1. ACCIDENT/INCIDENT RECORDINGS

The original ATC voice tape or DAT will not ordinarily be used in response to requests for copies. The copies will be made from the original rerecording. When filling a request, do not use a cassette that has a previous recording on it.

**a.** With the prior approval of the Service Area office and Director of Safety Investigations, a requesting party must be permitted to obtain a direct rerecording of the original tape or DAT. The facility air traffic manager must ensure that a qualified FAA employee retains custody of the original recording and is present during reproduction. Recordings will be continuous, thus eliminating starting and stopping of the original tape or DAT to the maximum extent possible.

**b.** A certified rerecording must be made of all portions of tape(s) or DAT(s) copied by the requesting party. This recording must be retained in the facility in accordance with the appropriate records retention criteria; i.e., accidents or incidents, etc. The original tape(s) or DAT(s), will be returned to service.

## 4–8–2. REQUESTS TO PRESERVE TAPE OR DAT UNDER FOIA

When requests are received to preserve more of the original tape or DAT(s) than required by FAAO 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting, or FAAO JO 7210.3, Facility Operation and Administration, the following will apply:

**a.** Immediately remove the tape(s) or DAT(s) or the pertinent portion thereof from service. During the time a tape(s) or DAT(s) is to be preserved, the reel, or DAT on which it is to be stored must be labeled as follows: "WARNING this tape or DAT is to be preserved and is not to be returned to service until released by the Service Area office."

**b.** The requestor must be notified in writing that the requested tape(s) or DAT(s) will be held for a period of 20 days from the date of FAA's response. Within this time, the requesting party must make arrangements to obtain a rerecording. If, at the end of the 20–day retention period, there has been no contact by the requesting party, or no follow through in obtaining a rerecording, the requestor will be advised in writing of that fact and be advised that we will hold the tape(s) or DAT(s) for an additional 10 days from the date of this notification. If, at the end of the additional 10 days, there has been no contact or follow through by the requesting party, the portion of tape(s) or DAT(s) that is more than we normally retain must be returned to service.

## 4–8–3. COMPUTER DATA

The data on a computer tape/disc is normally useless to a requesting party unless reduced to printed form. Therefore, when filling a request for computer data, the tape/disc will be reduced to printed form. The following disclaimer will be attached to any computer reduction: "This document is derived from computer magnetic recordings of internal computer processing. It is not an exact representation of the control position display."

## 4–8–4. FEES

**a.** A request may be received for a certified rerecording on cassette tape or digital audio tape format. Unless otherwise specified in the request, prepare certified rerecordings on cassette tape.

**1.** Cassette Tape Format: A fee of $30.00 will be charged for each hour or portion thereof of actual recordings. No additional fee will be charged for preparation time or personnel costs.

***EXAMPLE–***

**1.** *A request is received for a rerecording of 1 hour of Ground Control (GC) and 30 minutes of Local Control (LC). Total time = 1:30. The charges would be computed thus:*

*$30.00 First hour (GC)*
*$30.00 Portion of time for the next hour (LC)*
*$60.00 Total Charge*

**2.** *A request is received for a total of 25 minutes of actual recordings. The charge would be $30.00.*

**3.** *A request is received for certified rerecordings of Clearance Delivery, GC, and LC with each position placed on a separate cassette. The total recorded time on all 3 positions is 45 minutes. The charge for the*

*3 cassettes would be computed thus:*

*$30.00 45 minutes*
*No additional charges would be assessed for the individual cassettes.*

**2.** DAT: A fee of $25.00 will be charged for each DAT provided under the request. In addition, a flat rate of $30.00 will be charged for each different block of time requested, limited to the daily 24 hour period recorded on the facility's master DAT. In other words, although a request for one block of time (i.e., 0900–0900) is a total of 24 hours, it is spread over a two day period. Therefore, such a request would be considered as two separate blocks of time.

***EXAMPLE–***
**1.** *A request is received for a voice recording on DAT format for 2 different blocks of time; from 0900–1200 and 1500–1830 on May 5. Since no specific position(s) were specified, the request could include all recorded positions during the time periods. Regardless, the charges for the service would be computed thus:*

*$25.00 1 DAT*
*$30.00 1 Block of time (0900–1200)*
*$30.00 1 Block of time (1500–1830)*
*$85.00 Total Charge*

**2.** *A request is received for a voice recording beginning on June 12, at 0900, through June 13, at 1800. The facility will have stored this information on two separate DATs. However, all of the requested data can be transferred to a single DAT for the customer. The charges would be computed thus:*

*$25.00 1 DAT*
*$30.00 1 Block of time (June 12, 0900–2359)*
*$30.00 1 Block of time (June 13, 0000–1800)*
*$85.00 Total Charge*

**3.** *The same information in example 2 is requested except the customer wants the data to be placed on separate DATs and labeled for each day. The charge would be computed thus:*

*$50.00 2 DATs @ $25.00 each*
*$30.00 1 Block of time (June 12, 0900–2359)*
*$30.00 1 Block of time (June 13, 0000–1800)*
*$110.00 Total Charge*

**4.** *A request is received for a voice recording from 0630–2345. The charge would be computed thus:*

*$25.00 1 DAT*
*$30.00 1 Block of time (0630–2345)*
*$55.00 Total Charge*

**5.** *A request is received for voice recordings of: LC, August 2, 1015–2255; GC, August 3, 0700–1635; and LC, August 3, 0700–1635. The charges would be computed thus:*

*$25.00 1 DAT*
*$30.00 1 Block of time (LC, August 2, 1015–2255)*
*$30.00 1 Block of time (GC and LC, August 3, 0700–1635)*
*$85.00 Total Charge*

**6.** *A request is received for a voice recording of: LC, August 2, 1015–2255; LC, August 3, 0700–1635; and GC, August 3, 0700–1530. The charges would be computed thus:*

*$25.00 1 DAT*
*$30.00 1 Block of time (LC, August 2, 1015–2255)*
*$30.00 1 Block of time (LC, August 3, 0700–1635)*
*$30.00 1 Block of time (GC, August 3, 0700–1530)*
*$115.00 Total Charge*

**b.** CPU cost:

**1.** FSS: $13.00

**2.** ARTS II/III: $99.00

**3.** HOST**:** $275.00

**c.** Fees for a computer search will be computed using the following formula:

$$\textit{Fee} = \frac{\textit{(minutes of CPU time)}}{60} \textit{ X (CPU cost)} + \frac{\textit{(minutes operator/programmer time)}}{60} \textit{ X (salary)} \quad \textit{X (1.16)}$$

***EXAMPLE–***
*For ARTCC given 15 minutes CPU time; 45 minutes programmer time; $30 salary.*

***NOTE–***
$({}^{15}/_{60} \text{ x } \$275) + {}^{45}/_{60} \text{ x } \$30 \text{ x } 1.16 = \$94.85$

# 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.*

**a.** An advance survey group comprised of representatives of the Office of the Military Assistant to the President, the U.S. Secret Service, the White House Staff, and a Presidential Advance Agent may visit each location which 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 ATCT manager, 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 an advance group.

**b.** The advance group, comprised of representatives of the same organizations stated in subpara 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.

**1.** The air traffic manager 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 and the appropriate ARTCC 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 ATCT manager, 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 air traffic manager must take whatever steps are necessary to ensure that the Presidential flight, airplanes, helicopters, and entourage are given priority. Restrictions will be placed upon normal air traffic operations to provide priority unless directed otherwise by the Presidential advance agent (USAF) or the Secret Service representative; the latter when the Presidential advance agent (USAF) is not directly involved. ATCT personnel must be guided by the determinations of the advance group and must cooperate to the maximum extent possible. The air traffic manager must consider the following alternatives:

**(a)** Employing air traffic control techniques to temporarily adjust or suspend the movement of traffic to accommodate the arrival and the departure of the Presidential aircraft and while the Presidential entourage is on the airport.

**(b)** Requesting traffic, by NOTAM, to voluntarily conform to restrictions in the vicinity of an airport. The NOTAM must give details 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.

**c.** 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 FAAO JO 7610.4, 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–***
*FAAO 7930.2, Para 7–1–1, FDC NOTAM Categories.*

**d.** 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.*

**e.** 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.

**f.** 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 para 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–***
*FAAO 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 special handling by ATC facilities to the maximum extent possible. FIAOs/flight inspectors are expected to coordinate with the facility's air traffic supervisor on duty, or a designated representative, 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.

**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 terminal and en route flight inspections are accomplished using automatic recording equipment, and an uninterrupted flight is necessary for the successful accomplishment of the flight. Maximum cooperation will help the FIAOs accomplish their job within their limited aircraft resources. FAAO 8240.41, Flight Inspection/Air Traffic On–site Coordination Requirements, provides additional details as does FAA0 7110.65, Air Traffic Control.

**d.** Facility procedures must provide a means of passing impending flight inspection information on to subsequent shifts and/or immediately notifying FIAOs/PICs when facility air traffic activities make it impossible to handle flight inspections expeditiously.

## 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. IDENTIFICATION OF SPECIAL DOE FLIGHTS

**a.** When transporting radioactive/high explosive materials, DOE flights will be identified by using the prefix "RAC" followed by the last four digits of the aircraft registration number.

**b.** The special characteristics of the cargo dictate that the flight be carefully planned along selected routes. Pilots may refuse clearances that require route or altitude changes.

## 5–3–3. NOTIFICATION OF DOE REPORTED ACCIDENT/UNREPORTED AIRCRAFT

In the event a "RAC" flight is involved in an accident, inform the STMCIC of the appropriate ARTCC so that he/she may immediately notify local and state rescue and law enforcement authorities of the accident and tell them that the flight was transporting radioactive/high explosive materials. The STMCIC must then notify the DEN air traffic security coordinator (ATSC), and the ATSC will notify the DOE Operations Control Center of the accident via urgent telephone call at (702) 295–0311. The STMCIC must be informed whenever a loss of radio/radar occurs en route or the flight is overdue at the destination. The STMCIC must then notify the OMIC and the ATSC, and the ATSC will notify the DOE duty officer.

## 5–3–4. ATMOSPHERE SAMPLING FOR NUCLEAR CONTAMINATION

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

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

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

***REFERENCE–***
*FAAO JO 7110.65, Para 9–3–15, SAMP.*
*FAAO JO 7610.4, Para 12–4–3, Atmospheric Sampling for Nuclear Contamination.*

## 5–3–5. 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.

## 5–3–6. WEATHER RECONNAISSANCE FLIGHTS

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

**a.** WINTER STORM MISSIONS.

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

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

**(a)** Mission call–sign.

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

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

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

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

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

***NOTE–***

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

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

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

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

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

**b.** HURRICANE AND TROPICAL CYCLONE MISSIONS.

**1.** These missions are flown in support of the National Hurricane Operations Plan (NHOP). Prior to a hurricane/tropical cyclone reconnaissance mission the 53WRS Current Operations or the AOC Flight Operations Division will contact the ATCSCC, and provide the following data:

**(a)** Mission call–sign.

**(b)** Departure point and estimated time of departure.

**(c)** Approximate route(s) to be flown.

**(d)** Requested altitude(s).

**(e)** Any special requests.

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

**2.** The ATCSCC must:

**(a)** Upon receipt of hurricane reconnaissance mission data, conference the affected ARTCC TMUs and distribute the mission information.

**(b)** Assist field facilities with traffic flow priorities if the hurricane reconnaissance flight will impact terminal traffic.

**3.** ARTCC TMUs must:

**(a)** Upon receipt of hurricane reconnaissance mission data, ensure that they are distributed to appropriate facilities in their jurisdiction.

**(b)** Relay any operational concerns to the ATCSCC for further evaluation and coordination.

**4.** Should it become necessary to contact a TEAL or NOAA flight and all other methods of communication are not possible (e.g., direct radio, ARINC, aircraft relay), the Chief, Aerial Reconnaissance Coordinator, All Hurricanes (CARCAH) may be requested to relay messages to/from the aircraft. You may receive a phone call from CARCAH to authenticate the request.

**5.** Requests to change any portion of the NHOP must be coordinated with System Operations and Safety.

## 5–3–7. OPEN SKIES TREATY AIRCRAFT PRIORITY FLIGHTS (F and D)

**a.** The ATCSCC CARF must be the FAA coordination unit between the Defense Threat Reduction Agency (DTRA) and field facilities for all OPEN SKIES operational information. This includes initial notification and follow-up information on each mission that requires priority handling.

***NOTE–***
*OPEN SKIES flights that require priority handling are located in FAA Order JO 7110.65, Para 9-2-22.*

**b.** ARTCCs/CERAPs/HCF must designate and advise the CARF of a focal point within that facility for OPEN SKIES information.

**c.** Advance scheduled movement information of OPEN SKIES aircraft received from the DTRA will be forwarded by the CARF.

**d.** Upon initial notification of a priority OPEN SKIES flight, the affected ARTCCs/CERAPs/HCF must inform all SUA-using/scheduling agencies along the route of flight and any other facility/agency it deems necessary within their area of responsibility of the flight path and possible deviation path of the aircraft. A letter of agreement is required between the using agency and the controlling agency for Open Skies (F and D) aircraft to transit active SUA. When Open Skies (F and D) aircraft transit SUA, an ATC facility must provide standard separation services at all times.

***NOTE–***
*OPEN SKIES flights will not deviate from approved route of flight without ATC clearance.*

***REFERENCE–***
*FAAO JO 7110.65, Para 9-2-22.c.1(a)(1), Open Skies Treaty Aircraft.*

**e.** The air traffic manager of each facility through which the priority OPEN SKIES aircraft transits must ensure that a supervisory specialist(s)/CIC monitors the aircraft while in the facility's airspace. The supervisory specialist(s)/CIC must monitor the movement of the priority OPEN SKIES aircraft from the flight's entry into the facility's airspace until the flight exits the facility's airspace to ensure that priority handling, separation, control, and coordination are accomplished.

***REFERENCE–***
*FAAO JO 7110.65, Subpara 2–1–4n, Operational Priority.*
*FAAO JO 7110.65, Para 9–2–22, Open Skies Treaty Aircraft.*
*TREATY ON OPEN SKIES, TREATY DOC. 102–37.*

**f.** Air traffic facilities must notify the CARF (540-422-4212/4213) and DTRA Operations (703-767-2003) immediately in the event of any incidents or problems generated by OPEN SKIES aircraft.

**g.** The CARF must immediately notify System Operations Security/Strategic Operations Security for resolution of problems or incidents, if necessary.

# 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. 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.

## 5–4–3. 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.

## 5–4–4. 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.

## 5–4–5. 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.

## 5–4–6. 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:*

**a**. *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.*

**b**. *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.*

**c.** *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.*

## 5–4–7. 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.*

# 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. Vice President of En Route and Oceanic Services approval 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 Radar, Non–Radar, or Oceanic and subclassified by altitude strata.

### 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 En Route and Oceanic Service Area Office 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., Ocean21);

**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 TRAFFIC MANAGEMENT ADVISOR (TMA) INFORMATION

Configure TMA delay information for single–center metering (SCM) or adjacent–center metering (ACM) to display TMA schedule information on the main display monitor (MDM).

# Section 2. Sector Information Binders

## 6–2–1. EN ROUTE CONTROLLER TEAM CONCEPT

**a.** 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.

**b.** The intent of the team concept is not to hold the team accountable for the action of individual members in the event of an operational error/deviation.

## 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 subpara a thru subpara 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 communications 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 FAAO 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 SIGMETs and CWAs and must ensure that sufficient information is disseminated to facilitate the required alert broadcasts.

**4.** Terminal ATC facilities must relay the SIGMET and the CWA information to towers under their jurisdiction.

**b.** PIREPs:

**1.** The WC is the focal point for handling PIREP requests and for the dissemination of Urgent PIREPs within the ARTCC and to the terminal ATC facilities without LSAS which are or may be affected.

**2.** The CWSU meteorologist solicits PIREPs through the weather coordinator or directly from the controllers when required. Both solicited and unsolicited PIREPs that meet the Urgent PIREP criteria will be distributed immediately via the Leased Service A System (LSAS).

**c.** PIREP classification: Categorize 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.

***NOTE–***
*Defined as wind shear within 2,000 feet of the surface.*

**(f)** Volcanic eruptions and volcanic ash clouds.

**(g)** Detection of sulfur gases ($SO_2$ or $H_2S$), associated with volcanic activity, in the cabin.

***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.*

**(h)** Any other weather phenomena reported which are considered by the specialist as being hazardous or potentially hazardous to flight operations.

**2.** ROUTINE: Classify as ROUTINE all PIREPs received except those listed above.

## 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.

## 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 En Route and Oceanic Operations Service Area Office.

## 6–3–4. DATA COMMUNICATION

ARTCC air traffic managers must furnish personnel assigned Flight Data duties a copy of FAAO JO 7110.10, Flight Service, and ensure they are familiar with it.

## 6–3–5. CHANGES TO MTR AND MOA PUBLISHED ACTIVITY SCHEDULES

ARTCCs must use the procedures as outlined in FAA JO 7930.2, Notices 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 FAAO 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. Forward charts and chart data records to the FIFO for certification and annual review.

***NOTE–***

**1.** *This may be accomplished by appending the data on sector charts or MVA charts. Special translucent sectional charts are also available. Special ordering information is contained in FAAO 1720.23, Distribution of Aeronautical Charts and Related Flight Information Publications.*

**2.** *For guidance in the preparation and review of Mini–mum IFR Altitude charts see FAAO 7210.37, En Route Minimum IFR Altitude (MIA) Sector Charts.*

***REFERENCE–***

*FAAO 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 369.9MHz) 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

To the extent practicable, each ARTCC should provide IFR separation to aircraft not on IFR flight plans conducting practice instrument approaches to airports where that ARTCC provides approach control service.

**a.** At locations where IFR separation is applied to VFR aircraft conducting practice instrument approaches and that airport has a nonapproach control tower or a FSS, provisions for handling such aircraft must be included in a letter of agreement.

**b.** ARTCCs must issue a letter to airmen advising users of airports where IFR separation is provided for VFR aircraft conducting practice instrument approaches. The letter should include appropriate frequencies for the airport concerned.

# Section 5. Stored Flight Plan Program

## 6–5–1. CRITERIA

The following criteria must be used in coordinating and implementing the stored flight plan program. The term *air carrier,* as used below, includes scheduled air taxi operators meeting the criteria for this program.

**a.** Each air carrier will provide the appropriate ARTCCs with a specific contact for coordination of this program.

**b.** The individual air carrier is responsible for providing the ARTCC the following:

**1.** Current flight plan schedule data at least 7 days prior to the effective date of the scheduled change.

**(a)** Changes to become effective between the 15th and the last day of the month must be received by the facility no later than the 8th day of the month.

**(b)** Changes to become effective between the 1st and the 14th of the month must be received by the facility no later than the 23rd of the month.

**2.** Permanent cancellations to flight plans currently stored will be accepted on a day–to–day basis.

**3.** When submitting revised listings, permanent cancellations, and additions, all changes must be clearly indicated.

**(a)** Additions to the current listings must be noted as such by placing the word *ADD* preceding item G(4) of the format and outside the normal left–hand margin.

**(b)** Deletions from the current listings should be noted by adding the contraction *DLT* preceding item G(4) of the format and outside the normal left–hand margin.

**(c)** Changes, such as departure time, altitude, equipment, and route of flight should be indicated by adding the contraction *CHG* preceding item G(4) of the format and outside the normal left–hand margin with the change underlined.

**(d)** Subsequent listings will not include the added, deleted, or changed information.

**c.** Each air carrier is responsible for providing day–to–day modifications to computer–stored flight plans to the appropriate ARTCC or terminal facility control positions no more than 30 minutes prior to the stored proposed departure time. The following procedures apply:

**1.** The ARTCC/ATCT facilities will provide the airline officials with the controller position phone number for modification of the stored flight plan. This procedure only affects the flight for this particular day and is not intended to be a modification to the permanent stored flight plan.

**2.** Changes to the flight plan, other than the identification, considered to fall in this category are change in the type of aircraft, DME or transponder equipment, altitude, route of flight, or cancellation.

**3.** If the proposed departure time is changed by less than 1 hour, there is no requirement for it to be forwarded to the ARTCC.

**4.** If the trip number is changed, a new flight plan must be filed at least 40 minutes prior to the proposed departure time.

**5.** Day–to–day modifications to computer–stored flight plans destined for Newark, LaGuardia, or Kennedy Airports must be accepted up to 1 hour and 30 minutes prior to stored proposed departure time. If the proposed departure time of flights for these three airports is changed by 30 minutes or more, the center should be advised.

**d.** Flights scheduled at least 1 day each week may be submitted to the ARTCC for the stored flight plan program.

**e.** Only these flight plans involving a reasonable amount of stability in the flight planned routes will be accepted in the program. The initial minimum stability factor is 85 percent.

**f.** Flight plan data must be submitted in chronological order by airports of departure and in the format outlined in the following example:

***NOTE–***
*The number above each item is explained in detail by the coinciding numbers listed below the Example.*

**g.** Each airline is responsible for developing procedures to preclude any misunderstanding

between controller and pilot in the event of changes to the stored flight plan. If the airline has a requirement for the controller to issue a complete clearance for a period of time after the effective date of a stored flight plan, the airline will alert its pilots not to accept "cleared as filed" and add the following information to remarks after the route of flight data forwarded to the ARTCC: FULL RTE CLRNC TIL, PAREN DATE PAREN.

***EXAMPLE–***
*(See FIG 6–5–1.)*

## 6–5–2. IMPLEMENTATION AND COORDINATION

Each ARTCC must provide the airline with a contact for implementing and coordinating this program.

## 6–5–3. PREPARATION AND MAINTENANCE OF BULK STORE FILE

Each ARTCC must prepare and maintain card decks, magnetic tapes, and discs necessary for computer processing of the data provided by the airlines.

## 6–5–4. REMARKS DATA

ARTCC controllers must not use "cleared as filed" until after the date specified in the remarks portion of the stored flight plan. (See subpara 6–5–1g.) The remarks data may be removed from the stored flight plan after the date specified.

***FIG 6–5–1***
**Stored Flight Plan Program**

**(1)**
**STORED FLIGHT PLAN DATA FOR THE ZDC ARTCC**
**(2)**
**11–5–86**
**(3)**
**11–13–86**

| (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|---|---|---|---|---|---|
| **XXXXXXO** | **EAL490** | **DC9** | **0425** | **DCA** | **P1830** | **170** |

**(11)** **(12)** **(13)**
**DCA 7NP V123 RBV** **JFK** **0105**

| |
|---|
| (1) Heading indicating the ARTCC for which the flight plan was prepared. |
| (2) Date flight plan prepared. |
| (3) Effective date of the stored flight plan based on UTC. (Must be submitted prior to the 8th of the month for an effective date between the 15th and the last day of the month or by the 23rd of the month for an effective date of the 1st to the 14th.) |
| Note.–Items (1), (2), and (3) must be included on each page of data submitted. |

(4) Seven characters reflecting operating frequency with the letter "X" appearing in the days of operation and the letter "O" appearing in the days of nonoperation; e.g., XXXXXXO means the flight operates daily except Saturday. The frequency of operation should always be based on UTC; e.g., a flight proposed to depart at 2000 EST on Friday would be filed as a 0100Z Saturday operation.

(5) The identification of the flight using the ICAO–authorized 3-letter designator followed by the trip number of this flight; i.e., UAL743 would be United Airlines flight number 743. The minimum number of characters is three (3), and the maximum number is seven (7) characters of information.

(6) The type of aircraft to be used on this flight. When equipment varies by the day of the week, this may be entered into the listing as a different flight plan. Although the aircraft identification may be the same, the operating frequency would be different and would preclude ambiguity. The type of aircraft may consist of three items of data. First, if appropriate, the heavy jet indicator "H," followed by a required second item containing a maximum of four (4) characters (the authorized contraction for the aircraft designator as described in FAAO JO 7340.2, Contractions). The third item may be a virgule "/" and one alphabetic character to indicate transponder and distance measuring equipment (DME) as described in FAAO JO 7110.65 and the AIM.

(7) The filed true airspeed (TAS) in knots or Mach speed. The required format for Mach speed is three (3) digits preceded by the letter "M;" e.g., M095.

(8) The airport of departure must be a maximum of five (5) characters using the authorized identifier as listed in FAAO JO 7350.8, Location Identifiers, or the ICAO Location Indicators Document 7910.

(9) The proposed departure time must always consist of the "P" followed by four numerics expressing the proposed departure time in 24 hour Coordinated Universal Time (UTC).

(10) The requested altitude must be a maximum of three (3) characters expressing the requested altitude in hundreds of feet; e.g., 140, fourteen thousand feet; 80, eight thousand feet.

(11) The intended route of flight to the first destination airport. (When a flight has multistops, each portion of the scheduled route must form the basis for a new flightplan and will be distinguished from other portions by changing the point of departure.) The absence of an airway or route number between two fixes indicates direct; therefore no symbol or abbreviation is required.

(a) All junctions between airways must be included when they can be identified as fixes listed in FAAO JO 7350.8, Location Identifiers, or the ICAO Location Indicators Document 7910. If any problem exists in using the name or the fix identifier, coordination between the carrier and the ARTCC must be accomplished to resolve the problem.

(b) The point of departure must always be the first item of the route data. If a standard instrument departure (SID) routing is requested, it must be filed using the official designator, followed by the departure point and the transition/exit fix.

(12) The last item in the route of flight will be the destination of the flight as identified in FAAO JO 7350.8, Location Identifiers, or the ICAO Location Indicators Document 7910.

(13) Estimated Time En Route (ETE).

# Section 6. Air Carrier Computer Interface Program

## 6–6–1. 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.

## 6–6–2. 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 para 6–6–3, Criteria for Participation.

**d.** Develop facility procedures to monitor air carrier flight plan input as specified in Chapter 6, Section 5, Stored Flight Plan Program.

## 6–6–3. 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 para 6–6–4, Format Conventions, and para 6–6–5, Message Content.

## 6–6–4. 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.

## 6–6–5. 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 6–6–1).

**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.** Heavy aircraft indicator (H/): When aircraft are designated heavy, the heavy indicator is mandatory.

**2.** Type of Aircraft: This element is mandatory and contains two to four characters consisting of the authorized aircraft designator as contained in the FAAO JO 7340.2, Contractions.

**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 as listed in FAAO JO 7350.8, 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 6–6–1.)*

***FIG 6–6–1***
**Automated Flight Plan Message**

| | | | | | | |
|---|---|---|---|---|---|---|
| **(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** |

***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 7. User Request Evaluation Tool (URET)

## 6–7–1. GENERAL

URET is an en route decision support tool that is used by the sector team in performing their strategic planning responsibilities. URET 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.

## 6–7–2. FRONT–LINE MANAGER–IN–CHARGE RESPONSIBILITIES

**a.** Where authorized, perform URET data entries to keep the activation status of designated URET Airspace Configuration Elements current.

**b.** Ensure that the URET Airspace Status Display information accurately reflects current Special Activity Airspace (SAA) status.

**c.** Perform coordination and designated actions in the event of a URET outage 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 URET operations.

**e.** Ensure changes to restrictions based on the Restrictions Inventory and Evaluation are implemented in a timely manner.

## 6–7–3. OPERATIONS MANAGER–IN–CHARGE RESPONSIBILITIES

**a.** Ensure that the URET Airspace Status Display information accurately reflects current SAA status.

**b.** Perform coordination and designated actions in the event of a URET 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.

## 6–7–4. FACILITY MANAGER RESPONSIBILITIES

**a.** Ensure LOAs, SOPs, and Sector Position Binders are current to support URET.

**1.** Facility managers must consider URET 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 Use Airspace (SUA) 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 URET. Directives must include, but are not limited to:

**1.** URET Outages.

**2.** URET Airspace Configuration Elements Data Entry.

**3.** Standard Use of Automated Flight Data Management.

**4.** Sectors authorized to use URET Inappropriate Altitude for Direction of Flight (IAFDOF) Manual Mode.

**5.** Sectors authorized to use the URET Drop Track Delete function and the conditions under which it may be used.

**6.** Conditions under which a controller can deactivate an adapted URET restriction.

**7.** Local requirements for posting flight progress strips that exceed national requirements.

**8.** Facility standard for annotating status of manual coordination at URET 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 URET Coordination Menu or flight progress strips, and must define a standard for each URET sector.

**9.** Facility standard for annotating hold instructions and reporting delay information at URET sectors. Facility directives may require either the use of URET Hold Annotations, flight progress strips, or a facility–approved worksheet, and must define a standard for each URET 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.

## 6–7–5. URET AIRSPACE CONFIGURATION ELEMENTS

**a.** URET Airspace Configuration Elements are:

**1.** Special Activity Airspace (SAA).

**2.** Airport Stream Filters (ASF).

**3.** URET adapted restrictions.

**b.** For each airspace configuration element adapted in URET, 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 URET 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 URET in a timely manner to update the status of SAA, restrictions, and ASF.

**d.** For a URET 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 URET status current.

**2.** The TMU or the appropriate operations supervisor should be assigned the secondary responsibility to keep URET status current.

## 6–7–6. STANDARD USE OF AUTOMATED FLIGHT DATA MANAGEMENT

Use of the checkbox flight data management feature of URET must be standardized in accordance with individual facility directives.

## 6–7–7. URET OUTAGES

**a.** In accordance with Chapter 8, NAS En Route Automation, and the requirements in this chapter, URET facilities must develop and maintain procedures for transition to and from URET operations.

***NOTE–***
*The back–up for URET is flight progress strips.*

**b.** Planned Outages.

**1.** Schedule preventive or periodic maintenance of URET to coincide with periods of low air traffic volume.

**2.** Notification of planned local URET outages must be coordinated with the Operations Manager no less than 2 hours in advance.

**3.** The Operations Manager must notify the neighboring URET facilities of a planned URET outage no less than 1 hour in advance.

**4.** The Operations Manager must notify Operations Supervisors of a planned URET outage as soon as known.

**5.** Each Operations Supervisor must notify the sector teams in their area of a planned URET outage as soon as known.

**6.** At least 20 minutes prior to a local URET outage, Operations Supervisors must ensure that sectors resume posting and maintenance of flight progress strips, in accordance with FAAO JO 7110.65, Air Traffic Control, requirements for a non–URET environment, except as otherwise permitted by facility directive.

**c.** Unplanned URET Outages.

**1.** A facility directive must include a checklist detailing actions to be taken and roles and responsibilities during an unplanned URET outage.

**2.** When an unplanned URET outage occurs, sectors must post and maintain flight progress strips in accordance with FAAO JO 7110.65, Air Traffic Control, requirements for a non–URET 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 URET data while strips are prepared for use in the event that the outage continues.*

**2.** *A "snapshot" of URET 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 URET data on a position's display must be approved by the Operations Manager.

**d.** Degraded Conditions.

**1.** In the event that URET 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.

## 6–7–8. TRANSITION AND TRAINING PLANNING

The facility air traffic manager must ensure that detailed facility plans are prepared defining:

**a.** Training schedules of Certified Professional Controllers, Operations Supervisors, and Operations Managers.

**b.** Training schedules of developmental controllers based on national training directives.

## 6–7–9. RESTRICTIONS INVENTORY AND EVALUATION

**a.** Facilities must identify responsibilities and establish procedures for the creation and maintenance of a facility restriction inventory once URET is fully operational. 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 URET operations. This must include URET 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 URET.

**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.

## 6–7–10. TRAFFIC COUNTS AND DELAY REPORTING

**a.** Automated counts of traffic activities are the preferred methods during use of URET.

**b.** Adherence to all applicable delay reporting directives must continue while URET is operational.

**c.** Delay information, must be recorded either on available flight progress strips, on facility approved forms, or via the automated URET delay reporting features for aircraft in hold. Facility directives must detail the procedures for collecting and reporting this information to the ATCSCC.

## 6–7–11. COMPUTER DATA RETENTION

Follow the guidelines detailed in this order to retain URET recorded data.

## 6–7–12. WAIVER TO INTERIM ALTITUDE REQUIREMENTS

**a.** If, at any URET facility, 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 URET alert data.

**b.** Each URET facility should strongly consider the benefits of URET in evaluating any current or future waiver for data entry of interim altitudes. URET accuracy in assigning alert priorities for surrounding sectors, including those in neighboring URET facilities, is dependent upon the subject sector's entry/update of interim altitudes.

## 6–7–13. TRANSFER OF POSITION RESPONSIBILITY

Each URET facility must ensure that pertinent URET information is integrated into any Position Relief briefing list, whether manual or electronic.

# Section 8. Ocean21

## 6–8–1. GENERAL

**a.** Ocean21 is an Air Traffic Control (ATC) System deployed in designated en route and oceanic airspace. Ocean21 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.** Ocean21 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.** Decision Support Tools used primarily for situation awareness.

**8.** Electronic Flight Data including Electronic Flight Strips.

## 6–8–2. 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 Ocean21 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.** Ocean21 data management when a channel changeover is being performed.

**d.** Assignment of Error Repair responsibilities.

## 6–8–3. ERROR REPAIR POSITION RESPONSIBILITIES

Facilities must define responsibilities and develop procedures associated with the Ocean21 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.

## 6–8–4. FACILITY MANAGER RESPONSIBILITIES

**a.** Ensure LOAs, SOPs, MOUs and Sector Position Binders are current to support Ocean21.

**1.** Facility managers must consider Ocean21 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 Ocean21. 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/Decision Support Tools use, limitations, and exceptions.

**7.** Internal coordination.

**8.** Contingency plans.

**9.** Controller preference management.

## 6–8–5. TRANSFER OF POSITION

In addition to the procedures outlined in para 6, Step–by–Step Process, of Appendix D, Standard Operating Practice (SOP) for the Transfer of Position Responsibility, in FAAO 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.

## 6–8–6. OCEAN21 CHANNEL CHANGEOVERS

Facilities must identify the procedures for a channel changeover that include a checklist detailing actions to be taken, and roles and responsibilities.

## 6–8–7. 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 Ocean21 degraded operations. A facility directive must include a checklist detailing actions, roles, and responsibilities during planned and unplanned outage or degraded operation.

## 6–8–8. 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 9. Reduced Vertical Separation Minimum (RVSM)

## 6–9–1. GENERAL

**a.** RVSM reduces the standard separation between FL290 and FL410 from 2,000 feet to 1,000 feet for those aircraft approved for operation within these altitude strata. The six additional altitudes provide the users fuel savings and operational efficiencies while providing ATC flexibility, mitigation of conflict points, enhanced sector throughput and reduced controller workload for air traffic control operations.

**b.** RVSM is applied in that airspace from FL290 through FL410 over the domestic United States, Alaska, the Gulf of Mexico 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. There are two forms of RVSM airspace:

**1.** RVSM Airspace. Use of the term RVSM airspace refers to the RVSM exclusive environment. Aircraft operating in this airspace must be RVSM approved.

***NOTE–***
**1.** *The following non–RVSM aircraft are exceptions to the exclusive RVSM airspace. However, access will be on a workload–permitting basis:*
**a.** *DOD aircraft.*
**b.** *DOD–certified aircraft operated by NASA (T38, F15, F18, WB57, S3, and U2 aircraft only).*
**c.** *MEDEVAC aircraft.*
**d.** *Aircraft being flown by manufacturers for development and certification.*
**e.** *Foreign State aircraft.*

**2.** *Aircraft not approved for RVSM operations may transition through RVSM airspace to operate above or below.*

**2.** Transition Airspace. Airspace where both RVSM aircraft and non–RVSM aircraft may be accommodated at all altitudes and RVSM approval is not required. Transition airspace connects airspace wherein conventional separation is applied to RVSM airspace. One thousand feet vertical separation can only be applied between RVSM aircraft. Two thousand feet separation must be applied between non–RVSM aircraft or whenever one of the aircraft is non–RVSM.

**c.** 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.

**d.** 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.

## 6–9–2. 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.

***REFERENCE–***
FAAO 7210.56, Paragraph 4–1–9, Invalid Mode C Reporting.

## 6–9–3. 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.

## 6–9–4. FRONT–LINE MANAGER–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 DSR MDM properly aligned to display the RVSM indicator depicting those aircraft that are non–RVSM.

## 6–9–5. 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.** 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.

## 6–9–6. 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.

## 6–9–7. 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.

## 6–9–8. 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.

## 6–9–9. 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 10. En Route Information Display System (ERIDS)

## 6–10–1. 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.

## 6–10–2. REQUIREMENTS

**a.** Where available, ERIDS must be used to provide controllers with the following information:

**1.** Sector binder information.

***REFERENCE–***
*FAAO JO 7210.3, Para 6–2–2, En Route Sector Information Binder*
*FAAO 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.

# 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 para 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 the associated FSS, 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 nonautomated 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, FLM, 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.*

**c.** The air traffic manager must not cause or permit the operational use of the Direct Access Radar Channel (DARC) solely for purposes of training when the primary operational system is available.

### 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/console typewriter printouts for 15 days unless they are related to an accident/incident as defined in FAAO 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting. Retention of the latter must be in accordance with FAAO 1350.15, Records, Organization, Transfer, and Destruction Standards, Chapter 14, subparas 8020(1), (a), (b), (c), (d), and (exception).

**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) tapes/discs/*duplicate and/or originals* and data communications/console typewriter printouts related to hijack aircraft the same as voice recorder tapes. (See para 3–4–4, Handling Recorder Tapes or DATs.)

# Section 2. Procedures

## 8–2–1. SINGLE SITE COVERAGE STAGE A OPERATIONS

Facilities may adapt all sort boxes within 40 miles of the antenna to that site as preferred and with the single site indicator set to permit the use of 3 miles radar separation as defined in FAAO JO 7110.65, Air Traffic Control, subpara 5–5–4b3, Minima. This adaptation may be used provided:

**a.** A significant operational advantage will be obtained using single site coverage. Consideration must be given to such aspects as terminal interface, radar reliability, etc.; and

**b.** Facility directives are issued to:

**1.** Define areas within 40 NM of any radar site in which the adaptation has been modified.

**2.** Permit 3 NM separation in the modified area.

**3.** Accommodate local procedural changes.

## 8–2–2. ADAPTED ALTIMETER SETTINGS

Ensure a current altimeter setting from the adapted reporting station for each radar sort box 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 nominal value of parameters specified in NAS Configuration Management Documents for the CA function unless a waiver to adjust parameter value is received from 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.

## 8–2–5. MODE C INTRUDER (MCI) ALERT PARAMETERS

**a.** Use the nominal value of parameters specified in the NAS Configuration Management Document for the MCI Alert function, except the base altitude parameter, unless a waiver to adjust parameter value is received from 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 subpara 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 altitude information adapted in the polygons agrees with the

MIA sector charts and that the automation is adapted in accordance with the appropriate NAS Management Documents.

## 8–2–7. WAIVER TO INTERIM ALTITUDE REQUIREMENTS

Where sector conditions; e.g., heavy traffic or sector complexity, preclude meeting the requirements of FAAO JO 7110.65, Air Traffic Control, subpara 5–14–3b, Computer Entry of Assigned Altitude, ARTCC air traffic managers may authorize the deletion of the requirements 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 waiver 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.

# 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 FIFO for a flight check. 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 standard 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 subpara 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 subpara 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 subpara 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 subpara b3(c) below, for the recovery into ARTCC airspace for an IFR leg of a composite flight plan.

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

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

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

## 9–1–7. INSTRUCTIONS FOR COMPLETING FAA FORM 7230–14

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

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

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

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

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

**2.** *Grand Total:* For the convenience of the facility (it is not keypunched), this column provides

space to add the Domestic total to the Oceanic total to get a grand total for the day. The form is designed to be folded so that the three columns are side by side and folding instructions are printed on the form.

**3.** *Special Use:* Routinely these columns are not used, but are provided for the occasional special project which may be directed by Washington or En Route and Oceanic Operations Area offices offices.

**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 by the En Route and Oceanic Operations Area Office. Send amended copies along with the current reporting month's forms to the En Route and Oceanic Operations Area Office.

# 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/MLS 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 CERAP. 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 (unit of issue: sheet; NSN: 0052–00–889–5000), 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 15 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.

*FIG 9–3–1*

**FAA Form 7210–8**

US Department of Transportation
Federal Aviation Administration

**ELT INCIDENT**

#

| Initial Notification | | | | |
|---|---|---|---|---|
| Facility | Initials Time (GMT) | | | Date Reported |
| | Facility / | RCC / | Regional CCC / | |

| First Heard By Acft/ | GRD Station | SARSAT | Frequency 12.5 243.0 |
|---|---|---|---|

| Overdue Aircraft | UNK. ID | Last known Position |
|---|---|---|

| Time Heard | Location | Altitude | Remarks |
|---|---|---|---|
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Presumed Location

| Additional Notifications/Time (GMT) | | |
|---|---|---|
| Airports | Police | Other |

| Incident Termination | | |
|---|---|---|
| Date Located | Actual Location | ☐ Military ☐ Civilian ☐ Distress ☐ Non-distress |
| Not Located | Date Closed | Initials/Time (GMT): Facility / ; ACC / ; Regional CCC / ; Other |

FAA Form 7210-8 (5-84) Supersedes all local forms

# 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 |
| 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

**a.** 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.

**b.** The intent of the team concept is not to hold the team accountable for the action of individual members in the event of an operational error/deviation.

### 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 AND TERMINAL AREA CHARTS

**a.** Terminal Area Charts (TACs) provide detailed information needed for flight within or in the vicinity of Class B airspace. Visual checkpoints are depicted on TACs, and at some locations, on Sectional Charts.

**b.** VFR Flyway Planning Charts are published on the back of existing TACs. Facilities with a TAC desiring publication of a VFR Flyway Planning Chart

should submit requests through the Terminal Operations Service Area office to Terminal Safety and Operations Support. Additional charts may be considered after all Class B airspace locations have been completed. VFR Flyway Planning Charts, which are intended to facilitate VFR transition through high density areas, depict generalized VFR routing clear of major controlled traffic flows which may be used as alternatives to flight within Class B airspace. Pictorial ground references and VFR checkpoints are provided to aid visual navigation. These charts are designed for information and planning purposes and are not intended to discourage VFR operations within Class B airspace. Pilot compliance with recommended flyways and associated altitudes is strictly voluntary. Controllers must not assign a charted VFR flyway to a pilot as part of a clearance nor predicate separation of aircraft on any expected pilot compliance with the depicted altitudes.

**c.** Facility air traffic managers must review VFR checkpoints published on Sectionals, TACs, and VFR Flyway Planning Charts for accuracy, completeness, and reasonableness. Nearby ATCT that make use of the same area depicted on the charts must agree upon the checkpoints to be depicted.

**d.** Submit changes or revisions to VFR checkpoints to System Operations Airspace and Aeronautical Information Management at least 10 weeks prior to the scheduled publication date.

**e.** If required, a list of checkpoints 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

**a.** ATCT supervisor/CIC has primary responsibility for determining which runways are to be designated as "active" runways. Where optional configurations of multiple active runways are used for operational flexibility, responsibility for designating which of the optional runways are active at any time may be further delegated. A facility directive must be issued to define specific coordination requirements. (See FAAO JO 7110.65, Air Traffic Control, para 3–1–3 thru para 3–1–5, para 3–5–1, para 3–5–2, etc.)

**b.** Determination of the active runway/s requires consideration of 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. (See FAAO JO 7110.65, para 2–1–16, para 2–1–18, para 2–6–1 thru para 2–6–5, para 3–1–8, para 3–3–1 thru para 3–5–3, etc.)

***NOTE–***
*Example of items to be considered are: surface wind direction and velocity, wind shear/microburst alerts/reports, adjacent airport traffic flows, severe weather activity, IFR departure restrictions, environmental factors, etc.*

## 10–1–7. USE OF ACTIVE RUNWAYS

**a.** Facility 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. In addition, a facility directive must include

procedures for the use of a memory aid for appropriate operational positions. This memory aid must visually and/or aurally indicate that an aircraft/vehicle/pedestrian is on or near an active runway. Where memory aids for runway use have been established, their use must be mandatory. Where memory aids are not in place, utilize collaborative effort, and develop and implement site–specific memory aids and procedures outlining their use.

**b.** Facility air traffic managers must include local procedures in the facility directive to assist the local and ground controllers in maintaining awareness of aircraft positions on the airport.

***REFERENCE–***
*FAAO JO 7110.65, Para 3–1–4, Coordination Between Local and Ground Controllers.*
*FAAO JO 7110.65, Para 3–1–7, Position Determination.*

**c.** FAAO 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 Terminal Operations Service Area Director, 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 FAAO JO 7110.65, Air Traffic Control. 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 absolutely 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 explicitly outline the responsibilities of the cab coordinator in authorizing active runway crossings. This directive must address and clearly answer the questions of the cab coordinator's function, authority, and accountability in these operations. The Terminal Operations Service Area Director must review and approve this facility directive prior to its implementation.

**4.** The Terminal Operations Service Area Director must forward a copy of the approved facility directive to the Director of System Operations Airspace and Aeronautical Information Management.

**d.** Facility air traffic managers at instrumented airports with operating control towers must, in addition to the above, annually review local 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 local departure procedures to ensure continued compatibility with the runway headings posted on the airport surface diagram.

**e.** Air traffic managers must develop a facility directive which specifically defines the responsibilities of local 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, in order 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, in order 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)** Intra-facility.

**(c)** Inter-facility.

**(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 use of a memory aid that visually and/or aurally indicates that the runway is closed. Where a memory aid for a closed runway has been established, its use must be mandatory. Where a memory aid for a closed runway is not in place, utilize collaborative efforts to develop and implement site-specific memory aid(s) and procedures outlining its use.

***NOTE–***
*When implementing these procedures, one should consider short-term versus long-term closures as well as planned versus unplanned processes.*

***REFERENCE–***
*FAAO JO 7110.65, Para 3-3-1, Landing Area Condition*
*FAAO JO 7110.65, Para 3-3-2, Closed/Unsafe Runway Information*
*FAAO JO 7110.65, Para 4-7-12, Airport Conditions*
*FAAO JO 7210.3, Para 4-7-3, System Impact Reports*
*FAAO JO 7210.3, Para 17-5-13, 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 or single site radars with CENRAP 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.

**5.** Transition from ATTS to non–ATTS.

**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 subpara 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. MOBILE CONTROL TOWERS

**a.** Mobile control towers must be used at FAA locations:

**1.** To provide services during a move from an old tower structure into a new tower.

**2.** When repairs, rehabilitation, or installation of new equipment make the tower structure temporarily uninhabitable.

**3.** During periods of natural emergency; e.g., the tower structure has been damaged by fire, accident, or wind.

**4.** During national emergencies as required by the DOD at FAA and non–FAA locations.

**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:

**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:

**(a)** Jeopardizing FAA activities.

**(b)** Interfering with the gainful employment of competent non–Federal personnel.

**2.** Non–Federal personnel selected to support the event are properly certificated and rated in accordance with 14 CFR Part 65 for the airport.

**3.** The requesting organization is apprised that the mobile unit is subject to immediate recall should an emergency arise.

## 10–1–12. PARTICIPATION IN LOCAL AIRPORT DEICING PLAN (LADP)

**a.** Officials, at airports operating under 14 CFR Part 107 and 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 acceptance 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.

***NOTE–***
*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.*

**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 FAAO 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–***
*FAAO 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. SIGMET AND PIREP HANDLING

Facility air traffic managers must establish procedures for the prompt collection and dissemination of SIGMET, CWA, and PIREP information. These procedures must contain direction for a central source to be responsible for:

**a.** Soliciting and handling PIREPs in accordance with the provisions of FAAO JO 7110.65, Air Traffic Control, para 2–6–3, PIREP Information.

**b.** Reviewing SIGMETs and CWAs to determine the required distribution, and disseminating SIGMET 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 or CWA to other terminal ATC facilities within your terminal area.

**2.** Disseminate selective SIGMET and CWA information on a need–to–know basis in accordance with the provisions of FAAO JO 7110.65, Paragraph 2–6–2, Hazardous Inflight Weather Advisory Service (HIWAS).

## 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 FAAO JO 7110.65, para 3–1–8, Low Level Wind Shear/Microburst Advisories. 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 sub–para 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–***
*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 airway facilities. 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 RVV/RVR VALUES

**a.** Relay of RVV/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 or RVV 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/MLS 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.** An MLS is normally flight checked to 20,000 feet and 20 miles for the azimuth and the glide path.

**c.** If an operational need to exceed these limitations exists, inform the FIFO, and they will flight check the ILS to the stipulated requirement. Ensure that current flight check data are available to facility personnel.

## 10–3–7. LAND AND HOLD SHORT OPERATIONS (LAHSO)

**a.** The air traffic manager must determine a valid operational need exists before conducting simultaneous takeoff and landing or simultaneous landing operations. This need may be considered evident if:

**1.** Present airport capacity/acceptance rate will be increased; and

**2.** Arrival/departure delays will be reduced; and

**3.** A reasonable savings in fuel consumption will result.

**b.** Before authorizing simultaneous takeoff and landing or simultaneous landing operations as specified in the current LAHSO directive.

**1.** Coordinate with each of the appropriate Flight Standards field offices having jurisdiction at the airport according to the type of aircraft operations involved and with user groups as required by para 4–2–4, Coordination of ATC Procedures, including the appropriate military authority where units are based at the airport.

***NOTE–***
*Appropriate Flight Standards offices are: the ACDO for air carrier operations or the FSDO or both/either.*

**2.** Prepare a facility directive using the information as specified in the current LAHSO directive prescribing procedures for conducting these operations. The directive must contain a diagram that depicts the airport runway configuration, identifies the configuration to be used, and specifies the Available Landing Distance (ALD) from the landing threshold to the Hold–Short Point.

***NOTE–***
*Any aircraft that is not listed in the current LAHSO directive must not be considered for LAHSO.*

***REFERENCE–***
*FAAO JO 7110.65, Para 3–10–4, Intersecting Runway Separations.*

**3.** Ensure the directive identifies the eligible aircraft which may operate on each runway, based on the ALD, current LAHSO directive, and/or FAAO JO 7110.65, Appendix A, Aircraft Information.

**4.** Provide a list of runways authorized for LAHSO, along with the appropriate ALD to System Operations Airspace and Aeronautical Information Management, for publication in the Airport/Facility Directory and appropriate U.S. Terminal Procedures Publications.

**5.** Conduct user briefings at least 45 days before implementation.

**c.** Air traffic managers must obtain concurrence from the appropriate Flight Standards field offices and conduct a preliminary environmental review before conducting LAHSO.

***REFERENCE–***
*FAAO 1050.1, Policies and Procedures for Considering Environmental Impacts.*

***NOTE–***
*This is only applicable to those facilities not currently conducting SOIR operations.*

## 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–***
*FAAO 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–***
*FAAO JO 7110.65, Para 3–9–4, Line Up and Wait (LUAW), subpara c1*
*FAAO 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–***
*FAAO JO 7110.65, Para 3–9–4, Line Up and Wait (LUAW), subpara c1 and g.*

**(g)** Fleet mix.

***REFERENCE–***
*FAAO JO 7110.65, Para 3–9–6, Same Runway Separation.*
*FAAO JO 7110.65, Para 3–9–7, Wake Turbulence Separation for Intersection Departures.*
*FAAO 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 front–line manager/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 front–line manager/CIC position should not be combined with any other position.

**7.** Ensure front–line managers/CICs review para 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 for Terminal Operations and Terminal Safety and Operations Support approval. Terminal Operations and Terminal Safety and Operations Support directors 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 Director, Terminal Operations (service area office) for approval. ATMs must maintain a copy of the approval correspondence from Terminal Operations.

**c.** The Director, Terminal Operations, must ensure an annual review of LUAW operations is conducted for those facilities employing LUAW. The results of this review must be sent to the Terminal Safety and Operations Support office by September.

## 10–3–9. 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.

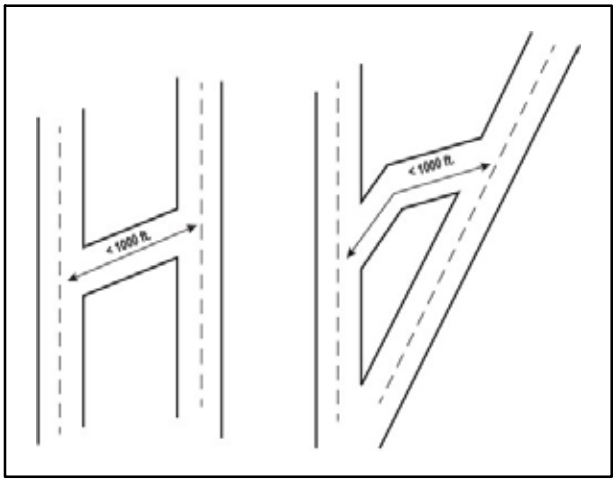
***REFERENCE–***
*FAAO JO 7110.65, Para 3–9–9, Takeoff Clearance.*
*Pilot/Controller Glossary Term – Clear of the Runway.*

## 10–3–10. MULTIPLE RUNWAY CROSSINGS

**a.** Air traffic managers at airports where the taxi route between runway centerlines is less than 1,000 feet must submit a request to the appropriate Terminal Services Director of Operations for approval before authorizing multiple runway crossings.

***REFERENCE–***
*FAAO 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 less than 1,000 feet between runway centerlines.

**c.** Facilities must keep a copy of the approval correspondence issued by the Terminal Services Director of Operations.

**d.** Facility directives must include a diagram that depicts the runway/taxiway intersections where multiple runway crossings are authorized.

**e.** The Terminal Services Director of Operations must ensure that an annual review of multiple runway crossing operations is conducted for those facilities employing this operation. The results of this review must be sent to the Terminal Safety and Operations Support Office by September of each year.

## 10–3–11. 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–***
*FAAO JO 7110.65, Para 2-9-3, Content*
*FAAO JO 7110.65, Para 3-7-1, Ground Traffic Movement*
*FAAO JO 7110.65, Para 3-9-1, Departure Information*
*FAAO JO 7110.65, Para 3-9-4, Line Up and Wait (LUAW)*
*FAAO JO 7110.65, Para 3-9-9, Take-off Clearance*
*FAAO JO 7110.65, Para 3-10-1, Landing Information*
*FAAO JO 7110.65, Para 3-10-5, Landing Clearance*
*FAAO JO 7210.3, Para 10-3-12, Change in Runway Length Due to Construction*
*FAAO JO 7210.3, Para 10-4-1, Automatic Terminal Information Service (ATIS)*

## 10–3–12. 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–***
*FAAO JO 7110.65, Para 2-9-3, Content*
*FAAO JO 7110.65, Para 3-7-1, Ground Traffic Movement*
*FAAO JO 7110.65, Para 3-9-1, Departure Information*
*FAAO JO 7110.65, Para 3-9-4, Line Up and Wait (LUAW)*
*FAAO JO 7110.65, Para 3-9-9, Take-off Clearance*
*FAAO JO 7110.65, Para 3-10-1, Landing Information*
*FAAO JO 7110.65, Para 3-10-5, Landing Clearance*
*FAAO JO 7210.3, Para 10-3-11, Airport Construction*
*FAAO JO 7210.3, Para 10-4-1, Automatic Terminal Information Service (ATIS)*

## 10–3–13. 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.

## 10–3–14. GO–AROUND/MISSED APPROACH

**a.** Tower facility directives must address procedures for go–arounds and/or missed approaches. The procedures must require controllers to issue control instructions as necessary to establish separation. During the development or review of these procedures, 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*
*FAAO JO 7110.65, Para 3–8–1, Sequence/Spacing Application*
*FAAO JO 7110.65, Para 3–8–2, Touch–and–Go or Stop–and–Go or Low Approach*
*FAAO JO 7110.65, Para 4–8–11, Practice Approaches*
*FAAO JO 7110.65, Para 4–8–12, Low Approach and Touch–and–Go*
*FAAO JO 7110.65, Para 5–5–4, Minima*
*FAAO JO 7110.65, Para 5–6–3, Vectors Below Minimum Altitude*
*FAAO JO 7110.65, Para 5–8–4, Departure and Arrival*
*FAAO JO 7110.65, Para 5–8–5, Departures and Arrivals on Parallel or Nonintersecting Diverging Runways*
*FAAO JO 7110.65, Para 7–2–1, Visual Separation*
*FAAO 7110.98A, Para 8d2*
*FAAO JO 7110.308, Para 6b1(d), Para 6c2(i)*

***NOTE–***
*Facilities with approved arrival/departure window procedures are considered to be in compliance with the provisions of this paragraph.*

**b.** The procedures must be evaluated on an annual basis to determine their effectiveness.

# Section 4. Services

## 10–4–1. AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS)

**a.** ATIS provides advance noncontrol 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. When appropriate, the voice/text must be cross–checked to ensure the message content is the same. In a conventional, controller-prepared voice recording, the specialist must ensure:

**1.** The speech rate is not excessive,

**2.** The enunciation is of the highest quality, and

**3.** Each part of the message is easily understood.

**d.** Those facilities with runway construction must ensure ATIS message content is complete, accurate, and contains the proper information related to runway closures and available length (feet). When runway construction is underway, the review of the message should be made by a person other than the specialist who prepared the original, preferably either a supervisor or CIC.

***REFERENCE–***
*FAAO JO 7110.65, Para 2-9-3, Content*
*FAAO JO 7110.65, Para 3-7-1, Ground Traffic Movement*
*FAAO JO 7110.65, Para 3-9-1, Departure Information*
*FAAO JO 7110.65, Para 3-9-4, Line Up and Wait (LUAW)*
*FAAO JO 7110.65, Para 3-9-9, Take-off Clearance*
*FAAO JO 7110.65, Para 3-10-1, Landing Information*
*FAAO JO 7110.65, Para 3-10-5, Landing Clearance*
*FAAO JO 7210.3, Para 10-3-11, Airport Construction*
*FAAO JO 7210.3, Para 10-3-12, 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–***
*FAAO 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 15 days.

**g.** Keep messages as brief and as concise as possible. Optimum duration of up to 30 seconds should not be exceeded unless required for message content completeness.

**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 nonoperation, part–time towers that have ATIS capabilities should record for continuous broadcast the following 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 and include the applicable information in subparas 10–4–1h, 1 thru 5 at the time of closing.*

**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.

***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. 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.

## 10–4–3. 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.

## 10–4–4. 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.

## 10–4–5. PRACTICE INSTRUMENT APPROACHES

**a.** VFR aircraft practicing instrument approaches at the approach control's primary airport must be provided IFR separation in accordance with FAAO JO 7110.65, Air Traffic Control, Chapter 4, Section 8, Approach Clearance Procedures.

***NOTE–***
*The primary airport is the airport from which approach control service is provided, except for remoted facilities where the facility air traffic manager will designate the primary report.*

**b.** IFR separation to VFR aircraft in accordance with FAAO JO 7110.65, Chapter 4, Section 8, Approach Clearance Procedures, must be provided to all secondary airports under the approach control's jurisdiction to the extent possible within existing resources. Where separation service is provided to an airport with a FSS that provides LAA, or a nonapproach control tower, provisions for handling such aircraft must be included in a LOA.

**c.** Where standard separation is not provided to VFR aircraft conducting practice approaches, instruct the aircraft to maintain VFR and provide traffic information.

**d.** At airports where the tower does not provide approach control service, handle practice instrument approaches in accordance with a LOA between the tower and the facility providing approach control service.

**e.** Facilities must issue a letter to airmen advising the users of those airports where standard separation is provided for VFR aircraft conducting practice instrument approaches. The letter should specify which facility will handle the aircraft practicing instrument approaches and include the appropriate frequencies.

***REFERENCE–***
*Para 4–5–2, Letters to Airmen.*

## 10–4–6. SIMULTANEOUS INDEPENDENT APPROACHES

**a.** Independent approaches may be conducted when:

**1.** Dual parallel runway centerlines are at least 4,300 feet apart.

**2.** Triple parallel centerlines are at least 5,000 feet apart and the airport field elevation is less than 1,000 feet MSL.

**b.** Specially–designed instrument approach procedures annotated with "simultaneous approaches authorized with Rwy XX" are authorized for simultaneous independent approaches.

**c.** Equipment required to maintain communication, navigation, and surveillance systems is operational with the glide slope exception as noted below.

**d.** 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. 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:

**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.

**2.** The ATC facility must notify Technical Operations personnel of the glide slope outage.

***REFERENCE–***
*FAAO JO 7210.3, Para 3–5–2, System Component Malfunctions*

**3.** The ATC facility must notify arriving pilots that the glide slope is out of service. This can be accomplished via the ATIS broadcast.

**4.** 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.

**5.** Controllers must be trained and provided annual refresher training concerning the application of these procedures.

**6.** 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.

**7.** Any loss of separation or break out associated with operations under a contingency plan for glide slope out must be reported to the Director, Terminal Operations, Headquarters.

**8.** The facility must have radar coverage down to the decision altitude or minimum descent altitude, as applicable.

**9.** Approaches must be terminated to the runway without a glide slope whenever the reported visibility is below the straight–in localizer minimum for that runway.

**10.** Any required equipment for the approach with the glide slope out of service must be operational, such as DME or VORTAC.

**e.** Simultaneous approaches with the glide slope unusable must be discontinued after 29 days unless a waiver has been submitted to and approved by FAA HQ. (See Appendix 4.)

**f.** 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.

## 10–4–7. SIMULTANEOUS INDEPENDENT CLOSE PARALLEL APPROACHES – HIGH UPDATE RADAR NOT REQUIRED

*TERMINAL*

**a.** Simultaneous close parallel approaches may only be conducted where instrument approach charts specifically authorize simultaneous approaches to parallel runways.

**b.** Apply the following minimum separation when conducting simultaneous independent close parallel approaches:

**1.** Provide a minimum of 1,000 feet vertical or a minimum of 3 miles radar separation between aircraft during turn-on to parallel final approach courses.

***NOTE–***
*Communications transfer to the tower controller's frequency will be completed prior to losing vertical separation between aircraft.*

**2.** Parallel runway centerlines are separated by a minimum of 3,600 feet or more, and the airport elevation is less than 1,000' MSL.

**3.** Provide the minimum applicable radar separation between aircraft on the same final approach course.

***REFERENCE–***
*FAAO JO 7110.65, Para 5-5-4, Minima*

**c.** A high-resolution color monitor with alert algorithms, such as the final monitor aid, must be used to monitor close parallel approaches.

**d.** In addition to subparagraphs a through c above, facility ATMs must ensure that operational personnel comply with the procedures specified in FAA Order JO 7110.65, paragraph 5-9-9d through 5-9-9f.

***REFERENCE–***
*FAA O JO 7110.65, Para 5-9-9, Simultaneous Independent Close Parallel Approaches – High Update Radar Not Required*

**e.** Facility managers must verify that adequate radar coverage exists to safely perform simultaneous approach operations to closely space runways.

## 10–4–8. SIMULTANEOUS WIDELY–SPACED PARALLEL OPERATIONS

The concept for conducting simultaneous independent approaches to widely-spaced parallel runways without final monitors is:

**a.** Specially-designed instrument approach procedures annotated with "Simultaneous Approaches Authorized with Rwy XX" are authorized for simultaneous independent approaches to widely-spaced parallel runways.

**1.** A separate approach system is required for each parallel runway. A minimum distance of more than 9,000 feet between centerlines is required when dual approaches are used at 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.

**2.** 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.

**3.** 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 subpara 10-1-6b Note, Selecting Active Runways).

**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.

**b.** The following minimum radar and communications equipment must be provided for monitoring simultaneous approaches:

**1.** One separate airport surveillance radar display of a model currently certified for ATC functions.

**2.** Establish separate radar and local control positions for each final approach course.

**3.** Facility directives must define the position responsible for providing the minimum applicable longitudinal separation between aircraft on the same final approach course.

**c.** Record the time the operation begins and ends on the facility log.

**d.** 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.

**e.** If there is an aircraft deviation requiring the utilization of breakout procedures, or if there is a loss of separation, specifically a compression on final error, forward a copy of that QAR to the Terminal Procedures Group via email at 9-ATOT-HQ-Safety-Risk-Management. This requirement must be written into each facility SOP.

## 10–4–9. PRECISION RUNWAY MONITOR–SIMULTANEOUS OFFSET INSTRUMENT APPROACHES

**a.** Precision Runway Monitor–Simultaneous Offset Instrument Approaches (PRM–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)/Microwave Landing System (MLS) and one Localizer Directional Aid (LDA), offset by 2.5 to 3.0 degrees using a PRM system with a 1.0 second radar update system in accordance with the provisions of an authorization issued by the Director of Terminal Safety and Operations Support in coordination with AFS. A high–resolution color monitor with alert algorithms, such as a final monitor aid (FMA) must be 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 para 10–1–6, Selecting Active Runways, subpara 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 PRM–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 PRM–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 FAAO JO 7110.65, Air Traffic Control, para 5–5–4, Minima, must be applied unless acceptable mitigating techniques and operational procedures are approved by the Director of Terminal Safety and Operations Support pursuant to an AFS safety assessment. A request for a safety assessment must be submitted to the Terminal Safety and Operations Support Office through the service area office manager. 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 PRM–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 PRM–SOIA, an operational need must be identified by the ATC facility manager, validated by the service area office

manager, and forwarded to the Terminal Safety and Operations Support Office for appropriate action. The statement of operational need should identify any required site specific procedures.

## 10–4–10. 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–***
*FAAO JO 7110.65, Subpara 5–5–4f, Minima.*

## 10–4–11. 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 Technical Operations Aviation System Standards, National Flight Procedures, for certification and annual review.

***NOTE–***
**1.** *For guidance in the preparation and review of Minimum IFR Altitude charts see FAAO 7210.37, En Route Minimum IFR Altitude (MIA) Sector Charts.*

**2.** *This may be accomplished by appending the data on sector charts or MVA charts; Special translucent sectional charts are also available. Special ordering information is contained in FAAO 1720.23, Distribution of Aeronautical Charts and Related Flight Information Publications. (Reference – para 3–8–2.)*

# 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 if:

**b.** Not more than two radar operating positions are required and CTRDs are used on a permanent basis.

**c.** More than two operating positions are required and CTRDs are installed on an interim basis pending the establishment of a TRACON.

**d.** On a temporary basis if other than CTRDs are installed.

**e.** Consider the following if scan conversion type bright display equipment is used:

**f.** 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.

**g.** 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.

**h.** 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.

**i.** VFR Radar Advisory Service functions will normally be conducted from the TRACON.

**j.** 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.

**k.** PAR functions will normally be conducted in a TRACON.

**l.** ASDE indicators must be placed in the tower cab so as to serve the LC and GC positions.

**m.** The CTRD may be used for any terminal radar function.

**n.** 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 airway facilities. 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 an ATTS.

## 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 FAAO JO 7110.65, Air Traffic Control, para 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)** A LOA, approved by the respective Terminal Operations Service Area Office, 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 pointouts 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 FAAO 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 subparas a and b, and/or the delegation of airspace to a tower require a staff study as prescribed in para 2–1–15, 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, MEARTS, and ARTS III-E, 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 para 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–***
*FAAO JO 7110.65, Para 5-1-2, Alignment Check.*

## 10–5–5. DEFICIENCIES IN SYSTEM

Note deficiencies in the radar system on FAA Form7230–4. 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 subpara 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 subparas c1 and c2 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 subpara 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.

**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.

## 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 FAAO JO 7110.65, Air Traffic Control, Chapter 3, Section 4, Airport Lighting, or FAAO 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 FAAO 6850.2, Visual Guidance Lighting Systems):

**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. The monitor is designed to indicate that at least the predetermined number of light units (lamps), plus or minus one, are inoperative. 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 (e.g., pilot, airport manager) that one of these two conditions exists. When a report indicates that at least four adjacent bars are out (three or more lamps out on a bar determine bar outage) or four consecutive sequence flashers are out, landing minima criteria are changed. If this condition exists, the air traffic facility manager must send the appropriate NOTAM.

**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 sub–para 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 subpara 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.

***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.*

**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 subpara 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.*

## 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% |

# 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 Managers, Tactical Operations (MTOs) 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 para 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 MTO will make the final determination.*

**c.** MTOs must ensure that the data is entered in the National Traffic Management Log (NTML) under the runway template.

**d.** Consistent with para 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 subpara 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 MTOs 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 MTOs 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. National Programs

## Section 1. Terminal VFR Radar Services

### 11–1–1. PROGRAM INTENT

Basic Radar Service, TRSA Service, Class B and Class C services are the four types of 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, 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.

***REFERENCE–***
*Pilot/Controller Glossary Term– Terminal VFR Radar Services.*
*FAAO JO 7110.65, Chapter 7, Section 6, Basic Radar Service to VFR Aircraft– Terminal.*

### 11–1–2. IMPLEMENTATION

**a.** Facilities unable to meet the following requirements must submit justification to the respective Terminal Operations Area Office:

**1.** Newly commissioned terminal radar facilities must implement basic radar services to VFR aircraft, as prescribed in FAAO JO 7110.65, Air Traffic Control, para 7–6–1, Application, within 30 to 60 days after full IFR service is available. All radar facilities must provide basic radar service at primary airports and, where operationally feasible, at satellite airports with a control tower.

**2.** TRSA Service: In addition to basic radar service, provide separation between all participating aircraft operating in an established TRSA. If a need exists, facilities may develop coded VFR departure routes for TRSA service. When such routes are established, the following provisions apply:

**(a)** Prior to implementing coded VFR departure routes, the facility must coordinate with local user groups.

**(b)** A letter to airmen must be issued advising pilots of the procedure.

**(c)** These routes must only be issued to local users familiar with the procedure.

**(d)** Detailed departure instructions must be furnished when requested by the pilot.

**3.** Facility air traffic managers must address in writing, as a minimum, the following pertinent factors when submitting for service area office approval, either a recommendation for revision or withdrawal of an existing TRSA.

**(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.)

**b.** Revisions to TRSAs must be submitted to System Operations Airspace and Aeronautical Information Management, NFDC, at least 9 weeks prior to one of the appropriate publication dates; i.e., Sectional Charts, Notice to Airmen, or the Airport/Facility Directory. The following are considered sufficient justification to warrant revision:

**1.** Changes in configuration, frequencies, or primary airport status (name, elevation, closed, abandoned, etc.).

**2.** Additions or deletions to the VFR checkpoints/NAVAIDs.

**3.** Typographical errors.

**c.** 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 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 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 primarily based on aircraft maintaining assigned headings and altitudes.

**(c)** If a pilot cannot abide with an ATC instruction or clearance, he/she should notify ATC immediately.

**4.** Follow–up meetings ("HOW GOES IT" type) must be conducted.

## 11–1–3. TRSA

**a.** TRSAs are not officially designated by airspace action and were established solely to define an area within which a separation service will be provided. 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.

**b.** The size and shape (laterally/vertically) of the TRSA will vary depending upon operational requirements. However, each TRSA must reflect the most efficient and reasonable configuration to contain large turbine–powered aircraft while achieving a higher level of overall safety.

***NOTE–***
*There is no requirement for the TRSA facility to retain operational jurisdiction of the airspace in its entirety if another facility can more effectively manage a particular portion of the airspace. The requirement is that the system provides the required service.*

**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.

## 11–1–4. 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.*

**a.** Facility managers who determine a need for Class C airspace establishment must prepare and submit a staff study in accordance with FAAO 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.

**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.** The *National Terminal Radar Program* includes military as well as civil airports. Each case of military airport inclusion or establishment of Class C airspace must be processed through appropriate military channels for thorough examination and individual justification.

**j.** When recommending a location for withdrawal from the Class C airspace, facility air traffic managers must prepare and submit a staff study to Washington headquarters, Airspace and Rules through the appropriate Terminal Operations Service Area Office in accordance with FAAO JO 7400.2, Procedures for Handling Airspace Matters.

## 11–1–5. 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.

**b.** The size and shape (laterally/vertically) of the Class B airspace will vary depending upon operational requirements. However, each 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.

***NOTE–***
*There is no requirement for the Class B airspace facility to retain operational jurisdiction of the airspace in its entirety if another facility can more effectively manage a particular portion of the airspace. The requirement is that the system provide the required service.*

**c.** All IFR procedures used by large turbine–powered aircraft arriving and departing designated airports must be fully contained in the Class B airspace. Each Class B airspace should be configured to ensure the most efficient use of airspace.

**d.** 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.

**e.** Procedures must be developed to accommodate VFR aircraft desiring to transit the Class B airspace. 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.

# Section 2. Automated Terminal Tracking Systems (ATTS)

## 11–2–1. OPERATIONAL USE

**a.** Do not use ATTS data when the system, or that portion of the systems, is released to Technical Operations technicians.

**b.** Verify the operational status of all ATTS components daily prior to operational use.

**c.** Advise effected facilities when ATTS equipment will not be operational at normal startup time, when it fails, is shut down, resumes operation, or when interfacility mode is lost/regained.

## 11–2–2. DATA ENTRIES

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

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

## 11–2–3. DISPLAY DATA

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

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

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

***REFERENCE–***
*FAAO JO 7110.65, Para 5–2–23, Altitude Filters.*

## 11–2–4. USE OF MODIFY AND QUICK LOOK FUNCTIONS

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

**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 MODIFY or QUICK LOOK functions is satisfactory or some other mode of data transfer is to be used; e.g., voice call or computer handoff.

**b.** Factors to be considered by the controller in determining use of the MODIFY or QUICK LOOK functions and by the facilities for prohibiting their use include, but are not limited to, light on the face of the

CTRD, traffic volume, other duties requiring the controller's attention, and the number of controllers available in the tower.

## 11–2–5. AUTOMATION PROGRAM CHANGES

The air traffic manager of automated 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–***
ARTS IIIA:
"A3.06, National Patch Level P operational suitability testing completed, acceptable."

COMMON ARTS:
"A605, REV 20 operational suitability testing completed, acceptable."

"A2.09, REV 20 operational suitability testing completed, acceptable."

MICRO EARTS:
"M4.08R, operational suitability testing completed, acceptable."

## 11–2–6. 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/ATTS–to–ATTS automatic handoff area when the center is in the radar data processing (RDP) mode.

**2.** Coordinate with the adjacent automated facilities to ensure that computer handoffs will be initiated only after the aircraft is within their facility's automatic acquisition area. Where this is not feasible due to airspace assignment, facility directives must require use of an appropriate procedure specified in FAAO JO 7110.65, Air Traffic Control, to confirm the identity of all aircraft handed off prior to ATTS 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.** Terminal Operations Service Area Directors may authorize a distance greater than specified in subparas a3 and 4 above, where the operational conditions dictate.

## 11–2–7. MINIMUM SAFE ALTITUDE WARNING (MSAW), CONFLICT ALERT (CA), AND MODE C INTRUDER (MCI)

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

**b.** When their continued use would adversely impact operational priorities, air traffic managers may temporarily inhibit the MSAW, the Approach Path Monitor portion of MSAW, and/or the CA and/or MCI functions. Except when equipment or site adaptation problems preclude these functions being used, a brief written report must be sent to the

Terminal Operatons Service Area Office whenever they are inhibited. A copy of the report must be sent to Terminal Safety and Operations Support.

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

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

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

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

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

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

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

**6.** Tower aural alarm areas are identified.

## 11–2–8. MAGNETIC VARIATION OF VIDEO MAPS/GEO MAPS AT ARTS FACILITIES

Air traffic managers must ensure that:

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

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

***NOTE–***

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

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

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

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

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

***REFERENCE–***

*Para 11–2–9, MSAW DTM Cartographic Certification, Updates, and Recompilation.*
*FAAO 8260.19, Flight Procedures and Airspace.*

## 11–2–9. MSAW DTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION

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

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

**1.** The ASR antenna 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 two degrees or more.

***NOTE–***

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

## 11–2–10. 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 FIFO for a flight check.

# Section 3. Data Recording and Retention

## 11–3–1. 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 paras 11–3–1, Data Recording, and 11–3–2, Data Retention. However, the data may be retained on a disc or hard drive as specified in a facility directive.

## 11–3–2. 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 subpara 11–3–1c not extracted.

**5.** The data extracted in addition to that required by subpara 11–3–1c.

**6.** The initials of the person changing the recording.

**b.** Retain data extraction recordings for 45 days except:

**1.** En route facility utilizing system analysis recording tapes as their radar retention media must retain radar data for 15 days.

**2.** Accidents: Retain data extraction recordings in accordance with FAAO 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting.

**3.** Incidents: Retain data extraction recordings in accordance with FAAO 8020.11, and/or FAAO 7210.56, Air Traffic Quality Assurance.

**4.** Accidents: Retain TTYE stored captured files (or TTY if TTYE captured files are unavailable) for 30 days unless they are related to an accident or incident as identified in FAAO 8020.11 or FAAO 7210.56.

***NOTE–***
*A facility using a console typewriter printout take–up device may retain the printout on the spool for 15 days after the last date on the spool. Retention of the daily printouts relating to accidents/incidents must be in accordance with subpara b.*

**5.** 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 and console typewriter printouts pertaining to hijack aircraft the same as voice recorder tapes.

***REFERENCE–***
*Para 3–4–4, Handling Recorder Tapes or DATs.*

## 11–3–3. 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 4. TPX–42

## 11–4–1. OPERATIONAL USE

**a.** Do not use TPX–42 data when the system is released to Technical Operations technicians.

**b.** Verify the operational status of the TPX–42 prior to operational use.

**c.** Inform affected facilities of scheduled and unscheduled shutdowns.

**d.** Develop local procedures, operating instructions, and training materials required to ensure intrafacility standardization of operation.

**e.** Facility directives must specify the discrete codes assigned to each operating position from the code subsets allocated to the facility.

**f.** Traffic entering the terminal airspace on an ARTCC computer–assigned discrete beacon code must not remain on that code any longer than the time specified in a LOA.

***NOTE–***
*Center computer parameters are adjusted to minimize the time in which a discrete code is assigned to an aircraft. The time specified in the letter of agreement should not exceed the Arrival Flight Plan Drop Interval adapted for your airport.*

## 11–4–2. LOW ALTITUDE ALERT SYSTEM (LAAS)

**a.** When continued use would adversely impact operational priorities, air traffic managers may temporarily inhibit the LAAS. Except when equipment or site adaptation problems preclude the use of LAAS, a brief written report must be sent to the respective Terminal Operations Service Area Office whenever it is inhibited. A copy of the report must be sent to System Operations and Safety, System Safety and Procedures.

**b.** Air traffic managers are authorized to inhibit LAAS at specific operating positions if an operational advantage will be realized.

**c.** Sector/altitude maps must be kept current.

**d.** Terminal Operations Service Area Offices must:

**1.** Furnish LAAS facilities a copy of:

**(a)** Newly received FAA Form 7460–2, Notice of Actual Construction or Alteration.

**(b)** Emergency Notices of Construction of structures more than 200 feet above ground level lying within 60 NM of the radar site.

**2.** Ensure that the daily National Flight Data Digest is provided to LAAS facilities when it affects their area of jurisdiction.

**e.** Facility managers must ensure that:

**1.** The material described in subpara d1 above, is reviewed, and that the appropriate corrections to the sector/altitude map are made.

**2.** The magnetic variation of the facility's sector/altitude map coincides with the magnetic variation of the facility's radar video maps/geo maps.

***NOTE–***
*The sector/altitude map is constructed to align with the radar antenna offset for magnetic north. Consequently, any change in antenna offset will result in a corresponding change in the relative position of the terrain points and the obstacles used to determine altitude assignments. This will require generating a new sector/altitude map.*

# Section 5. Charted VFR Flyway Planning Chart Program

## 11–5–1. DEFINITION

VFR flyways are general flight paths not defined as a specific course, for use by pilots in planning flights into, out of, through, or near complex terminal airspace to avoid Class B airspace. An ATC clearance is NOT required to fly these routes.

## 11–5–2. CRITERIA

Use the following criteria for establishing VFR Flyway Planning Charts:

**a.** Flyway Course: The flight paths used to describe VFR flyways, must, to the maximum extent practicable, reference ground objects that can be readily identified from the air. If necessary, and if an operational benefit can be derived, radio NAVAID references may be used.

**b.** Flyway Altitudes: Each segment of a charted 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 flyway to encounter inflight wake turbulence generated by large 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: Charted 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.

**e.** Once a flyway is charted, it will only be moved when it significantly interferes with other operations.

## 11–5–3. RESPONSIBILITIES

**a.** Flyway Development: The facility air traffic manager develops requirements for VFR flyways charting. All actions leading to the development of a VFR Flyway Planning Chart should be initiated by the facility air traffic manager.

**1.** Initial Action: The requesting facility air traffic manager must establish a task force of air traffic, FSDO, military, and local aviation interests, as appropriate, to recommend where the charted VFR flyways should be located.

**2.** Flyway Justification: As a minimum, the facility air traffic manager must address in writing the following pertinent factors:

**(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 flyway and the appropriate VFR Terminal Area Chart or a drawing must depict the following data:

**(a)** VFR flyway flight paths with named visual checkpoints, NAVAID magnetic radials, and altitudes;

**(b)** Any large turbine–powered aircraft arrival/departure routes that cross the charted VFR flyway;

**(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.** Flyway Approval: Terminal Operations Service Area Offices are responsible for approving the proposed VFR Flyway Planning Charts and ensuring that they comply with the prescribed criteria. If approval is granted, the Terminal Operations Area

Offices must forward the proposal to System Operations Airspace and Aeronautical Information Office at least 9 weeks prior to the planned implementation date. The planned implementation date must coincide with a publication date of the respective VFR TAC.

**c.** Annual Review: Terminal Operations Area Offices are responsible for reviewing existing VFR Flyway Planning Charts on an annual basis to determine their continued need.

**d.** Revision to Flyways: In order that System Operations Airspace and Aeronautical Information Office can meet its responsibilities, revisions to VFR Flyway Planning Charts must be submitted to System Operations Airspace and Aeronautical Information Office at least 9 weeks prior to the publication date of the respective VFR Terminal Area Chart. Revisions may be initiated by the facility air traffic manager or the Terminal Operations Area Office. 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.

**3.** Additions or deletions to checkpoints/NAVAIDs.

**e.** Publicity: The facility air traffic manager must seek the cooperation of the FSDO in informing aviation interests about the VFR Flyway Planning Chart Program. Special emphasis should be placed on:

**1.** Pilot adherence to flyways and recommended altitudes is voluntary.

**2.** Flyways are not devoid of IFR or military traffic. They represent flight paths that are believed to have the least IFR or military activity.

**3.** A “see and avoid” environment must be maintained and emphasized.

# Section 6. Helicopter Route Chart Program

## 11–6–1. POLICY

**a.** The Helicopter Route Chart Program has been established to enhance helicopter access into, egress from, and operation within high density traffic areas by depicting discrete and/or common use helicopter routes, operating zones, and, where necessary, radio frequencies. The program had been designed to improve operational safety in areas where significant helicopter operations occur, and to establish a systematic process for chart development, modification, and acquisition.

**b.** Pilot adherence to charted helicopter routes and the recommended altitudes or flight ceilings associ–ated 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.** Helicopter route charts must be published individually, on a site–specific basis. They are not updated on a regular basis as are other visual charts. They will be updated when a significant number of changes have accumulated, or when safety related or major airspace modifications warrant the printing of a new chart. The *Dates of Latest Editions,* published by the National Ocean Service will serve as a notice when a new chart is about to be published and which editions of charts are currently in use.

## 11–6–2. DEFINITION

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 IFR traffic avoidance and pilot adherence to minimum safe altitude requirements. The charts provide expanded, and in some cases unique, ground reference symbology to improve visual navigation.

## 11–6–3. CRITERIA

Use the following criteria when determining the need for a new or revised helicopter route chart:

**a.** Routes:

**1.** Recommended altitudes/flight ceilings/floors must avoid restricted/military airspace requiring prior authorization or clearance to enter.

**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.

**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.

**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.

**1.** Recommended altitudes/flight ceilings/floors must avoid airspace requiring prior authorization or clearance to enter.

**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, fixed wing traffic.

**3.** When altitude/flight ceiling changes are required, they should be based on a descent rate of 250–350 feet per nautical mile.

**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.** 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.** Helicopter routes may be changed or modified whenever a new chart is updated. It is recommended that all route modifications be coordinated with operating groups in the local area.

## 11–6–4. RESPONSIBILITIES

**a.** Helicopter route chart development: Facility air traffic managers are responsible for determining the need for chart development or revision, and for compliance with the following:

**1.** Initial action: Facility air traffic managers who desire to establish a new route chart or revise an existing chart must establish a task force or planning group 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.

**2.** Justification: All recommendations for new and/or revised charting must include justifying information that includes, as a minimum, the following information:

**(a)** Background information pertinent to chart development or revision, including the composition of the task force or planning group;

**(b)** The airspace areas and proposed routes, operating zones, and altitude/flight ceiling/floor considerations examined;

**(c)** Special VFR procedural implications;

**(d)** Task force or planning group recommendations; and

**(e)** Supporting rationale.

**3.** Charts and description: Facility air traffic managers must provide a narrative description or drawing of the chart area, including:

**(a)** Identification of all integral routes or operating zones, with named visual checkpoints and elevations, and associated altitude or flight ceiling limitations;

**(b)** Any IFR routes that fall within the charted area;

**(c)** Procedural notes pertinent to operations within the charted area or an operating zone, and on designated routes; and

**(d)** Traffic advisory radio communications frequencies and ATC facility names associated with area, route, or zone operations.

**b.** Chart approval: Terminal Operations Service Area Directors are responsible for reviewing and approving new or revised helicopter route chart proposals, and assuring that they comply with all prescribed criteria. However, procedural implementation may not occur until the proposal has been reviewed by System Operations Airspace and Aeronautical Information Management, and subsequently published. Consequently, managers should forward their approved packets through System Operations Airspace and Aeronautical Information Management as far in advance of the desired publication/implementation date as possible.

***NOTE–***
*The publication lead times for new charts and minor chart revisions will routinely approximate 6–9 months and 3–4 months, respectively.*

**c.** Annual review: Terminal Operations Service Area Directors are responsible for the conduct of annual reviews of existing VFR helicopter route charts to determine their accuracy and continued utility.

**d.** Chart revisions:

**1.** Revisions to existing helicopter route charts may be initiated by any facility air traffic manager, but can only be approved by the Terminal Operations Service Area Directors. However, to assure completion of all requisite Airspace and Rules review and publication requirements, proposals must be submitted through System Opererations Airspace and Aeronautical Information Management to Airspace and Rules at least 6–9 months or 3–4 months (as appropriate) prior to their expected or recommended implementation date.

**2.** The following are considered sufficient justification for a revision:

**(a)** Changes, additions, or deletions to area coverage, designated routes or operating zones,

controlling agencies and/or frequencies, procedural notes, or airport/heliport/helistop status;

**(b)** Changes in IFR routes within the chart coverage area; and

**(c)** Additions or deletions to visual checkpoints.

**e.** Publicity: Facility air traffic managers 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:

**1.** The voluntary nature of pilot adherence to designated routes, operating zones, altitudes/flight ceilings, and procedural notes;

**2.** The importance of chart use to operational safety and IFR traffic avoidance; and

**3.** The "see and avoid" nature of operations within the chart area.

# Section 7. Terminal Area VFR Route Program

## 11–7–1. POLICY

**a.** The Terminal Area VFR Route Chart Program has been developed to assist pilots operating under VFR who do not wish to communicate with ATC to avoid airspace requiring such contact.

**b.** Pilot adherence to Terminal Area VFR Routes, and the recommended altitudes associated with them, is strictly voluntary and in no way relieves pilots from requirements to comply with all applicable Federal Aviation Regulations.

## 11–7–2. DEFINITION

Terminal Area VFR Routes are specific flight courses depicted on the chart(s), which may include recommended altitudes, and described by reference to electronic navigational aids and/or prominent visual landmarks for optional use by pilots to avoid Class B, Class C, and Class D airspace while operating in complex terminal airspace. An ATC clearance is not required to fly these routes.

## 11–7–3. CRITERIA

Use the following criteria for establishing Terminal Area VFR Routes:

**a.** Routes:

**1.** Recommended routes should avoid the flow of IFR traffic.

**2.** Recommended routes must, to the maximum extent practical, reference prominent landmarks that can be readily identified from the air.

**3.** The course must be described by magnetic compass headings and latitude/longitude. Radio aids to navigation may be used as supplemental course guidance when feasible.

**b.** Recommended Altitudes: Each segment of a route must have recommended minimum/maximum altitudes.

**1.** Recommended altitudes must avoid airspace requiring prior ATC authorization or contact to enter.

**2.** Recommended altitude must be in accordance with VFR cruising altitudes.

**3.** Recommended altitudes must avoid areas of expected wake turbulence from large aircraft.

**4.** Altitude changes should be based on climb/descent rate of 250–350 feet per nautical mile.

**5.** Recommended 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. Recommended routes which cross or are close to MTR should include communication instructions to allow pilots to determine MTR status.

## 11–7–4. RESPONSIBILITIES

**a.** Terminal Area VFR Route Development: Terminal Operations Service Area Directors are responsible for determining the need for recommended routes and for compliance with the following:

**1.** Initial action: Terminal Operations Service Area Directors desiring to establish recommended routes must form a task group consisting of local air traffic, FSDO, military, and other interested parties.

**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 recommended routes which must include as a minimum:

**(a)** Arrival/departure airports.

**(b)** Latitude/longitude of each turning point on the route. The description must include a sufficient number of points to establish the desired turn radius. NAVAID data may be included if appropriate: e.g., VOR radials.

**(c)** Recommended altitudes for each route segment and flight status: i.e., level, climbing, or descending.

**(d)** A list of recommended VFR checkpoints (including latitude/longitude) may be included, if appropriate.

**b.** Route Review: Terminal Operations Service Area Directors are responsible for reviewing recommended VFR routes and for ensuring that they comply with all prescribed criteria. Terminal Operations Service Area Directors must submit route descriptions to the System Operations Airspace and Aeronautical Information Management in a tabular format suitable for publication in the National Flight Data Digest without additional processing.

**c.** Annual Review: Terminal Operations Service Area Directors must as a minimum, on an annual basis, review routes and submit revisions to System Operations Airspace and Aeronautical Information Management in format described above.

**d.** Route Revisions: The System Operations Airspace and Aeronautical Information Management office, must ensure that route descriptions/revisions submitted by Service Area offices are published in the National Flight Data Digest for the use of chart makers and other interested parties.

# Section 8. Standard Terminal Automation Replacement System (STARS)

## 11–8–1. 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 effected 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.

## 11–8–2. DATA ENTRIES

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

## 11–8–3. DISPLAY DATA

**a.** When a malfunction causes repeated discrepancies of 300 feet or more between the automatic altitude readouts and pilot reported altitudes, request the AUS or 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 FAAO JO 7110.65, Air Traffic Control, para 2–1–6, Safety Alert, and subpara 5–2–17a2, Validation of Mode C Readout, may be applied. Air traffic managers may authorize the temporary suspension of this requirement when target clutter is excessive.

***REFERENCE–***
*FAAO JO 7110.65, Para 5–2–23, Altitude Filters.*

## 11–8–4. USE OF STARS QUICK LOOK FUNCTIONS

**a.** Where STARS data from a system common to the TRACON and the tower is presented on the TDW or supplemental display in the tower cab, and if operational benefits will accrue by using the QUICK LOOK function, a facility directive or a LOA must be prepared specifying:

**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.

## 11–8–5. 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."*

## 11–8–6. 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 when the center is in the radar data processing (RDP) mode.

**2.** Coordinate with the adjacent automated facilities to ensure that computer handoffs will be initiated only after the aircraft is within their facility's automatic acquisition area. Where this is not feasible due to airspace assignment, facility directives must require use of an appropriate procedure specified in FAAO JO 7110.65, Air Traffic Control, to confirm the identity of all aircraft handed off prior to ARTS 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.** Terminal Operations Service Area Directors may authorize a distance greater than specified in subparas 3 and 4 above, where the operational conditions dictate.

## 11–8–7. MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA)

**a.** When their continued use would adversely impact operational priorities, facility air traffic managers may temporarily inhibit the MSAW, the Approach Path Monitor portion of MSAW, and/or the CA functions. Except when equipment or site adaptation problems preclude these functions being used, a brief written report must be sent to the respective Terminal Operations Area Office whenever they are inhibited. A copy of the report must be sent to Terminal Safety and Operations Support.

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

**c.** MSAW Digital Terrain Maps (DTMs) must be kept current.

**d.** Terminal Operations Area Offices must:

**1.** Furnish STARS facilities a copy of:

**(a)** Newly received FAA Forms 7460–2, Notice of Actual Construction or Alteration.

**(b)** Emergency Notices of Construction of structures of 200 feet or more above ground level lying within 60 NM of their radar site.

**2.** Ensure that the daily *National Flight Data Digest* (NFDD) is provided to STARS facilities and other offices when it affects their area of jurisdiction.

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

**1.** The material described in subpara d1 above, is reviewed and that appropriate corrections to the DTM are made.

**2.** The magnetic variation of the facility's DTM coincides with the magnetic variation of the facility's radar video maps/geo maps.

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

***REFERENCE–***
*Para 11–2–8, Magnetic Variation of Video Maps/Geo Maps at ARTS Facilities.*

**3.** MSAW parameters are modified, as appropriate, to minimize the extent of inhibit areas as specified in the Standards and Guidelines for STARS.

**4.** 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.

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

**6.** Tower aural alarm areas are identified.

**7.** 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.

## 11–8–8. MAGNETIC VARIATION OF VIDEO MAPS/GEO MAPS AT STARS FACILITIES

Air traffic managers must ensure that the magnetic variation of radar video maps/geo maps, MSAW, DTMs, and radar site settings coincide. The magnetic variation must be verified annually and a change of 2 degrees or more requires a recompiling of the effected map or maps.

***NOTE–***
*The video map is the primary reference for maintaining radar antenna alignment.*

***REFERENCE–***
*Para 11–8–7, Minimum Safe Altitude Warning (MSAW) and Conflict Alert (CA).*
*Para 11–8–9, MSAW DTM Cartographic Certification, Updates, and Recompilation.*

## 11–8–9. MSAW DTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION

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

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

**1.** The ASR antenna 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 two degrees or more.

***NOTE–***
*Requests for new or recompiled DTMs are routed to System Operations Airspace and Aeronautical Information Management.* The NACO *requires approximately ten weeks to build and deliver a DTM.*

## 11–8–10. 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 FIFO for a flight check.

## 11–8–11. 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 subparas b or c below,

unless a waiver to adjust the base altitude parameter value is received from System Operations Security.

**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 and forwarded to System Operations Security, through the respective Terminal Operations Area Office.

**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. The following is required when MCI base altitude is adjusted:

**1.** Log each occurrence on FAA Form 7230–4, when this procedure is being used, including the sector/position and temporary altitude.

**2.** Documentation must be forwarded to System Operations Security if it is determined that a temporary adjustment of the MCI base altitude does not meet the needs of the sector/position.

**d.** Facility air traffic managers are authorized to inhibit the display of MCI Alert at specified sectors/position.

## 11–8–12. 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.*

## 11–8–13. 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.*

## 11–8–14. 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.*

## 11–8–15. SINGLE SITE COVERAGE ATTS OPERATIONS

Facilities may adapt all sort boxes within 40 miles of the antenna to that site as preferred and with the single site indicator set to permit the use of 3 miles radar separation as defined in FAAO JO 7110.65, Air Traffic Control, subpara 5–5–4b3, Minima. This adaptation may be used provided:

**a.** A significant operational advantage will be obtained using single site coverage. Consideration must be given to such aspects as terminal interface, radar reliability, etc.; and

**b.** Facility directives are issued to:

**1.** Define areas within 40 NM of any radar site in which the adaptation has been modified.

**2.** Permit 3 NM separation in the modified area.

**3.** Accommodate local procedural changes.

# Section 9. Safety Logic Systems Front–Line Manager/CIC Procedures

## 11–9–1. SYSTEM OPERATION

**a.** Safety logic systems are software enhancements to the ASDE–3 and Airport Surface Detection Equipment System – Model X (ASDE–X) 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.

**1.** Airport Movement Area Safety System (AMASS) is a safety logic system enhancement to the ASDE–3.

**2.** ASDE–X safety logic is a system enhancement to ASDE–X.

**b.** The safety logic system must be operated in a full core alert runway configuration. (In ASDE–X, when rain configuration is selected, it includes full core alerting capabilities.)

**c.** In the event of a Multilateration (MLAT) failure, ASDE–X will stay operational. In this case, ASDE–X will operate in radar–only mode. The system automatically transitions to radar–only mode when it senses an MLAT fault. No action is required by the operator to enable radar–only mode.

**1.** The controller displays will keep maps and track data. Tracks that were currently being tracked when MLAT failed will keep their data blocks while in the coverage area. Tracks on arrival with ASR coverage will also keep a data block while in the coverage area. Tracks moving from a radar–only mode zone to a fully operational zone will display the tracks as it enters the operational zone.

**2.** New tracks will start as unknown icons and must be manually tagged to receive a data block. ASDE–X safety logic processing is not affected by radar–only mode operation. The system automatically transitions to normal operation once the MLAT subsystem is back online. Full core alerting capabilities are provided in radar–only mode.

**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 front–line manager/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 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. The National Airway Systems Engineering (NASE) group may be able to provide an adaptation to filter the affected areas from safety logic system coverage. Facilities must contact NASE via email at 9–AMC–ATOW–ASDES@faa.gov, 30 to 45 days before the construction is scheduled to begin to assist in deciding if an adaptation is necessary.

**g.** ASDE–X 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–***
*FAAO JO 7110.65, Para 3–6–2, Identification.*

**h.** 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.

## 11–9–2. ENSURE STATUS

**a.** The front–line manager/CIC is responsible for ensuring that the Safety Logic System is set for the correct runway configuration.

**b.** The front–line manager/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 front–line manager/CIC must ensure that all outages are carried over on applicable logs.

## 11–9–3. MONITOR ALERTS AND ENSURE CORRECTIVE ACTION

**a.** The front–line manager/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.

**c.** The purpose of logging Safety Logic System alerts is to track the reliability and performance of the system. Therefore, the Quality Assurance Review (QAR) process must not be used for false or nuisance alerts.

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

## 11–9–4. 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–X and AMASS 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.*

## 11–9–5. 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 alerts" is at the discretion of each front–line manager/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 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 the limited configuration disables all alerts except arrivals to and departures on a closed runway and is not considered full–core alert status.*

## 11–9–6. 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 10. VFR Waypoint Chart Program

## 11–10–1. 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, and Special Use Airspace (SUA). 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.

## 11–10–2. DEFINITION

A VFR waypoint is a predetermined geographical point depicted on a chart for transitioning and/or circumventing controlled and/or SUA, that is defined relative to a visual reporting point or in terms of latitude/longitude coordinates.

## 11–10–3. 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 7, Terminal Area VFR 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.** Guidance for the development of VFR waypoints to identify mountain passes/routes is or will be provided in Flight Standards' directives.

**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 letter to System Operations Airspace and Aeronautical Information Management, 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 National Flight Data Center 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 Cartographic Committee (IACC) 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 IACC waypoint symbology.

**4.** The latitude/longitude for each waypoint will be published in the Airport/Facility Directory (A/FD) and on one of the panels of the appropriate chart.

## 11–10–4. 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, Flight Standards District Office, Flight Service Station (FSS), military, law enforcement, etc.

***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 Terminal Operations Area Office containing:

**(a)** A new or revised VFR navigation chart depicting the location and five–letter name of each waypoint/checkpoint.

**(b)** A completed FAA Form 8260–2, Radio Fix and Holding Data Record, in accordance with FAAO 8260.19, Flight Procedures and Airspace. A list of VFR waypoint five–letter names can be obtained from the Terminal Operations Service Area offices obtain five–letter names from System Operations Airspace and Aeronautical Information Management. Flight checks are not required.

**(c)** A camera–ready textual description of each waypoint including the name. Contact the Terminal Operations Area Office for assistance in preparing this document.

**(d)** A 7 1/2–minute quadrangle chart or obstruction evaluation (OE)/airport airspace analysis (AAA) Geographical Information System (GIS) graphics with the precise point of the VFR waypoint depicted. It is critical that the depictions be easily readable by the Technical Operations Aviation Systems Standards, National Aeronautical Charting office, in order to verify the position for accurate charting. If using OE/AAA GIS graphics, provide the applicable 7 1/2–minute quadrangle map names. Contact the Terminal Operations Area Office for assistance in preparing this chart.

**(e)** Justification/supporting rationale.

**c.** The Terminal Operations Area Office must:

**1.** Provide assistance to the air traffic facility, when requested, to prepare the camera–ready textual description of each waypoint including the name and/or to depict the VFR waypoints on a 7 1/2–minute quadrangle chart.

**2.** Approve the VFR waypoint charting and ensure compliance with the prescribed criteria. If approval is granted, the Terminal Operations Area Office must forward the package to System Operations Airspace and Aeronautical Information Management 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.** System Operations Airspace and Aeronautical Information Management 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 National Aeronautical Charting for verification of the geographic positions.

**4.** Upon verification, National Aeronautical Charting must notify System Operations Airspace and Aeronautical Information Management 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.

**e.** National Aeronautical Charting must:

**1.** Review the incoming VFR waypoint proposals for completeness.

**2.** Coordinate with System Operations Airspace and Aeronautical Information Management for the resolution of any geographic positions that require FAA Form 8260–2 revisions; provide System Operations Airspace and Aeronautical Information Management with verification that geographic positions are ready for publication in the NFDD.

**3.** Coordinate with System Operations Airspace and Aeronautical Information Management to ensure that any new or revised VFR checkpoints are published in the NFDD.

**4.** Publish VFR waypoint geographic positions in the A/FD and on appropriate VFR charts.

# Chapter 12. Facility Statistical Data, Reports, and Forms

## Section 1. General Information

### 12–1–1. 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 FAAO JO 7210.55, Operational Data Reporting Requirements. All air traffic facilities, except FSSs, must report traffic count information daily through OPSNET or OPSNET touch–tone interface (OTTER).

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.

### 12–1–2. 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.

### 12–1–3. 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.

### 12–1–4. 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 12–1–1.)

*TBL 12–1–1*
**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* |

## 12–1–5. 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

## 12–2–1. 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 standard 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 standard 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

## 12–3–1. 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

## 12–4–1. 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

## 12–5–1. 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 ATCSCC, Quality Assurance Branch.

## 12–5–2. ANALYSIS AND REVIEW

Data are available for analysis and review through the following Web site: http://www.apo.data.faa.gov. Select the OPSNET link from this page for logon. Forward all requests for changes and enhancements to the person listed on the home page of the Web site.

# Part 4. FLIGHT SERVICE STATIONS

# Chapter 13. Flight Service Operations and Services

## Section 1. General

### 13–1–1. OPERATING POSITION DESIGNATORS

**a.** The following designators may be used to identify operating positions in an FSS. (See TBL 13–1–1.)

*TBL 13–1–1*
**Operating Position Designators**

| | *Designator* | *Position* |
|---|---|---|
| 1. | AA | Airport Advisory |
| 2. | BC | Broadcast |
| 3. | C | Coordinator |
| 4. | DSC | Data Systems Coordinator |
| 5. | FD | Flight Data |
| 6. | FW | Flight Watch |
| 7. | IF | Inflight |
| 8. | N | NOTAM |
| 9. | OM | Operations Manager |
| 10. | OS | Operations Supervisor |
| 11. | PF | Preflight |
| 12. | STMCIC | Supervisory Traffic Management Coordinator–in–Charge |
| 13. | WO | Weather Observer |

**b.** Facility managers may use designators other than those listed to accommodate local situations.

### 13–1–2. 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.

### 13–1–3. FLIGHT PLAN AREA

The Airport/Facility Directory lists each public use airport and its associated FSS. As changes occur, determine the flight plan area assignments as follows:

**a.** The Flight Services 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.*

### 13–1–4. 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 Services Operations Service Area Office approval, facilities may add additional menu instruction for special purpose requirements, e.g., coastal route, TIBS sectorization, etc.

# Section 2. Position/Service Information Binders

## 13–2–1. RESPONSIBILITY

**a.** The air traffic manager must provide position binders 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.

## 13–2–2. 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.

## 13–2–3. POSITIONS/SERVICES

**a.** Broadcast:

**1.** Define broadcast area and list outlets.

**2.** List locations and weather products.

**3.** Specify broadcast hours.

**b.** Pilot Briefing:

**1.** List and/or specify preflight briefing display.

**2.** Specify flight plan handling procedures.

**c.** 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 pro–cedures.

**6.** Specify PIREP handling procedures.

**7.** Specify procedures for altimeter check.

**d.** 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.

**e.** 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.

**f.** En Route Flight Advisory Service (EFAS): Provide graphic depiction of flight watch area and include communications outlets.

# Section 3. Operations

## 13–3–1. 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.

## 13–3–2. 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 Management.

## 13–3–3. AIRPORT SEARCH ARRANGEMENTS

FSS air traffic managers must arrange with the airport management of each civil landing area in the FSSs flight plan area, including private landing areas as appropriate, to be searched for an overdue or unreported aircraft upon request from the station. Request police assistance in searching unattended landing areas.

## 13–3–4. 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.

## 13–3–5. 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.

## 13–3–6. 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.

# Section 4. Services

## 13–4–1. 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.

## 13–4–2. PRACTICE INSTRUMENT APPROACHES

At locations providing Local Airport Advisories (LAA) where either an ARTCC or an approach control facility provides standard separation to VFR aircraft practicing instrument approaches, provisions for handling such aircraft must be included in a letter of agreement.

## 13–4–3. 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.

## 13–4–4. 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 10–6–8, Runway Edge Lights Associated with Medium Approach Light System/Runway Alignment Indicator Lights.

## 13–4–5. 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.

## 13–4–6. AUTOMATIC FLIGHT INFORMATION SERVICE (AFIS) – ALASKA FSSs ONLY

**a.** Alaska FSS AFIS provides a continuous broadcast of recorded non–control information at airports in Alaska where a Flight Service Station (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, breaking 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.

## 13–4–7. TRANSMISSION OF MESSAGES FROM AIRPORT INSPECTORS

Accept administrative messages from airport inspectors for transmission to NFDC and other FAA offices as prescribed in Chapter 2 of FAAO 5010.4, Airport Safety Data Program.

# Chapter 14. Aviation Meteorological Services and Equipment

## Section 1. General

### 14–1–1. 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.

### 14–1–2. CERTIFICATES OF AUTHORITY

**a.** FSS personnel must obtain a certificate of authority from the NWS before performing the following functions:

1. Weather observing.
2. Interpretation of weather radar.
3. Pilot weather briefing.
4. EFAS (Flight Watch).

**b.** FSS personnel selected as Academy instructors who hold current certificates of authority for Weather Observations/Pilot Weather Briefings may maintain their currency by forwarding the certificates to the Weather Service Coordinator, AMA–514.

### 14–1–3. LIAISON WITH AVIATION INTERESTS

**a.** Because of their aviation service responsibilities, FSS supervisors should establish and maintain cordial relations with aviation interests within 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.

### 14–1–4. 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 Airport/Facility Directory. Include TEL–TWEB (Alaska only), and Fast File in the local directories, and ensure that Foreign Exchange, Enterprise, etc., are listed in the directories of the areas which they serve. 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.**

### 14–1–5. 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.)

## 14–1–6. SUPPLY–SUPPORT

Equipment used exclusively for aviation observations will be procured, installed, operated, maintained, and supply–supported by FAA. Observational equipment; e.g., gust recorders, barographs, and rain gauges, 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 nonreimbursable basis where appropriate.

## 14–1–7. NWS OPERATIONS MANUAL

**a.** Specialized Weather Services, Chapter D–20 through Chapter D–27, are distributed by Washington headquarters to all FSS facilities. When other D Chapters are required, facility managers must arrange for routine distribution through the respective Flight Services Operations Service Area Office.

**b.** If the listed Weather Service Operations Manuals (WSOM) and associated Operational Manual Letters (OML) are not available through FAA Distribution, those items annotated with an asterisk may be obtained from:

National Oceanic and Atmospheric Administration (NOAA) Logistics Supply Center
1510 East Bannister Road
Building 1
Kansas City, Missouri 64131

Remaining documents may be obtained by contacting the Weather Service Evaluation Officer (WSEO) servicing your area.

**c.** Following is a list of the available chapters. They are amended and supplemented by the issuance of either a revision or an Operations Manual Letter (OML). When ordering, specify the effected D chapter, the revision or the OML, and include the issuance number and the date. (See TBL 14–1–1.)

*TBL 14–1–1*
**D–Chapter Listing**

| *Chapter Title/Amendments* | *Issuance Number* | *Issuance Date* |
|---|---|---|
| WSOMD–20 Aviation Area Forecasts* | 91–3 | 5/3/91 |
| OML 10–92* | | |
| OML 11–92* | | |
| OML 12–92* | | |
| WSOMD–21 Aviation Terminal Forecasts | 84–14 | 10/26/84 |
| Rev 1 | 85–1 | 1/22/85 |
| Rev 2 | 88–4 | 3/11/88 |
| OML 3–85 | | |
| OML 11–86 | | |
| OML 1–91* | | |
| OML 6–92* | | |
| OML 5–93 | | |
| WSOMD–22 Aviation In–Flight Weather Advisories* | 91–7 | 5/22/91 |
| WSOMD–23 Special Aviation Forecasts and Events | 79–11 | 8/23/79 |
| WSOMD–24 Wind and Temperature Aloft Forecasts | 81–18 | 11/4/81 |
| OML 4–83 | 4–83 | 2/7/83 |
| WSOMD–25 Support to AT Facilities | 84–1 | 2/10/84 |
| OML 2–84 | 2–84 | |
| WSOMD–26 Aviation Weather Warnings and Pilot Briefings | 85–9 | 8/26/85 |
| Rev 1 | | |
| OML 13–92* | 88–8 | 8/1/88 |
| OML 7–92* | | |
| OML 1–92* | | |
| WSOMD–27 In–Flight Reports from Pilots (PIREPs) | 73–1 | 1/23/73 |
| WSOMD–30 Transcribed Weather Broadcast Text Products | 88–3 | 2/5/88 |
| WSOMD–35 International Aviation Area Forecasts | 74–20 | 9/27/74 |
| Rev | | |
| OML 7–89 | 75–11 | 5/29/75 |
| WSOMD–37 International Aviation Aerodrome Forecasts | 88–6 | 6/1/88 |
| OML 7–88 | | |
| WSOMD–38 International Aviation In–Flight Advisories | 88–5 | 5/27/88 |
| OML 3–91* | | |
| OML 3–90 | | |
| OML 8–89 | | |
| WSOMD–79 National Weather Service Flight Operations | 83–8 | 4/27/83 |
| WSOMD–82 Training Program for Pilot Weather Briefers | 89–8 | 8/17/89 |
| Rev 1 | | |
| Rev 2* | 90–10 | 11/27/90 |
| OML 8–92 | 92–2 | 4/28/92 |

**D–Chapter Listing –** *continued*

| *Chapter Title/Amendments* | *Issuance Number* | *Issuance Date* |
|---|---|---|
| WSOMD–83 Aviation Weather Seminars and Safety Clinics | 74–19 | 9/16/74 |
| WSOMD–90 Weather Support for Accident Investigations and Litigation<br>OML 3–92 | 89–1 | 2/15/89 |

** If not available through FAA Distribution, may be obtained from:*

*NOAA Logistics Supply Center*
*1510 East Bannister Road*
*Building 1*
*Kansas City, Missouri 64131.*

# Section 2. Pilot Weather Briefing

## 14–2–1. 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.

## 14–2–2. 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.

## 14–2–3. 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.

## 14–2–4. FSS–WSO/WFO ADJOINING

When the offices are adjoining, the aviation briefing facilities should be combined to the extent practicable for efficient weather briefing service. A joint display should provide all needed aviation weather information. The briefing function will be conducted in accordance with local agreements prepared by the NWS and the FAA regions and based on interagency policy. Normally, briefings will be provided by FSS personnel. The NWS will provide support by providing and updating briefing material, consultation with the FSS briefers, and direct briefing service to the aviation user when requested by the user or the FSS specialists.

## 14–2–5. FSS–WSO/WFO NOT ADJOINING

At locations where joint briefing displays are not practicable, cooperative briefing service may be furnished by means of a one–call phone arrangement. This system provides for all aviation weather briefing telephone requests to be received in the FSS on lines listed under the FSS. By a switching arrangement, the pilot can be referred to the WSO/WFO when requested by the pilot.

## 14–2–6. 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.** Airport/Facility Directory, NOTAM publication, and Aeronautical Information Manual.

**d.** Army Aviation Flight Information Bulletin.

**e.** DOD IFR En Route Supplement and DOD VFR Supplement.

***REFERENCE–***
*Para 14–2–8, Military Training Activity.*

**f.** Drawing of the local airport.

**g.** Sunrise and sunset tables.

**h.** Aero computer.

**i.** Pilot chart working area.

## 14–2–7. FLIGHT PLANNING FORMS

FSS facility managers must assure FAA Form 7233–1, Flight Plans, 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.

## 14–2–8. 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.

## 14–2–9. 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 requalified by means of an oral examination by the NWS.

**c.** FSS personnel who are selected as Academy Instructors. (See para 14–1–2, Certificates of Authority.)

# Section 3. En Route Flight Advisory Service (EFAS)

## 14–3–1. GENERAL

EFAS, Radio call; "FLIGHT WATCH" is a service specifically designed to provide en route aircraft with timely and meaningful weather advisories pertinent to the type of flight being conducted. This information is limited to near–time or real–time weather that will directly affect an aircraft's route of flight. Full weather briefings and nonweather aeronautical information are not provided by Flight Watch Specialists (FWS).

## 14–3–2. FLIGHT WATCH AREA (FWA)

The FWA is the area within which EFAS is provided by the Flight Watch Control Station (FWCS).

**a.** The FWA must normally be defined by the boundary of the associated ARTCC plus 100 NM.

**b.** The Flight Services Operations Service Area Director may redesignate the FWA when necessary to accommodate service responsibilities at facilities not yet consolidated into ARTCC areas. These FWAs will vary according to the number and range of the communications outlets, but should include an area that overlaps adjacent FWCS operational areas by at least 50 NM.

## 14–3–3. SYSTEM CONFIGURATION

**a.** EFAS must be provided to aircraft within communications coverage of the FWCS. This will normally be considered congruent to the FWA.

**b.** Remote Communication Facilities (RCF) locations must be at an FSS, an existing RCF, or a VOR location when possible. The locations may be adjusted when it is advantageous to do so for reasons such as better communications coverage, leasing problems, etc.

**c.** Communications, through local or remote outlets, must be provided to enable pilots operating at or above 5,000 feet above ground level to maintain communications over the area served by the FWCS.

**d.** Frequency 122.0 MHz must be provided as a common frequency at all EFAS facilities and used for communications with aircraft flying below 18,000 feet MSL.

**e.** An assigned discrete frequency must be available for communications with aircraft operating at FL180 and above within each FWCS's associated ARTCC area. This does not preclude use of the frequency for communications with aircraft operating at a lower altitude where frequency coverage permits.

## 14–3–4. HOURS OF OPERATION

EFAS must be available from 6 a.m. to 10 p.m. local time, 7 days a week. The Flight Services Operations Service Area Office, with concurrence of the Vice President, Flight Services, may authorize extension of hours or a 24–hour operation when it is determined that expanded or continuous operation is essential to aviation safety.

## 14–3–5. STAFFING

**a.** The EFAS operating position must be manned by certified FWS. Each FWCS must be staffed sufficiently for the authorized hours of operation. The Flight Services Operations Service Area Office can authorize additional staffing levels when justified and requested by the facility air traffic manager.

**b.** During periods of high activity, an additional specialist may be assigned to the position to assist the FWS in the processing, posting, and dissemination of weather information. It is not required that this specialist be EFAS qualified to perform these duties.

## 14–3–6. NATIONAL WEATHER SERVICE (NWS) SUPPORT

**a.** The NWS area manager (normally the WFO meteorologist–in–charge) of the WFO within which the FWCS is located, or as designated by the NWS regional office, has the responsibility to monitor and evaluate the various links between the NWS and FAA facilities. The air traffic manager must coordinate with the designated NWS area manager to establish and maintain EFAS/NWS local procedures.

**b.** The CWSU of the associated ARTCC is designated as the primary operational support facility for the FWCS. The CWSU will, to the extent practicable, commensurate with other duties:

**1.** Provide duty briefings once per shift, as initiated by the FW specialist, which will include a

thorough description of meteorological conditions which are impacting, or are expected to impact, aviation weather within the FW/ARTCC area.

**2.** Provide expertise for consultation of ongoing weather trends during the hours the CWSU is operational.

**c.** Support for EFAS operational questions or clarification concerning weather is also provided by the associated WFO and the National Aviation Weather Advisory Unit (NAWAU) for specific products originated by these offices. The WFO will also provide EFAS support, (weather consultation) as necessary, when CWSU service is unavailable.

***NOTE–***
*The CWSU hours of operation are normally the same as the EFAS facility. Preparation and priority duties may preclude extended service for the first 1 to 2 hours of operation.*

## 14–3–7. EQUIPMENT

A separate position of operation must be provided for EFAS. The following equipment and/or material must be terminated in, or readily accessible at, the EFAS console:

**a.** Graphic weather chart, computer "view sequences," and written message display equipment.

**b.** Weather radar displays to provide presentations from local and remote sites covering the associated ARTCC area plus 100 NM when available and feasible. (Dependent on sites and coverage.)

**c.** Weather satellite displays.

**d.** Alphanumeric Service A weather data.

**e.** FSS/NWS lines. Access must be provided to the associated CWSU and WFO providing aviation meteorological support.

**f.** Position recording of the FW position and an associated time signal must be provided at FWCSs.

**g.** PIREP display. A PIREP graphic display, computer "view sequence" or manual equivalent (written) must be provided at the EFAS position for display and maintenance of pilot reported weather conditions over the FWA.

## 14–3–8. TRAINING

**a.** Classroom Training. Successful completion of an FAA approved Flight Service Station En Route Flight Advisory Service course is required prior to position certification.

**b.** Facility Training. "Facility qualification training and certification requirements for the FWS position must be developed and administered using the guidance contained in FAAO 3120.4, Air Traffic Technical Training."

## 14–3–9. CERTIFICATION

The following personnel must be certified on the FWS position:

**a.** All newly selected FWS.

**b.** All first–line supervisors assigned to FWCS locations. The certification must be accomplished within 1 year of selection or during the probationary period.

**c.** All permanently assigned training specialists and quality assurance specialists at FWCS locations. Resident Course 50201 should be completed within the first year of assignment.

## 14–3–10. RECERTIFICATION REQUIREMENTS

**a.** Previously certified personnel, after an absence of more than 120 days but less than 1 year, must be provided refresher training at the facility as determined by the facility manager and recertified on the position by their first–line supervisor.

**b.** Previously certified personnel, after an absence of more than 1 year from the FWS duties, must be provided refresher training at the facility as determined by the facility manager, pass an EFAS Recertification Examination by the FAA Academy NWS Unit, and be recertified on the position by their first–line supervisor.

**c.** The EFAS certification exam is maintained by FAA Academy NWS Unit, Mike Monroney Aeronautical Center. To obtain a copy, forward a written or electronic request to the FAA Academy NWS Unit. Instructions for administration and grading of the examination will be included in the package.

## 14–3–11. QUALIFICATION AND SELECTION

**a.** To be considered for an EFAS position, an air traffic control specialist must have, as a minimum, 2 years experience as a facility–rated FPL specialist.

**b.** All personnel must be selected under applicable agency personnel policies.

# Section 4. Broadcasts

## 14–4–1. STATION BROADCASTS

Facility air traffic managers must select the specific reports to be included in the Scheduled Weather Broadcast (SWB) and the Transcribed Weather Broadcast (TWEB). Include in each type broadcast 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. In addition, facility air traffic managers at TWEB transcribing locations must coordinate with facility air traffic managers at remote outlets to ensure adequate service to the users in all areas covered by the TWEB facility. 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 Services Operations Area Office approval is required.

## 14–4–2. COORDINATE WITH WEATHER FORECAST OFFICE (WFO) (ALASKA ONLY)

FSS air traffic managers at TWEB transcribing locations must coordinate with the associated WFO to ensure that TWEB forecast texts are adjusted as requirements change.

## 14–4–3. 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 TWEB or 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.** No commercial broadcast station or other special equipment is located in the FSS.

**f.** 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 Services Operations Area Office and the Vice President of Flight Services.

***NOTE–***
*TWEB procedures apply only to FSS facilities in Alaska.*

## 14–4–4. REDUCING RECORDED WEATHER INFORMATION SERVICES

Recorded weather services are TWEB (Alaska only) and TIBS. These services are very valuable and cost effective when utilized by the aviation community. The following guidelines will assist facility managers when adjusting services.

**a.** Minimum service hours for recorded weather services must be from 0600 thru 1800 local. Waivers must not be granted.

**b.** The facility manager may increase or reduce services between the hours of 1800 thru 0600 hours. To assist in the decision process the manager must proactively solicit user input at least twice annually.

**c.** A record summarizing the semi–annual solicitation activities must be maintained to justify and support the decision process and resultant changes in service. The record must contain an evaluation section with conclusions, as statement of actions taken in response to the information, and a 60–day follow–up plan to verify use of the requested services.

**d.** The record must be retained locally for three years then destroyed.

**e.** When services are added in direct response to a request for services from local aviators and the 60–day evaluation determines a lack of use or very low use, prior to discontinuing the new services discuss the issues with the group's representative.

# Chapter 15. Equipment

## Section 1. General

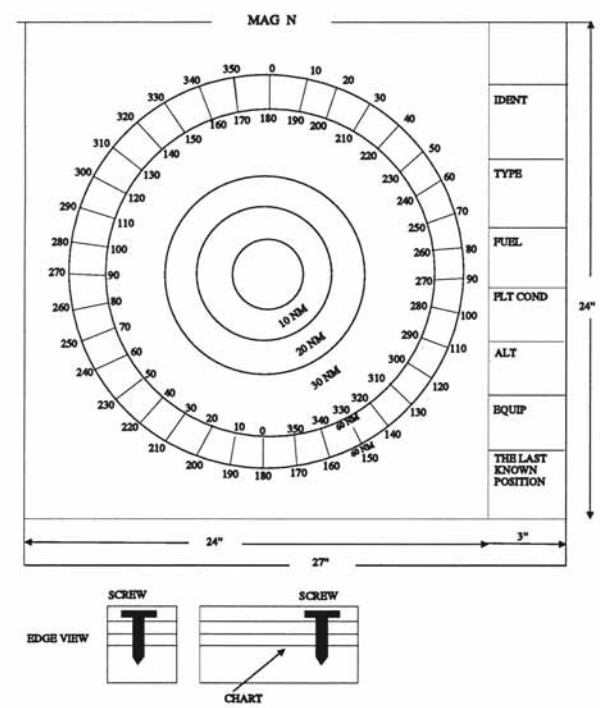
### 15–1–1. RESPONSIBILITY

FSS air traffic managers must identify requirements for new and replacement equipment and facilities by budget submission.

***NOTE–***
*Not applicable to contract facilities.*

### 15–1–2. AIRCRAFT ORIENTATION PLOTTING BOARD

*FIG 15–1–1*
**Example of a Standard Aircraft Orientation Plotting Board**




Maintain an aircraft orientation plotting board (see FIG 15–1–1), 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.

### 15–1–3. ADDITIONAL TELEPHONE SERVICE

Submit operational justification for additional local telephone service to the service area office when a facility receives or makes telephone calls amounting to an aggregate of more than 20 minutes per line during a normal daily peak hour. The rotary system must be used for this service.

### 15–1–4. ORDERING OVERLAYS

**a.** Compass Rose Clear Plastic Overlays. When ordering the overlays, use the following National Stock Numbers (NSN):

**1.** VOR 3–inch compass rose:
NSN 5220–01–062–8231.

**b.** Requests for aircraft orientation plotting board and compass rose overlays should be forwarded to:

| |
|---|
| FAA Mike Monroney Aeronautical Center |
| P.O. Box 25082 |
| Oklahoma City, Oklahoma 73125 |

**c.** Items must be ordered by using one of the following three methods:

**1.** LIS System: NSELITE System through Service Area office; must have NSN, user ID and password, supply support code (SSC), facility type (equipment application), and facility location identifier.

**2.** IMPART: www.impart.faa.gov; must have NSN, user ID and password, facility location identifier.

**3.** FAA Logistics Center, Customer Care Center– (405) 954–3793 or 1–888–322–9824: must have NSN or part number, supply support code (SSC), equipment application, facility location identifier.

### 15–1–5. LEASED EQUIPMENT SUPPLIES

**a.** FSSs equipped with Leased Service A Systems (LSAS) must provide all expendable items. These

should normally be obtained through the FAA supply system.

**b.** Paper used in the LSAS monitor printer must be retained for 15 days.

**c.** 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

## 15–2–1. 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.

## 15–2–2. UHF EN ROUTE CHANNEL

Frequency 255.4 MHz must be the UHF channel for en route communications with military aircraft and must be provided as necessary to meet military en route requirements.

# Chapter 16. Facility Statistical Data, Reports, and Forms

## Section 1. General Information

### 16–1–1. FORM USAGE

**a.** FSSs, as used herein, include and apply to combined facilities insofar as station functions are concerned. All domestic and IFSS must use FAA Form 7230–13 daily for recording in–flight, flight plan, and pilot briefing activity.

***REFERENCE–***
*Para 16–5–3, Distribution and Amendment.*

***TBL 16–1–1***
**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 16–1–1.)

### 16–1–2. 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:

**a.** FSS: Total Flight Services equal two times pilot briefs plus two times flight plans originated plus aircraft contacted.

**b.** IFSS: Total Flight Services equal two times pilot briefs plus two times flight plans originated plus two times aircraft contacted.

**c.** FSS/IFSS: Total Flight Services equal two times pilot briefs plus two times flight plans originated plus two times international aircraft contacted plus one times domestic 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

## 16–2–1. 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.

**c.** IFSSs must count aircraft contacted times two. IFSSs combined with other options must take the aircraft contacted times two only on the international portion of their operations.

***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.*

**d.** 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.

**e.** For EFAS, one aircraft contacted count may be taken for each communications outlet over which the same aircraft is provided service.

## 16–2–2. 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.

## 16–2–3. 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

## 16–3–1. 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.

## 16–3–2. 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.

## 16–3–3. 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.

## 16–3–4. FLIGHT PLAN FORMS

**a.** Use FAA Forms 7233–1 or 7233–4, as appropriate, to record flight plans copied by specialists.

**b.** Provide FAA Forms 7233–1 or 7233–4 and carbon for pilot use. Duplicating machine may be used in lieu of carbon.

# Section 4. Pilot Briefing Count

## 16–4–1. 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 subparas 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.*

## 16–4–2. RETENTION OF FORMS CONTAINING PILOT BRIEFING ("PB") DATA

In nonautomated FSSs retain FAA Forms 7233–1, 7233–3, 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

## 16–5–1. 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 as specified in FAAO JO 7350.8, 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 specified in FAAO JO 7350.8.

**8.** Aircraft Contacted: Enter the number of aircraft contacted in accordance with para 16–2–1, Aircraft Contacted.

**9.** Flight Plans Originated: Enter the number of flight plans in accordance with para 16–3–1, Flight Plan Count.

**10.** Pilots Briefs: Enter the number of pilot briefings in accordance with para 16–4–1, Pilot Briefing Count.

**11.** TIBS Calls Received: Enter the total number of calls to the TIBS.

**12.** NOTAMs issued: Enter the total number of NOTAMs issued. Count all NOTAM D, and NOTAM L. Do not count NOTAM cancellations.

**13.** Calls to Briefers: Calls to Briefers and TIBS Calls Received are separate categories and are not to be combined. 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.

**14.** 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.

**15.** Airport Advisories: Enter the number of airport advisories in accordance with para 16–2–2, Local Airport Advisory (LAA)/Remote Airport Advisory (RAA)/Remote Airport Information Service (RAIS).

**16.** Radio Contacts: Enter the number of radio contacts in accordance with Paragraph 16–2–3, Radio Contacts.

## 16–5–2. EFAS MONTHLY REPORT

Facilities which provide EFAS should record and submit this monthly activity on FAA Form 7230–13, plainly marked "EFAS."

## 16–5–3. DISTRIBUTION AND AMENDMENT

**a.** Distribute FAA Form 7230–13 (FSS Activity) and FAA Form 7230–13 (En Route Flight Advisory System only) as follows:

**1.** Forward the original form to the Flight Services Operations Area Office 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 Services Operations Area Office. Send amended copies, along with the current reporting month's forms, to the Flight Services Operations Area Office.

## 16–5–4. MESSAGE TRAFFIC NUMBER RECORD

Use FAA Form 7233–6 or local substitute to record message traffic.

## 16–5–5. UNANNOUNCED MILITARY AIRCRAFT ARRIVALS

The destination and departure tie–in stations must record on or attach to unannounced arrival messages all available related information and must coordinate with the local military bases for corrective action when necessary. These messages must be filed with the military daily traffic and unless a part of an incident, alleged violation, or accident, be retained for 15 days before disposal.

# Section 6. FSS Printing of Lists and Tallies (Model 1 Full Capacity)

## 16–6–1. PRINTING OF LISTS

**a.** Every hour on the minute specified by the Inbound List Print Interval (ILPI) system parameter, the Suspense List and the Inbound List must be printed at the appropriate FSS on the flight plan (FP) printer. For each list and FSS, this function must:

**1.** Retrieve the list data from the data base.

**2.** Format the title and the column headings.

**3.** List the entries in chronological order.

**b.** The Inbound List hourly printout consists of:

**1.** Time.

**2.** ACID.

**3.** Type of Flight.

**4.** A/C Type.

**5.** Departure.

**c.** The Suspense List hourly printouts consist of:

**1.** Time.

**2.** Message ID and/or ACID.

**3.** Type.

**4.** Addresses.

**d.** The Inbound List and the Suspense List printouts must be retained for 15 days.

## 16–6–2. PRINTING OF TRANSACTIONS INVOLVING LIST UPDATES

Transactions involving updates must be printed at the time of the transaction at the affected FSS on the flight movement printer.

**a.** The conditions for this function are a Flight Data List being updated by:

**1.** Acknowledging a general Service B message.

**2.** Not acknowledging the last address of a flight plan.

**3.** Receipt of an inbound flight plan.

**4.** Receipt of a change ETA message.

**5.** Receipt of a Roger message.

**b.** The List Update printouts must be retained for 15 days.

## 16–6–3. FLIGHT PLAN LOG PRINTING

The Flight Plan Log must be printed on the FP printer for the appropriate FSS once a day at the Log/Tally Print Time (LOGT) for that FSS. The entries in the log must be printed in chronological order.

**a.** The Flight Plan Log must consist of:

**1.** Date/Time.

**2.** ACID.

**3.** Types of Flight.

**4.** Departure Point.

**5.** Destination.

**6.** Position Number.

**b.** Should the log buffer for an FSS become full (100,000 characters) before the LGOT, the data will be printed.

**c.** The Flight Plan Log printout must be retained for 15 days.

## 16–6–4. PREFLIGHT BRIEFING LOG PRINTING

The Preflight Briefing Log must be printed on the FP printer for the appropriate FSS once a day at the LOGT for the FSS. The entries in the log must be printed in chronological order.

**a.** The Preflight Briefing Log must consist of:

**1.** Time.

**2.** ACID.

**3.** Departure Point.

**4.** Destination.

**5.** Position Number.

**6.** Remarks.

**b.** Should the log buffer for an FSS become full (100,000 characters) before the LOGT, the data will be printed.

**c.** The Preflight Briefing Log printout must be retained for 15 days.

## 16–6–5. IN–FLIGHT CONTACT LOG PRINTING

The In–Flight Contact Log print function must be printed on the FP printer for the appropriate FSS once a day at the LOGT for the FSS. The entries in the log must be printed in chronological order.

**a.** The In–Flight Contact Log must:

**1.** Retrieve the data from the In–Flight Contact Log.

**2.** Format the title and the column headings.

**3.** Sum the tallies.

**4.** List the entries in chronological order.

**b.** Should the log buffer for a FSS become full (100,000 characters) before the LGOT, the data will be printed.

**c.** The In–Flight Contact Log printout must be retained for 15 days.

## 16–6–6. TALLIES PRINTING

The tally print function must print the tallies on the FP printer or to a personal computer (PC) assigned to collect the data once a day at the LOGT for the FSS.

**a.** The Terminal Daily Tally and the Summary of Daily Tallies must be printed or sent to a PC assigned to collect the data. The tallies for the Terminal Daily Tally are summed from the log entries for each of the terminal entries. The following type of logging must be done by the system:

**1.** From the In–Flight Contact Log:

**(a)** Radio contacts.

**(b)** Aircraft contacted.

**(c)** Pilot briefs.

**2.** From the Preflight Briefing Log, pilot briefs.

**3.** From the Flight Plan Log:

**(a)** International.

**(b)** Military.

**(c)** Civil.

**(d)** IFR.

**(e)** VFR.

**4.** Flight services.

**b.** The tallies for the Summary of Daily Tallies are the sums of the terminal tallies for a FSS plus any modifications to the tallies made by the Facility Supervisor's Terminal (FST). The tally section labeled "Aircraft Contacted – International," must be omitted if there are no entries for the terminal and the FSS. Tallies are printed or sent to a PC assigned to collect the data at the scheduled time, even if interim printing of logs has occurred due to a full buffer.

**c.** Use the Summary of Daily Tallies to complete FAA Form 7230–13.

***REFERENCE–***
*FAAO JO 7210.3, Para 16–5–3, Distribution and Amendment.*

**d.** The Summary of Daily Tallies printout or computer records must be retained for 15 days.

## 16–6–7. FLIGHT PLAN PRINTING

The FP print function prints the fields associated with the flight plan when it is modified, is deleted, remains on the Proposed List longer than the Flight Plan Drop Interval (FPDI), or is the recycle of a Roger message (when acknowledging the last address of a flight plan.)

**a.** The data must be formatted with a title indicating what action is being performed (modified or deleted) and which list is affected. The formatted data must be printed on the flight movement printer at the affected FSS. The printing will be done after completion of the transaction.

**b.** The FP printout must be retained for 15 days.

## 16–6–8. DISABLED SYSTEM COMPONENT PRINTING

**a.** The Disabled System Component printing function will print the Failed Component Message at the affected FSS printer and on the display processor printer for the FSS COTC.

**b.** The Disabled System Component printout must be retained for 15 days.

# Section 7. FSS Lists, Logs, and Tallies (OASIS)

## 16–7–1. 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.*

## 16–7–2. 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.

## 16–7–3. 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, Flight Watch Domestic, Flight Watch 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 Watch Position Aircraft Contact Tally: IFR, DVFR, VFR, ICAO IFR, ICAO VFR.

**1.** Air Carrier.

**2.** Air Taxi.

**3.** General Aviation.

**4.** Military.

**f.** Flight Watch Position Radio Contact Tally: IFR, DVFR, VFR, ICAO IFR, ICAO VFR.

**1.** Air Carrier.

**2.** Air Taxi.

**3.** General Aviation.

**4.** Military.

**g.** Flight Plan Tally: IFR Domestic, IFR ICAO, VFR Domestic, VFR ICAO, DVFR Domestic.

**1.** Filed.

**2.** Amended.

**3.** Canceled.

**4.** Closed.

**h.** NOTAM Tally.

**i.** PIREP Tally.

# Part 5. TRAFFIC MANAGEMENT SYSTEM

# Chapter 17. Traffic Management National, Center, and Terminal

## Section 1. Organizational Missions

### 17–1–1. 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.

### 17–1–2. 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.

### 17–1–3. 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

## 17–2–1. AIR TRAFFIC TACTICAL OPERATIONS PROGRAM

System Operations must:

**a.** Develop national TM programs.

**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.

## 17–2–2. 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.

## 17–2–3. 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 airway facilities, as appropriate:

**a.** Implement national TM programs (i.e., NRP, MAR, 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.** Implement national TM initiatives, when necessary, to ensure the orderly flow of traffic throughout the NAS.

**f.** Recommend and approve TM alternatives when national initiatives are not appropriate.

**g.** Monitor TM initiatives issued throughout the system for effectiveness; take action to cancel or modify where appropriate.

**h.** 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–trailrestrictions, local airport fix balancing, and other such adjustments required to balance flows within their area of responsibility.*

**i.** Evaluate proposed TM initiatives to ensure appropriateness.

## 17–2–4. FIELD FACILITIES

All actions initiated by the TMU must be in accordance with standard operating procedures, applicable directives, and approved TM position descriptions. The TMU is delegated the authority to direct traffic flows and implement approved 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 FAAO 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.** 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.

**10.** 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.** Designate a TM representative as the primary interface between the Center Weather Service Unit (CWSU) and ATC operational personnel as described in FAAO 7210.38, Center Weather Service Unit (CWSU), as amended.

**5.** Establish an analysis function referred to in Chapter 17, 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/international flight service stations/(FSS)/(IFSS).

**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 configurtions.

**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

## 17–3–1. 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.

## 17–3–2. 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.

## 17–3–3. 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

## 17–4–1. 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.*

## 17–4–2. SPECIAL INTEREST FLIGHTS

ATCSCC, ARTCC, and CERAP: Follow procedures in FAAO JO 7610.4, Special Operations, Chapter 12, Special Military Flights and Operations, Section 12, 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.

## 17–4–3. 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.

## 17–4–4. 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.** FAAO 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting.

**2.** Bomb threats.

**3.** National Search and Rescue Manual.

**4.** FAAO 1270.1, Freedom of Information Act Program.

**c.** EA activity: FAAO JO 7610.4, Special Operations.

**d.** Hijack situations:

**1.** FAAO JO 7610.4, Special Operations.

**2.** FAAO JO 7110.65, Air Traffic Control.

**e.** Suspect aircraft:

**1.** FAAO 1600.29, Law Enforcement Alert Message System.

**2.** FAAO JO 7110.67, Special Aircraft Operations by Law Enforcement/Military Organizations.

**f.** Special flight operations: FAAO JO 7110.65, Chapter 9, Special Flights.

**g.** FAAO 7210.38, Center Weather Service Unit (CWSU).

***NOTE–***
*In order to provide the maximum TM services, TM personnel should be utilized to perform non–TM functions only as a last resort.*

## 17–4–5. 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 17–4–1, 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 17–4–1, 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 17–4–1).

***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 17–4–1***
**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.** | | | | | | | | |

## 17–4–6. 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.*

# Section 5. Coordination

## 17–5–1. COORDINATION

Coordinate through verbal and automated methods. At times, it may be required to utilize both methods to ensure complete communication and situational awareness.

## 17–5–2. 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.

## 17–5–3. 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.

## 17–5–4. RESPONSIBILITIES

**a.** All facilities must:

**1.** Communicate and coordinate events that may have an impact on the NAS.

**2.** Use the NTML to document events and traffic management initiatives (TMI).

**b.** The ATCSCC must:

**1.** Provide an FAA ATCSCC data entry web page for facilities identified in TBL 17–5–1, 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.

**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.

**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, 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.

**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 of TM initiatives.

**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 17–5–1 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.** Submit suggestions for improvement to the Terminal Operations area office, when applicable.

**f.** The information for subpara 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.** Mark entries for a QAR with a (Q) when they cause a TMI or result in a TMI.

**4.** Enter TMIs initiated by your facility.

**5.** Enter constraints in your area of responsibility that may impact the NAS and forward them to the ATCSCC.

**6.** Enter arrival, departure, and en route delay status, as appropriate.

**7.** 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 17–5–1*

| AVIATION SYSTEM PERFORMANCE METRICS<br>AIRPORT TRAFFIC CONTROL TOWERS | | | | |
|---|---|---|---|---|
| ABQ | DCA | LAS | ONT | SEA |
| ANC | DEN | LAX | ORD | SFO |
| ATL | DFW | LGA | OXR | SJC |
| AUS | DTW | LGB | PBI | SJU |
| BDL | EWR | MCI | PDX | SLC |
| BHM | FLL | MCO | PHL | SMF |
| BNA | GYY | MDW | PHX | SNA |
| BOS | HNL | MEM | PIT | STL |
| BUF | HOU | MHT | PSP | SWF |
| BUR | HPN | MIA | PVD | TEB |
| BWI | IAD | MKE | RDU | TPA |
| CLE | IAH | MSP | RFD | TUS |
| CLT | IND | MSY | RSW | VNY |
| CVG | ISP | OAK | SAN | |
| DAL | JAX | OGG | SAT | |
| DAY | JFK | OMA | SDF | |

## 17–5–5. 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 Manager of Tactical Operation (MTO) 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 acceptance/configuration

**c.** The MTO 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.

## 17–5–6. EN ROUTE INTRA–FACILITY 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 not only implementing TM initiatives, but also in evaluating the effectiveness of any initiatives.

## 17–5–7. TERMINAL INTER–FACILITY 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. Any 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.

## 17–5–8. 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 1350.15, Records Organization, Transfer, and Destruction Standards.

**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.

## 17–5–9. NTML FACILITY CONFIGURATION REQUIREMENTS

At least one TMU position in each facility must:

**a.** Subscribe to DCC for TMIs 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.

## 17–5–10. NTML PROCEDURES

**a.** Facilities must enter, review, and respond to data in the NTML, as appropriate.

**b.** 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.

## 17–5–11. 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 para 17–5–11b4 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.

## 17–5–12. 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 or ground stops issued by the ATCSCC. The verbal notification must include the number of aircraft actually in delay, the projected maximum delay, and the number of aircraft expected to encounter delays. The facility must verbally notify the ATCSCC and impacted facilities when delays fall below 15 minutes.

**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. 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.

## 17–5–13. 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, 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 MTO or designee, through their TMO. This includes, but is not limited to, reduction in AAR/ADR, 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 MTO/designee or the OSG must enter the impact data on the Strategic Events Coordination Web site 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.

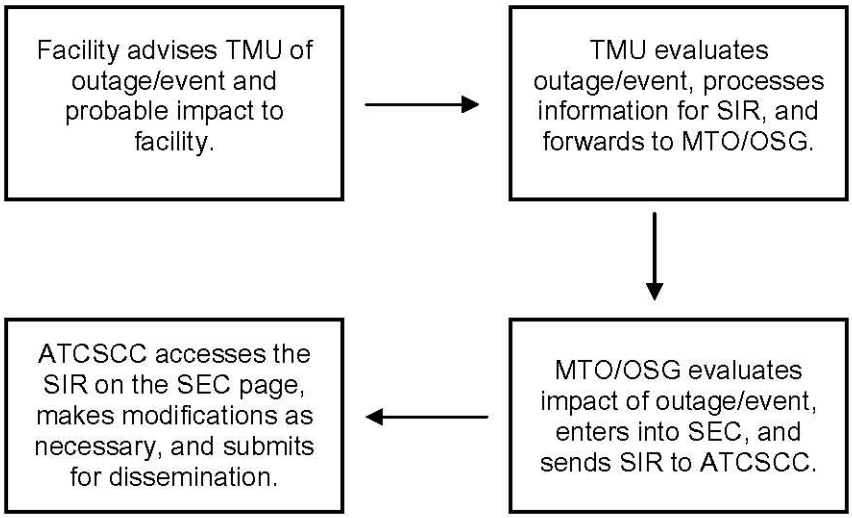
**11.** General information.

**12.** Contact information.

**13.** Date/time of scheduled telecons.

***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 Web site at http://sec.faa.gov.*

*FIG 17–5–1*
**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, MTOs, 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.

## 17–5–14. 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 as a QAR "Q"entry 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 as a QAR "Q"entry 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 as a QAR "Q"entry 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 QAR 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. Traffic Management Initiatives

## 17–6–1. GENERAL

**a.** Traffic Management Initiatives (TMIs) are techniques used to manage demand with capacity in the NAS.

**1.** 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.

**2.** Any TMI creates an impact on customers. It is imperative to consider this impact and implement only those initiatives necessary to maintain system integrity.

**b.** Dynamic TMIs are those imposed on an as needed basis to manage fluctuations in traffic demands.

## 17–6–2. BACKGROUND

Some TMIs may also be considered "control instructions" or procedures; the difference is determined by the magnitude of the event, the coordination process, and the length of time it is implemented. TMIs may also be referred to as "restrictions," especially in conjunction with miles–in–trail.

## 17–6–3. POLICY

To maintain the integrity of the air traffic system, facility TM personnel must employ the least restrictive methods available to minimize delays.

## 17–6–4. TYPES OF TMIs

**a. Altitude.**

**1.** Utilized to segregate different flows of traffic, or to distribute the number of aircraft requesting access to a specified geographic region.

**2.** Colloquialisms:

**(a)** Tunneling– Term to indicate traffic will be descended prior to the normal descent point at the arrival airport to remain clear of an airspace situation; e.g., holding.

**(b)** 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 severe weather constraints on the system. 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 a specific criteria. The criteria may be separation, 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 non–radar environment, or when transitioning to a non–radar 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.** Sequencing Programs. These programs are designed to achieve a specified interval between aircraft; they may be software generated or determined by TM personnel. Different types of programs accommodate different phases of flight.

**1.** 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.

**2.** En route Sequencing Program (ESP)– Assigns a departure time that will facilitate integration in the en route stream.

**3.** Arrival Sequencing Program (ASP)– Assigns fix crossing times to aircraft destined to the same airport.

**4.** Center TRACON Automation System Traffic Management Advisor (CTAS–TMA)– Assigns meter fix/arc crossing times to aircraft to manage airport arrival demand.

**g.** 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 file new flight plans when they are more than 45 minutes from departure.

**3.** Sources for route information:

**(a)** Airport/Facility Directory.

**(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.** More information on routes is contained in Section 17, Coded Departure Routes, Section 18, Route Advisories, and Section 20, National Playbook.

**h.** Ground Delay Programs. (See Section 9, Ground Delay Programs.)

**i.** Airspace Flow Programs. (See Section 10, Airspace Flow Programs (AFP).)

**j.** Ground Stops. (See Section 11, Ground Stop(s).)

## 17–6–5. 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.

## 17–6–6. 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 Evaluation Area) enhances the coordination process.

## 17–6–7. TMI APPROVAL AUTHORITY

**a.** The ATCSCC is the approval authority for all en route and designated terminals inter–facility 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.

## 17–6–8. 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.

## 17–6–9. FIELD FACILITY RESPONSIBILITIES FOR TMIs

**a.** Evaluate capacity and demand. The assessment must include the evaluation of all data required to

make an informed decision. The data may include 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 inter–facility TMIs.

**c.** When interfacility TMIs are appropriate, coordinate with the ATCSCC and provide the following information:

**1.** A detailed and specific identification of the problem.

**2.** Intra–facility 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 17–7–5.*

## 17–6–10. 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.

## 17–6–11. 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.

## 17–6–12. 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.

## 17–6–13. EN ROUTE SEQUENCING PROGRAM (ESP) IMPLEMENTATION

ESP assigns a departure time that will facilitate integration into an en route stream. Runway configuration and departure procedures must be considered for accurate projections. The TMU must:

**a.** Enter TM messages (FT, FE, etc.) to produce strips and automatically acquire full data blocks on departures, arrivals, and overflight traffic specifying the appropriate destination.

**b.** Inform appropriate sectors and ATCTs that ESP will be in effect (time) for aircraft destined to specified airports and routes.

**c.** Regulate VFR services to ensure that delays are distributed equally, especially if a ground delay program is in effect for a primary airport.

**d.** If an aircraft does not depart within the designated departure window, the appropriate sector

and/or ATCT must contact the TMU to obtain a new release time.

## 17–6–14. 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.

## 17–6–15. 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 7. Flow Evaluation Area (FEA) and Flow Constrained Area (FCA)

## 17–7–1. 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 traffic situation display the TSD, the Web situation display (WSD), or the collaborative constraint situation display (CCSD).

## 17–7–2. 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.** 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.

## 17–7–3. 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).*

## 17–7–4. 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.

## 17–7–5. ARTCC TO ARTCC COORDINATION

These procedures must be utilized in the development and coordination of ARTCC to ARTCC and ARTCC to N90 MIT.

## 17–7–6. 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*

## 17–7–7. 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.

# Section 8. Monitor Alert Parameter

## 17–8–1. 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.

## 17–8–2. IMPLEMENTATION PROCEDURES

MAP values are established and will be assigned for air traffic functional positions, within the MA function of TFMS as follows:

| Average Sector Flight Time | MAP VALUE |
|---|---|
| 3 min. | 5 |
| 4 min. | 7 |
| 5 min. | 8 |
| 6 min. | 10 |
| 7 min. | 12 |
| 8 min. | 13 |
| 9 min. | 15 |
| 10 min. | 17 |
| 11 min. | 18 |
| 12 min. or greater | 18 |

**a.** Average sector flight time will be calculated using data indicating functional position operations for a consecutive Monday through Friday, 7:00 AM – 7:00 PM local time frame.

***NOTE–***
*This does not apply to combined sectors MA values.*

**b.** MAP values for combined sectors may exceed the baseline value by more than three. Normal sector combinations and associated MAP values must be forwarded to the manager ATCSCC.

**c.** Baseline MAP values may be adjusted +/–3. Adjustments of more than +/–3 requires concurrence of the TMU and representatives of the area of specialization. Adjustments to the baseline values will be documented, including rationale, and maintained by the TMU.

**d.** The MAP value will be dynamically adjusted to reflect the ability of the functional position to provide air traffic service. During periods of reduced efficiency the MAP will be dynamically adjusted downward and conversely, when efficiency is improved, the MAP will be adjusted upward, but not to exceed the baseline or documented, adjusted value.

## 17–8–3. 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 preplanning 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 15 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.

## 17–8–4. 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 subpara 17–8–3d3.

**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, nonconcurrence from other facilities), the local facility will elevate the issue to the responsible Service Area office.

## 17–8–5. 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 inter–facility 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 9. Ground Delay Programs

## 17–9–1. 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.

## 17–9–2. 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.

## 17–9–3. 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 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.

## 17–9–4. 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.

## 17–9–5. 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.

**a.** GDP Adjustments. The ATCSCC may make revisions and compressions to the GDP as conditions at the airport or within the airspace 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 nondiverted flights.

**c.** User Options. Users are permitted to exchange and substitute Controlled Times of Arrival (CTA) congruent with CDM agreements concerning substitutions.

## 17–9–6. 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 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.

**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.** Reason.

**16.** Remarks.

**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 EAS computers by the TFMS and appears on flight progress strips as an EDCT. In the event of a communication failure between the TFMS 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.** Obtain arrival and departure counts from affected facilities, as appropriate.

**k.** Utilize the TSD and FSM to monitor traffic flow patterns, obtain estimated arrival counts, or obtain airborne delay estimates.

**l.** When appropriate and workload permitting, utilize FSA to monitor the GDP.

## 17–9–7. 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 FAAO 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.

## 17–9–8. 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 FAAO 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.*

## 17–9–9. 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.

## 17–9–10. 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)** Reason.

**(d)** Remarks.

**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.

## 17–9–11. 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.

## 17–9–12. 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.

## 17–9–13. 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 10. Airspace Flow Programs (AFP)

## 17–10–1. 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.

## 17–10–2. 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.

## 17–10–3. RESPONSIBILITIES

Facilities must:

**a.** Develop and share FEAs that may require AFP consideration.

**b.** Comply with AFP–generated EDCTs.

## 17–10–4. 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 nontowered airports. If a flight departing a nontowered 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 nontowered 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 nontowered 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 11. Ground Stop(s)

## 17–11–1. 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.

## 17–11–2. 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.*

## 17–11–3. 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.

## 17–11–4. 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.

## 17–11–5. 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.

## 17–11–6. 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 12. Special Traffic Management Programs

## 17–12–1. SPECIAL EVENT PROGRAMS

Special procedures may be established for a location to accommodate abnormally large traffic demands (Indianapolis 500 Race, Kentucky Derby, fly-ins) or a significant reduction in airport capacity for an extended period (airport runway/taxiway closures for airport construction). These special procedures may remain in effect until the event is over or local TM procedures can handle the situation.

## 17–12–2. COORDINATION

Documentation to justify special procedures must be submitted by the facilities to the En Route and Oceanic Operations Service Area Office and Terminal Operations Area Office 90 days in advance, with a copy to the appropriate Manager, Tactical Operations. The service area office 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 procedures 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 NOTAM and temporary flight restrictions. (Electronic mailing preferred).

**8.** IFR/VFR capacity at each airport/sector.

**9.** Resource cost estimate including staffing and telephone requirements.

**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 area office must forward the NOTAM to System Operations Airspace Aeronautical Information Management/Publications, for publication no later than 28 days prior to the publication date. Cutoff submittal dates and publication dates are printed inside the front cover of the monthly NOTAM Flight Information Publication.

***NOTE–***
*The toll–free number/web address to obtain a STMP slot are:*
***1.*** *Touch–tone interface: 1–800–875–9755.*
***2.*** *Web interface: www.fly.faa.gov.*
***3.*** *Trouble number: (540) 422–4246.*

## 17–12–3. 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 for the touch–tone interface.

## 17–12–4. 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 Web site or touch–tone phone interface below for the current listing of the slot controlled airports, limitations, and reservation procedures.

***NOTE–***
*The Web interface/telephone numbers to obtain a reservation for unscheduled operations at a slot controlled airport are:*
**1.** *http://www.fly.faa.gov/ecvrs.*
**2.** *Touch–tone: 1–800–875–9694 (e–CVRS interface).*
**3.** *Trouble number: (540) 422–4246.*

# Section 13. Severe Weather Management

## 17–13–1. 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.

## 17–13–2. 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.** Conduct a daily operations critique with affected facilities and system customers, as appropriate.

**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 14. Severe Weather Avoidance Plan (SWAP)

## 17–14–1. 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.

## 17–14–2. 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 15. Preferred IFR Routes Program

## 17–15–1. GENERAL

**a.** This section identifies responsibilities and establishes procedures for the development, revision, and cancellation of preferred IFR routes in the NAS. The objective of preferred routes is the expeditious movement of traffic during heavy demand periods and the reduction of TM initiatives and coordination. User acceptance will be greatly enhanced by the prompt cancellation of unnecessary routes and the prompt and thorough coordination of new or revised routes.

**b.** Preferred IFR routes should be established only when traffic density and safety makes such routes necessary for the expeditious movement of air traffic. Except for the short climb or descent segments between the terminal and the en route structure, preferred routes must be developed using designated airways/routes as depicted on en route charts. Preferred routes are normally established between two terminal areas, but routes may also be established between a terminal and an en route fix, an en route fix and a terminal, or two en route fixes.

**c.** The impact of airspace actions on preferred IFR routes must be considered. Retention of the most user desirable route(s), consistent with TM requirements, must also be considered.

**d.** Comments concerning problems or recommendations to improve the preferred IFR route program are encouraged and should be forwarded to the ATCSCC.

## 17–15–2. RESPONSIBILITIES

**a.** ARTCCs must be responsible for:

**1.** Identifying, developing, coordinating, and establishing preferred routes, as needed, in accordance with the provisions of this section. The originating ARTCC is responsible for ensuring the accuracy of the submitted route (e.g., checking for typographical errors) and for route connectivity and compatibility with NAS processing.

**2.** Maintaining and verifying route validity and accuracy by establishing, revising, and canceling preferred routes as operational needs dictate.

**3.** Identifying a single office of responsibility for their preferred IFR routes program. This office must act as the office of primary responsibility (OPR) for the facility and must be the focal point for coordination with the appropriate En Route and Oceanic Operations Service Area Office.

**b.** En Route and Oceanic Operations Service Area offices must be responsible for:

**1.** Reviewing proposed routes to ensure that NAVAID identifications, airway designations, route connectivity and fix names are correct.

**2.** Reviewing all preferred routes at least annually and revise or cancel routes as necessary.

**3.** Serving as the focal point for coordination with the ATCSCC and System Operations Airspace and Aeronautical Information Management.

**c.** The ATCSCC must be responsible for:

**1.** Managing the national preferred IFR routes program.

**2.** Operating as the OPR at the national level.

**3.** Providing operational review of submitted preferred routes to examine the routes for operational impact.

**4.** Acting as the approving authority for preferred IFR routes.

**d.** The NFDC 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).

## 17–15–3. DEVELOPMENT PROCEDURES

Routes and route segments must be defined by any combination of the following:

**a.** Type and number of the airway, jet route, or RNAV route (e.g., V43, J54).

**b.** NAVAID identifier, intersection name, or fix name codes (e.g., ARD, BELLE).

**c.** NAVAID radial/distance (e.g., ARD201113).

**d.** NAVAID radial (e.g., ARD201).

**e.** Portion of routes not necessary to comply with the preferred route objective should be contained within brackets [ ]. Any routing between the fixes inside the brackets is normally at the pilot's discretion. The first fix after the right–hand bracket is where the preferred portion of the route actually begins.

***EXAMPLE–***
*[DFW GVE] GVE J37 J55 PVD V139 HTM BOS*

**f.** When developing or reviewing preferred routes, considerations should include:

**1.** Terminal/en route traffic flow patterns and traffic density.

**2.** Radar coverage.

**3.** Beginning and termination fixes of SIDs/STARs and correlation with the SID/STAR program.

**4.** North American Route (NAR) System.

**5.** Special use airspace.

**6.** Computer–adapted preferential arrival routes, preferential departure routes, and preferential depar- ture/arrival routes.

**7.** Lead time requirements for publication in the AFD, DOD flip, en route high/low altitude charts, area charts, SID/STAR charts, instrument approach procedure charts, and other flight planning publications.

**8.** NAVAID identifiers and name codes must be used in preferred route descriptions, except that intersection/fix names must be spelled out in the AFD, pending assignment of five letter name codes.

**9.** NAVAID radials or radial distance fixes must not be used to avoid airway/jet route rule making actions. NAVAID radials are used only where necessary. Radial/distance fixes must be used only for expediency pending assignment of intersection or fix name code by the NFDC. Route descriptions in the AFD should be compatible with the computer description, except as previously specified. When it is necessary to use NAVAID radials or radial/distance fixes to describe direct route segments, use one of the following:

***NOTE–***
*The originator is responsible for verifying computer adaptation and NAS compatibility before using the above techniques.*

**10.** All preferred IFR routes must have specified effective times of operation based on need. Effective times must be published in the AFD and, in the case of single direction routes, on en route charts as appropriate.

**11.** Low altitude preferred IFR routes must have inclusive altitudes. Minimum obstruction clearance altitude, minimum en route altitude, and minimum reception altitude must be considered when establishing inclusive altitudes.

**12.** Define points of transition from one airway/route structure to another by using NAVAIDs/fixes which are common to both structures and depicted on en route charts for both structures. When describing high altitude preferred routes, victor airways may be used to define climbing/descending segments provided that such usage does not exceed the service limitations of the NAVAID.

**13.** Low frequency nondirectional beacons must not be used except when absolutely necessary or when international routes enter/depart the NAS (e.g., routes in Alaska or oceanic control areas).

**14.** 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 and those routes serving a terminal area must be listed in the AFD and may also be depicted on en route charts.

## 17–15–4. COORDINATION PROCEDURES

**a.** General: The coordination process accomplishes two things. First, it informs users/facilities/Service Area offices that a preferred route is being established or revised and solicits input. Second, it provides users, facilities, service area offices, and publishers with timely information so that the necessary actions can be initiated and accomplished within established schedules. Except for editorial corrections, proposed preferred routes must be fully coordinated well in advance of planned publication dates.

**b.** User coordination: Users must be allowed at least 30 days to review and comment on proposed preferred routes. Coordination should be through:

**1.** Designated user representatives.

**2.** Designated organization or association representatives when users are members.

**3.** FAA/user meetings.

**4.** The ATCSCC for user organizations at the national level.

**c.** Interfacility coordination:

**1.** The originating ARTCC must be 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 change or delete a preferred IFR route.

**(c)** When establishment, change, or deletion of a preferred route is proposed by a facility other than an ARTCC, the requesting facility must coordinate with the parent ARTCC. The parent ARTCC must assume responsibility as the originator.

**2.** The originating ARTCC must:

**(a)** Coordinate with all affected ATC facilities and users at the local level.

**(b)** Forward the completed data to the En Route and Oceanic Operations Service Area office and Terminal Operations Service Area office.

**3.** Each Service Area office must:

**(a)** Resolve differences between its ATC facilities.

**(b)** Coordinate with the users at the Service Area office level.

**(c)** Forward the completed data to the ATCSCC.

**d.** The originating Service Area office must forward unresolvable controversial proposals, with all comments and objections, to ATCSCC for resolution. Proposals which are approved will be sent for processing. Disapprovals will be returned to the Service Area office originating the proposal.

**1.** The ATCSCC must:

**(a)** Complete coordination with the users at the national level.

**(b)** After the 30 day coordination forward completed preferred IFR routes to System Operations Airspace and Aeronautical Information Management for publication.

## 17–15–5. PROCESSING AND PUBLICATION

**a.** The airspace information cutoff dates listed in the AFD are the last date that preferred routes may be received by the NFDC to assure publication on the planned effective date. The following procedures must apply:

**1.** Plan "effective" dates to coincide with the issue date of the AFD.

**2.** Send approved preferred routes to the ATCSCC at least 15 weeks prior to the desired effective date. Include the desired effective date. Effective dates must coincide with the 56–day charting cycle due to airway changes affecting preferred routes.

**3.** ATCSCC must forward approved preferred routes to arrive at the NFDC at least 9 weeks prior to the desired effective date.

***NOTE–***
*The importance of adequate lead time cannot be overemphasized. Experience has shown that early submission for publication reduces errors, workload, and printing costs. In the case of major or lengthy changes, additional lead time may be necessary. Facilities should coordinate with the ATCSCC to determine if the requested effective date can be met.*

**b.** Preferred routes must be submitted to the NFDC on standard 8.5 by 11 (inches) white bond paper, camera ready, to be included in the NFDD. To facilitate editing and processing, it is recommended that the preferred route text be submitted as an electronic mail attachment. The specific format for preferred routes is noted in examples 1, 2, and 3 below. For those submissions not covered by example, the originator should contact NFDC for guidance.

**c.** The following three examples show the formats for the submission of preferred IFR route data. The first shows the addition of new routes, the second shows the modification of existing routes, and the third shows the deletion of existing routes. Compliance is mandatory to eliminate the possibility of error in publication.

***EXAMPLE–***

**1.** *Adding new routes, use this format:*

| SPECIAL USE AIRSPACE<br>LOW ALTITUDE PREFERRED ROUTES<br>(or other applicable section) | |
|---|---|
| NORTHEAST U.S. | EFFECTIVE HOURS |
| (applicable A/FD) | UTC |
| Effective April 28, 1994, the following routes are added: | |
| BALTIMORE TO NORFOLK | |
| NEW: (70–170 INCL., NON–JET) | 1100–0300 |
| V93 PXT V16 V33 V286 STEIN | |
| OR | |
| (70–170), JETS) DAILY | 1100–0300 |
| V33 V286 STEIN | |
| BALTIMORE TO ROCHESTER | |
| NEW: V31 ROC154 CHESY | 1100–0300 |

**2.** *Deleting existing routes, use this format:*

| SPECIAL USE AIRSPACE<br>LOW ALTITUDE PREFERRED ROUTES<br>(or other applicable section) | |
|---|---|
| NORTHEAST U.S. | EFFECTIVE HOURS |
| (applicable A/FD) | UTC |
| Effective April 28, 1994, the following routes are deleted: | |
| BALTIMORE TO NORFOLK | |
| BALTIMORE TO ROCHESTER | |

***NOTE–***

*Multiple routes are considered a set and the entire set must be deleted to be shown as in this example. If only one route of the set is deleted, use the modified format in example 3.*

**3.** *Modifying existing routes, use this format:*

| SPECIAL USE AIRSPACE<br>LOW ALTITUDE PREFERRED ROUTES<br>(or other applicable section) | |
|---|---|
| NORTHEAST U.S. | EFFECTIVE HOURS |
| (applicable A/FD) | UTC |
| Effective April 28, 1994, the following routes are modified: | |
| BALTIMORE TO NORFOLK | |
| OLD: (70–170 INCL., NON–JET) | 1100–0300 |
| V87 PXT V6 V73 V286 STEIN | |
| OR | |
| (70–170), JETS) DAILY | 1100–0300 |
| V33 V286 STEIN | |
| BALTIMORE TO ROCHESTER | |
| V81 ROC154 CHESY | 1100–0300 |
| Note – Notice that in the routes from Baltimore to Norfolk, there are two available routes and that only the first route changed. The two routes are considered a set and the entire set must be submitted, even if only one route is being changed. | |

# Section 16. North American Route Program

## 17–16–1. PURPOSE

The NRP provides the users of the NAS greater flexibility in flight plan filing at or above 29,000 feet (FL290).

## 17–16–2. 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)

## 17–16–3. 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.

## 17–16–4. 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.

## 17–16–5. 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 17. Coded Departure Routes

## 17–17–1. PURPOSE

This section prescribes policies and guidelines for Coded Departure Route(s) (CDR).

## 17–17–2. 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.

## 17–17–3. 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.*

## 17–17–4. 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.** Notify activation/deactivation of CDR usage through the ATCSCC Advisory System.

**b.** The National Flight Data Center must:

**1.** Forward to the ATCSCC Point of Contact (POC) any changes to published navigational database, (i.e., SIDs/STARs, NAVAIDs, preferred routes, etc.) contained in the National Flight Data Digest(s) (NFDD) that are effective for the subsequent chart date. This data must be provided at least 45 days before 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.** Ensure CDRs in the national database are limited to 20 per city pair.

**5.** Notify the originating Center when a CDR must be modified to accommodate changes within your airspace, e.g., traffic flow changes, airway realignments, and navigational aid designator changes. Exceptions – revisions to Standard Terminal Arrival (STAR) Procedure and Standard Instrument Departure (SID) Procedure numbers will be entered at the ATCSCC.

**6.** Ensure EAS Stereo Flight Plans utilized for CDRs and CDRs published in the operational database are identical.

**7.** Report unusable, inaccurate, or unsatisfactory CDRs to the ATCSCC POC or via Planning Team (PT) feedback form available on the ATCSCC web page. Reports must include the CDR designator, affected sectors, and specific description of the impact, and, if appropriate, suggestion for modification.

**8.** Facilitate the coordination necessary for the usage of abbreviated clearances, when requested.

**d.** The terminal facilities must coordinate with their host ARTCC for all matters pertaining to CDRs.

## 17–17–5. CDR DATA FORMAT

All Centers must develop and update CDRs in accordance with the following:

**a.** Eight–Character Designator. All facilities must use the eight character naming convention. The eight character name must comply 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 numbers zero and one. (Examples of the naming convention are: ATLLAX9N, BOSLAX01, and EWRSFOGR).*

**b.** CDRs may be developed for aircraft with basic navigational capabilities or with advanced RNAV capabilities. When developing or amending CDRs, the RNAV STAR is preferred. Facilities may include both conventional and RNAV CDRs in their CDR database.

**c.** All CDRs must have current procedure numbers (SID/STAR) included as a part of the route string.

***NOTE–***
*Examples of acceptable procedure numbers are: LGC8, OTT5, and SWEED5. Examples of unacceptable procedure numbers are: MINKS#, MINKS STAR, MINKS%.*

**d.** All CDR route strings must tie into normal arrival routings into the destination airport.

**e.** Approved database format:

**1.** Route string data must include only uppercase characters (A–Z) or numbers with spaces separating each element (J48 ODF MACEY2 ATL).

**2.** No dots, dashes, asterisks, plus signs, or placeholders are to be included, because most flight planning systems will not accept them.

**3.** No leading zeroes are permitted in victor or jet airways (J12 is permitted, J012 is not).

**f.** CDRs for each location must be published via the national CDR database. Updates to the CDR database will coincide with the normal 56–day chart updates. There are two segments of the CDR database. The operational database is a read–only record of all the current CDRs. The staging database is read–only to users but amendable by FAA facilities. The staging database replaces the operational database on each chart date.

**g.** CDRs must be processed in accordance with the following timelines:

**1.** All changes must be entered into the staging database at least 36 days prior to each chart date. The staging database is closed to changes 35 days prior to each chart date.

***NOTE–***
*The timeline for the staging database is available under the Options drop–down menu. In addition to the drop–down menu, the status of the staging database is given at each login to the CDR database.*

**2.** 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.*

**3.** 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.

## 17–17–6. PROCEDURES

**a.** Facilities must notify ATCSCC when implementing and terminating CDRs.

**b.** The ATCSCC must issue an advisory when facilities are implementing or terminating CDRs.

**c.** Facilities must make real–time reports of unusable or inaccurate CDRs through the ATCSCC for follow–up by the ATCSCC POC.

# Section 18. Route Advisories

## 17–18–1. PURPOSE

This section prescribes policies and guidelines for issuing Route Advisories.

## 17–18–2. POLICY

In accordance with Federal Air Regulations, all operators have the right of refusal of a specific route and may elect an alterative. Alternatives include, but are not limited to, ground delay, diversion to another airport, or request to stay on the filed route.

## 17–18–3. 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 17–18–1.

**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 17–18–1*
**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 |

## 17–18–4. 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 nonairborne.

**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 17–18–2 .

*TBL 17–18–2*
**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. Shuttle Activity | ✓ | ✓ | ✓ | |
| 9. FCA | ✓ | | | |
| 10. FEA | | ✓ | ✓ | ✓ |
| 11. Informational | | ✓ | ✓ | ✓ |
| 12. Miscellaneous | | ✓ | ✓ | ✓ |

## 17–18–5. 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 TELCON 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.

## 17–18–6. 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 TELCON, 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 19. Operations Plan

## 17–19–1. 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).

## 17–19–2. DEFINITION

**a.** The Operations Plan (OP): The OP is a plan for management of the NAS. The OP is a collaboratively developed plan. The OP is derived by the Planning Team (PT) after collaboration with the FAA and customer's weather forecasters, FAA Air Route Traffic Control Center (ARTCC) Traffic Management Officer (TMO) or designee, other FAA field facility management personnel, airline planners, Air Traffic Control System Command Center (ATCSCC) personnel, international facilities, military, and general aviation system customers.

**b.** Trigger: A specific event that causes a specific traffic management initiative (TMI) to be implemented.

**1.** A trigger is for planning purposes and is intended to reduce coordination when implementing the specified TMI.

**2.** All en route facilities impacted by the TMI must be contacted prior to implementing the TMI in response to the trigger.

**3.** En route facilities must relay TMIs to affected terminal facilities within their 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.*

**c.** 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.

## 17–19–3. RESPONSIBILITIES

**a.** The ARTCC TMO or their designee must:

**1.** Participate via the PT Telephone Conference (TELCON) in the formulation and development of the OP when stated on the previous OP, or requested later by the ATCSCC, or issues within the facility arise that may require inclusion in the OP.

**2.** Provide input on:

**(a)** Equipment outages having an operational impact;

**(b)** Internal initiatives;

**(c)** Terminal constraints;

**(d)** Route closure/recovery information;

**(e)** Anticipated Traffic Management Initiatives (TMI) necessary to manage the system; or

**(f)** Other issues which may impact operations (i.e., staffing, special events, etc.). See FIG 17–17–1, Operational Planning TELCON Checklist.

**3.** 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 TELCON.

**4.** Coordinate with and provide direction to underlying facilities on the implementation of the OP.

**5.** Monitor and assess the OP, notifying the ATCSCC of problems that may impact the OP.

**6.** Provide operational feedback for use in post–operational evaluation of the OP.

**b.** The ATCSCC must:

**1.** Maintain the Planning Team (PT) TELCON Bridge.

**2.** Maintain a web page for publicizing the OP to aviation systems users.

**c.** The ATCSCC National Operations Manager (NOM) must:

**1.** Direct the facility National Traffic Management Officer (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 ATCSCC PT must:

**1.** Lead the PT in development of the OP.

**2.** Record participation of FAA and non–FAA entities in PT TELCONs.

**3.** Formulate the OP through coordination with PT members using the OP Timeline.

**4.** Brief the NOM, NTMO, and other ATCSCC operational elements on the OP.

**5.** Post the OP on the ATCSCC web site and issue as a numbered advisory.

**6.** Document agreed upon triggers in the OP.

**e.** The Terminal Facility Management must:

**1.** When notified by the ARTCC TMO or designee or ATCSCC PT, participate in the PT TELCONs.

**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.

## 17–19–4. PROCEDURES

**a.** The PT is composed of FAA and customer weather forecasters, FAA ARTCC's 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 has been delegated the authority to direct the operation of the PT TELCONs for the FAA.

**1.** The ATCSCC will notify those FAA facilities required to participate as part of the PT TELCON.

**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 normally developed for the hour beginning after the TELCON commences and the subsequent six (6) hours. The OP is updated, amended, and evaluated on a recurring basis through a dedicated TELCON Phone Bridge at the ATCSCC.

**d.** Collaborative Convective Forecast Product (CCFP): The CCFP is the consolidated input of ARTCC Weather Service Unit (CWSU), Aviation Weather Center (AWC) personnel, ATCSCC Weather Unit (DCCWU) personnel, and airline meteorologists. The CCFP is the primary weather product used by the PT in developing the OP.

**e.** OP Timeline (all times local/eastern): The OP Timeline provides a 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.

**1.** 5:00 a.m. – National Weather TELCON: ATCSCC PT monitors the weather TELCON, receives midnight operational briefing, and collaborates with select FAA facilities and users for the next amendment.

**2.** 6:00 a.m. – Amendment to the OP is published on the ATCSCC web page and through an ATCSCC numbered advisory.

**3.** 6:00–7:00 a.m. – Individual team entities conduct an assessment of operation in preparation for the OP TELCON. The ATCSCC identifies and notifies FAA facilities required to participate in the PT TELCON.

**4.** 7:15 a.m. – Planning TELCON conducted: The OP is developed by the PT.

**5.** 8:00 a.m. – The OP is published on the ATCSCC web site and via numbered advisory.

**6.** 8:00–9:00 a.m. – Individual team entities conduct an assessment of operation in preparation for the OP TELCON.

**7.** 9:15 a.m. – Planning TELCON conducted: The OP is developed by the PT.

***NOTE–***
*TELCON/planning cycle repeats every 2 hours or as conditions warrant. The time intervals may be varied; however, each OP and associated advisory will state the time for the next TELCON.*

***FIG 17–19–1***
**Operational Planning TELCON Checklist**

Review the Current OP

Review the CCFP

Input from the Areas

- Staffing
- Combined Sectors
- Anticipated Initiatives
- Equipment
- Anticipated Traffic Volume
- Constraints/Other

Input from Approaches and Towers

- Current Configuration and AAR
- Anticipated Configuration and AAR
- Other

Miscellaneous

- VIP Movement
- Special Events
- Military Activities
- Diversions

Flow Constrained Areas

- Current
- Anticipated
- Pathfinders
- Recovery

Anticipated Traffic Management Initiatives

- Alternatives
- Triggers Needed
- Exit Strategy Needed

# Section 20. National Playbook

## 17–20–1. 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.

## 17–20–2. POLICY

National Playbook routes must only be used after collaboration and coordination between the ATCSCC and the TMU(s) of affected air traffic facilities.

## 17–20–3. DEFINITION

The National Playbook is a traffic management tool developed to give the ATCSCC, other FAA facilities, and customers a common product for various route scenarios. The purpose of the National Playbook is to aid in expediting route coordination during those periods of constraint on the NAS. The National Playbook contains common scenarios that occur during each severe weather season, and each includes the resource or flow impacted, facilities included, and specific routes for each facility involved. These routes may include any combination of the following NAS elements: Navigation Reference System (NRS) waypoints, RNAV waypoints, RNAV fixes, NAVAIDS, DPs, and STARs. The playbooks are validated by the individual facilities involved in that scenario. The National Playbook is available on the ATCSCC Web site at http://www.atcscc.faa.gov/Operations/operations.html.

## 17–20–4. RESPONSIBILITIES

**a.** The ATCSCC must:

**1.** Manage the National Playbook program.

**2.** Operate as OPI at the national level.

**3.** As a minimum, conduct a yearly review of the National Playbook routes and procedures.

**4.** Facilitate the validation process for additions, modifications, updates, and corrections.

**5.** Coordinate the activation/deactivation of National Playbooks.

**6.** Maintain a listing of all National Playbook routes on the ATCSCC web page.

**b.** The NFDC must forward to the ATCSCC point of contact (POC) any changes to published navigational database, (i.e., SIDs/STARs, NAVAIDs, preferred routes, etc.) contained in the National Flight Data Digests (NFDD) that are effective for the subsequent chart date. This data must be provided at least 45 days before the chart date.

**c.** The En Route and Oceanic Operations Service Area and Terminal Operations Service Area offices must:

**1.** Ensure facilities submit data as required.

**2.** Resolve discrepancies and issues identified.

**3.** Submit suggestions for improving the process, when applicable.

**d.** The ARTCCs must:

**1.** Identify, develop, and coordinate National Playbook routes as needed, in accordance with this section.

**2.** Supply a POC for the ATCSCC to contact regarding National Playbook routes.

**3.** Participate in the validation process of National Playbook routes impacting their facility. The validation of a National Playbook route is considered complete when all facilities affected by that route have confirmed the route as acceptable. Validation may also be accomplished by responding through the Route Management Tool (RMT), where it is available.

**4.** Report unusable, inaccurate, or unsatisfactory route data contained in the National Playbook to the ATCSCC Strategic Operations office. Reports must include the National Playbook designation and specific description of the data error and, if appropriate, suggestion for modification.

**5.** Recommend improvements in the process, if applicable.

**e.** Terminal Facilities must coordinate with their parent ARTCC for all matters pertaining to the National Playbook.

## 17–20–5. NATIONAL PLAYBOOK DATA FORMAT

**a.** All ARTCCs must develop and update the National Playbook in accordance with the following:

**1.** All National Playbook routes that specify the use of an arrival and departure procedure must have that procedure number (SID/STAR) included as part of the route string.

***NOTE–***
*Examples of acceptable procedure numbers are: LGC8, OTT5, and SWEED5. Examples of unacceptable procedure numbers are: MINKS#, MINKS STAR, and MINKS %.*

**2.** Approved database format:

**(a)** Route string data must include only uppercase characters (A–Z) or numbers with spaces separating each element (i.e., J48 ODF MACEY2 ATL.)

**(b)** No dots, dashes, asterisks, plus signs, or placeholders are to be included.

**(c)** No leading zeroes are permitted in victor or jet airways (J12 is permitted, J012 is not).

**b.** National Playbook routes will be published on the ATCSCC Web site. Updates to the National Playbook will coincide with the normal 56–day chart updates.

**c.** Changes to the National Playbook must be processed in accordance with the following timelines:

**1.** All changes require validation with affected facilities and therefore must be submitted to the ATCSCC POC at least 35 days prior to each chart date.

**2.** All National Playbook additions, deletions, and significant route modifications require coordination with FAA facilities and customers, and must be coordinated with the ATCSCC and validated at least 35 days prior to each chart date to be eligible for inclusion in that update.

***NOTE–***
**1.** *The ATCSCC will conduct an annual meeting or telecon to coordinate the National Playbook additions, deletions, and significant route modifications. This coordination will include FAA facilities and customers.*

**2.** *Seven days prior to the chart date, a preview version of the National Playbook will be made available to FAA facilities via the ATCSCC Web site.*

## 17–20–6. PROCEDURES

**a.** National Playbook routes are considered active when the ATCSCC has completed coordination with all impacted facilities. An ATCSCC numbered advisory will be sent by the ATCSCC describing the route being used.

**b.** 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.

**c.** 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.

**d.** 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.

**e.** 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 21. Traffic Management (TM) Support of Non–Reduced Vertical Separation Minima (RVSM) Aircraft

## 17–21–1. PURPOSE

This section prescribes policies and guidelines for Traffic Management (TM) support of Non–Reduced Vertical Separation Minima (RVSM) Aircraft.

## 17–21–2. 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.

## 17–21–3. 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.

## 17–21–4. 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 MEDEVAC call sign;

**d.** Flights conducted for aircraft certification and development flights for RVSM.

## 17–21–5. 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.*

## 17–21–6. 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 22. Contingency Plan Support System (CPSS)

## 17–22–1. PURPOSE

This section prescribes policies and guidelines for managing ARTCC Operational Contingency Plan (OCP) data within the Contingency Plan Support System (CPSS). The CPSS is maintained via the RMT.

## 17–22–2. DEFINITION

The CPSS, as defined in FAA Order JO 1900.47, Air Traffic Organization Operational Contingency Plan, is a software application used to collect, share, publish, and distribute OCPs for operational access and use by field facilities, the ATCSCC, and customers during ATC Zero events.

## 17–22–3. RESPONSIBILITIES

**a.** The ATCSCC must:

**1.** Manage the CPSS database following FAA Order JO 1900.47, Air Traffic Organization Operational Contingency Plan.

**2.** Designate a POC for the management of the CPSS database.

**b.** ARTCCs must:

**1.** Develop and maintain the accuracy of OCP data within CPSS following FAA Order JO 1900.47, Air Traffic Organization Operational Contingency Plan.

**2.** Designate a POC to coordinate with the ATCSCC on the management of the ARTCC's CPSS database information.

**3.** Coordinate with all affected facilities when changing CPSS data before including them in the CPSS database.

**4.** Ensure that CPSS data are available to operational positions.

***NOTE–***
*Before publication in the CPSS, the facility must ensure that hardcopy, or other electronic means of making this information available, is provided to operational personnel and the ATCSCC.*

**5.** Tell all affected offices when making any change to the National Airspace System that might affect internal or adjacent ARTCC contingency plans (for example, airway changes, frequency changes, airspace redesign, airway realignment, etc.)

**6.** Report unusable, inaccurate, or unsatisfactory CPSS information directly to the ATCSCC CPSS POC. Real–time implementation problems should be reported to the ATCSCC National System Strategy Team and to the ATCSCC CPSS POC. Reports must include the facility plan name, affected sectors, specific description of the impact, and if appropriate, suggestion for modification.

**7.** Coordinate with underlying terminal facilities for all matters pertaining to CPSS data information.

**c.** Service Center Operations Support Group must:

**1.** Review CPSS data for currency and consistency.

**2.** Serve as liaison between ARTCCs and ATCSCC on CPSS matters.

**3.** Serve as information and training resource for ARTCCs to help them maintain current and accurate information in CPSS.

## 17–22–4. PROCEDURES

**a.** OCP data for each ARTCC must be published within CPSS via the national RMT database. Updates to the RMT database will coincide with the 56–day chart update cycle.

**b.** OCP data must be processed in accordance with the following timelines:

**1.** All revisions to CPSS data must be provided to the ATCSCC CPSS POC at least 30 days before each chart date.

**2.** The ATCSCC POC must enter all revisions to the CPSS data at least 14 days before the chart update. The RMT database will then be locked.

# Section 23. Route Test

## 17–23–1. PURPOSE

This section describes policies and guidelines for conducting and evaluating route tests.

## 17–23–2. 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).

## 17–23–3. 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.

## 17–23–4. 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, through the regional MTO. 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 MTO to the ATCSCC Procedures Office, with supporting documentation. Facilities requesting extensions exceeding 180 days must review and comply with FAA Order 1050.1, Policies and Procedures Considering Environmental Impacts, 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 24. Traffic Management Advisor (TMA)

## 17–24–1. PURPOSE

This section establishes procedures and responsibilities for the use of Traffic Management Advisor (TMA).

## 17–24–2. DEFINITIONS

**a.** *Adjacent Center Metering (ACM)*. An extension of SCM that provides time-based metering capability to neighboring facilities. There are three categories of ACM processing and control at a facility:

**1.** Controlling facility – The TMA unit that exercises control over SCM and/or ACM settings and the relevant metering operation.

**2.** Limited Control - The ability to manage specific ACM settings and activities for relevant metering operations.

**3.** Non-Controlling - A facility that only has monitoring capability.

**b.** *Coupled Scheduling*. An automation process that adds additional meter-points and allows the linking of time-based flow management (TBFM) systems. This results in more optimal balancing and distribution of delays over a greater distance from the airport or meter point.

**c.** *En Route Departure Capability (EDC)*. A functionality within TMA that assists TMCs in formulating release times to adapted meter points in space.

**d.** *Metering*. A method of controlling aircraft demand by scheduling the time at which each aircraft should cross a predetermined fix.

**e.** *Rippling*. The recalculation of TMA–generated, frozen scheduled times of arrival (STA) resulting from a manual action at the controlling graphical user interface (GUI). Rippling, also commonly referred to as “rescheduling” or “reshuffling,” can be executed independently but is normally associated with changes to TMA configurations or settings.

**f.** *Single Center Metering (SCM)*. An application of the TMA tool that provides TMCs with the ability to view and manage arrival flows to an ARTCC’s internal airports.

**g.** *Time-Based Flow Management (TBFM)*. The technology and methods of balancing demand and capacity utilizing time.

**h.** *Traffic Flow Management (TFM)*. The processes and initiatives a TMC uses to balance air traffic demand with system capacity.

**i.** *Traffic Management Advisor (TMA)*. A comprehensive, automated method of planning efficient arrival trajectories from cruise altitude to the runway threshold.

## 17–24–3. RESPONSIBILITIES

**a.** The ATCSCC must:

**1.** Be the final decision authority for TMA-related operations and initiatives.

**2.** Manage the equity of overall system delays throughout the NAS.

**3.** Host/participate in ACM discussions and support all ACM and other time-based metering initiatives. Collaborate on an exit strategy when ACM is no longer required.

**4.** Include the status of any pertinent TMA-related information on the planning telecons and on the Operational Information System (OIS).

**5.** Prioritize TBFM activity based on NAS and/or facility constraints.

**6.** Inform impacted facilities of relevant information that would influence arrival metering decisions or en route EDC operations.

**7.** Establish and maintain multi-facility communications when necessary for ACM operations.

**8.** Log ACM events and other TMA activities as appropriate in the NTML.

**9.** Serve as a repository for TBFM information and TMA reference materials.

**b.** All TMUs with controlling TMA systems must:

**1.** Determine appropriate TMA settings.

**2.** Ensure TMA settings are entered, current, and coordinated.

**3.** Monitor TMA to determine metering timeframes and coordinate start/stop times and reportable delays with the ATCSCC and affected facilities.

**4.** Communicate meter start/stop information to operational areas, operating positions, and participating facilities, and enter into NTML as necessary.

**5.** Enable sector meter list as coordinated.

**6.** Monitor internal facility metering delays and initiate actions, as appropriate, when values exceed or are projected to exceed delays that can be absorbed by control sectors. Notify the FLM or affected areas/sectors of actions taken and expected outcomes.

**7.** Monitor multi-metering scenarios. Advise ATCSCC if time based metering (TBM) to multiple airports or fixes is impacting or projected to impact sector or facility level operations.

**8.** Coordinate changes to the metering plan or updates to the TMA schedule with the affected facilities.

**9.** Coordinate internally with affected areas and with any ACM supporting facilities before taking action to update the TMA schedule.

**10.** To the extent possible, avoid making any changes in TMA that cause a global schedule change (rippling) during metering operations. Advise affected facilities and sectors before rippling.

***NOTE–***
*Coordinate and disable the sector meter list when rippling is necessary. Enable the metering list when rippling is complete.*

**11.** Use TMA to determine release times for internal departures to a metered airport.

**12.** Monitor arrival and departure flows for potential metering actions/changes.

**13.** Monitor internal and adjacent facility metering compliance and take appropriate action.

**14.** Coordinate and disable sector meter list when metering times are no longer in effect.

**c.** Supporting TMUs performing ACM or coupled scheduling must:

**1.** Determine appropriate local TMA settings.

**2.** Ensure TMA settings are entered, current, and coordinated.

**3.** Coordinate with controlling facility and ATCSCC, as appropriate.

**4.** Communicate meter start/stop information to operational areas, operating positions, and participating facilities.

**5.** Enable sector meter list as coordinated.

**6.** Use TMA to determine release times for internal departures to a metered airport.

**7.** Monitor arrival and departure flows for potential metering actions/changes.

***NOTE–***
*Coordinate and disable the sector meter list when rippling is necessary. Enable the metering list when rippling is complete.*

**8.** Monitor internal and upstream compliance.

**9.** Disable the sector meter list when metering has been completed.

# Part 6. REGULATORY INFORMATION

# Chapter 18. Waivers, Authorizations, and Exemptions

## Section 1. Waivers and Authorizations

### 18–1–1. PURPOSE

This section prescribes policy and guidelines for the grant or denial or a Certificate of Waiver or Authorization from Title 14, Code of Federal Regulations (14 CFR).

### 18–1–2. POLICY

**a.** FAAO 1100.5, FAA Organization – Field, delegates to the Service Operations Service Area Directors and Flight Standards Division Managers the Administrator's authority to grant or deny a Certificate of Waiver or Authorization (FAA Form 7711–1), and permits the redelegation of this authority. Further, redelegation of the authority to grant or deny waivers or authorizations must be consistent with the functional areas of responsibility as described in FAA's Rulemaking Manual, and may be limited if deemed appropriate.

**b.** Applications for a Certificate of Waiver or Authorization acted upon by a En Route and Oceanic Operations Service Area or Terminal Operations Service Area office 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.

### 18–1–3. RESPONSIBILITIES

**a.** Air traffic, as designated by the Service Area Director, is responsible for the grant or denial of Certificate of Waiver or Authorization, except for those sections assigned to Flight Standards (detailed in subpara b).

**b.** Flight Standards, as designated by the Administrator, and described in FAA's Rulemaking Manual, is responsible for providing advice with respect to the qualification of civil pilots, airworthiness of civil aircraft, and the safety of persons and property on the ground. Additionally, Flight Standards has the responsibility for the grant 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 91.175, Takeoff and landing under IFR;

**3.** Section 91.209, Aircraft lights;

**4.** Section 91.303, Aerobatic flight;

**5.** Any section listed in 91.905 as appropriate for aerobatic demonstrations and other aviation events.

**6.** 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.

## 18–1–4. PROCESSING CERTIFICATE OF WAIVER OR AUTHORIZATION (FAA FORM 7711–2) REQUESTS

**a.** Requests for a Certificate of Waiver or Authorization (FAA Form 7711–2) 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 Area Director for action. Those requests that are forwarded to FAA Washington Headquarters for processing must include all pertinent facts, background information, recommendation(s), as well as the basis and reasons for requesting Headquarters 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.

## 18–1–5. 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 reissuance or by letter.

## 18–1–6. 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 18–1–1 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. Except for waivers or authorizations issued by ATO for unmanned aircraft flight or Flight Standards, waivers or authorizations must not be made effective for more than 12 calendar months. Waivers or authorizations issued by Flight Standards and ATO may be made effective for 24 calendar months in accordance with Flight Standards and ATO policies. 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.

**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 (e.g., limitations, location, time periods, type aircraft) must be specified and included as part of the waiver or authorization.

## 18–1–7. 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.

## 18–1–8. 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 Flight Standards Service, forward copies of waivers, authorizations or written denials to the Washington Headquarters, System Operations Airspace and Aeronautical Information Management.

**d.** Other Distribution: Other than as specified above and as necessary to satisfy Service Area office needs, distribution must be limited to those offices that have a need for the information.

## 18–1–9. CANCELLATION OF WAIVERS AND AUTHORIZATIONS

A waiver or authorization may be canceled at any time by the Administrator, the person authorized to grant the waiver or authorization, or the representative designated to monitor a specific operation. As a general rule, 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. Cancellation procedures, as applicable, must be used as follows:

**a.** Notify the holder immediately.

**b.** Verify and document the basis for the cancellation.

**c.** Notify the appropriate Service Area office, 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.

*FIG 18–1–1*

**FAA Form 7711–1**

**DEPARTMENT OF TRANSPORTATION**

**FEDERAL AVIATION ADMINISTRATION**

# CERTIFICATE OF WAIVER OR AUTHORIZATION

**ISSUED TO**

*(self-explanatory)*

**ADDRESS**

*(self-explanatory)*

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

**OPERATIONS AUTHORIZED**

***(Indicate in detail all operations authorized. Use a separate sheet of paper if necessary.)***

**LIST OF WAIVED REGULATIONS BY SECTION AND TITLE**

***(This section not used for Unmanned Air Vehicle authorizations.)***

**STANDARD PROVISIONS**

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

Note: - This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

**SPECIAL PROVISIONS**

**Special Provisions Nos. 1 to 4, inclusive, are set forth on the reverse side hereof.**

This certificate is effective from ***(Beginning date/time)*** to ***(Ending date/time)***, inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

**BY DIRECTION OF THE ADMINISTRATOR**

| | |
|---|---|
| *(self-explanatory)* | ***(Signed by Appropriate Waiver Authority)*** |
| **(Region)** | **(Signature)** |
| ***(Enter date the waiver was signed)*** | ***(self-explanatory)*** |
| **(Date)** | **(Title)** |

**FAA Form 7711-1 (7-74)** ***1975 - G.P.O. - 1703-M/674-862/199**

# 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

## 18–2–1. 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.

## 18–2–2. 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.*

## 18–2–3. RESPONSIBILITIES

**a.** Each Service Area office 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 Area office must forward the names of the airspace surface areas recommended for elimination/restoration of fixed–wing SVFR operations, with detailed justification, to the System Operations Airspace and Aeronautical Information Management for review.

# Section 3. Current Authorizations and Exemptions from Title 14, Code of Federal Regulations

## 18–3–1. 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.

## 18–3–2. AUTHORIZATION AND EXEMPTION REQUESTS

Requests for updated summaries of all current air traffic control authorizations and exemptions from 14 CFR processed by System Operations Airspace and Aeronautical Information Management should be made through the Service Area office.

# Section 4. Parachute Jump Operations

## 18–4–1. 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 nonemergency 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.** The communication 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, NOTAM information must be submitted for publication in the AFD.

**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 the jump operations must be maintained in the facility files for 15 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.

**f.** Upon request, air traffic facilities must furnish whatever information might be available concerning parachute jumps to the U.S. Coast Guard.

# Section 5. Moored Balloons, Kites, Unmanned Rockets, and Unmanned Free Balloons/Objects

## 18–5–1. MOORED BALLOONS, KITES, UNMANNED ROCKETS, AND UNMANNED FREE BALLOONS/OBJECTS

Apply the following guidelines to moored balloon, kite, 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.** 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.

**c.** 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.

**d.** 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.*

## 18–5–2. 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 ATCSCC, the regional Operations Center, and all affected facilities of the derelict. The ATCSCC will serve as the focal point for the collection and dissemination of further information.

**3.** Provide the ATCSCC with revised position or altitude information.

**4.** If required, assistance in locating and tracking the balloon may be requested from the National Military Command Center (NMCC), NORAD, or other agencies with surveillance capabilities through the ATCSCC. If appropriate, the ATCSCC will advise the NMCC 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.

***NOTE–***
*The final decision to destroy the derelict balloon is the responsibility of the appropriate NORAD Commander.*

**e.** Record and handle the derelict balloon as a Miscellaneous Incident.

***REFERENCE–***
*FAAO JO 7110.65, Para 9–6–2, Derelict Balloons.*

# Chapter 19. Temporary Flight Restrictions

## Section 1. General Information

### 19–1–1. PURPOSE

This section prescribes guidelines and procedures regarding the use and issuance of regulatory temporary flight restrictions (TFRs).

### 19–1–2. 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 (U.S.C.) to regulate, control, and develop plans for the use of the navigable airspace and to formulate policy for navigable airspace. See also 49 U.S.C. Section 40101(d).

**b.** Title 14 of the Code of Federal Regulations (14 CFR) parts 91 and 99 contain regulations addressing temporary flight restrictions and Special Security Instructions.

### 19–1–3. 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. A Special Security Instruction may be issued for reasons of national security.

### 19–1–4. TYPES OF TFRs

TFRs may be issued under the following regulations:

**a.** Section 91.137, Temporary Flight Restrictions in the Vicinity of Disaster/Hazard Areas.

**b.** Section 91.138, Temporary Flight Restrictions in National Disaster Areas in the State of Hawaii.

**c.** Section 91.139, Emergency Air Traffic Rules.

**d.** Section 91.141, Flight Restrictions in the Proximity of the Presidential and Other Parties.

**e.** Section 91.143, Flight Limitation in the Proximity of Space Flight Operations.

**f.** Section 91.145, Management of Aircraft Operations in the Vicinity of Aerial Demonstrations and Major Sporting Events.

**g.** Section 99.7, Special Security Instructions.

### 19–1–5. TFR NOTAM CONTENT

TFR NOTAMs must comply with procedures detailed in FAA Order JO 7930.2, Notices to Airmen (NOTAM).

### 19–1–6. TFR INFORMATION

**a.** Educational information regarding TFRs can be found in 14 CFR parts 91 and 99, and the Aeronautical Information Manual.

**b.** National Airspace System (NAS) users or other interested parties should contact the nearest flight service station for TFR information. Additionally, you can find TFR information on automated briefings, Notice to Airmen (NOTAM) publications, and on the Internet at *http://www.faa.gov*. The FAA also distributes TFR information to aviation user groups and requests these groups to further disseminate the information to their members.

### 19–1–7. 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 users of any hazard or dangerous information outside of the sovereign U.S. airspace and its territories.

## 19–1–8. TFR QUESTIONS

Direct any questions or concerns regarding TFRs to the ATO service area manager having jurisdiction over the TFR area. You may also contact Mission Support, Airspace, Regulations, and ATC Procedures Group, FAA Headquarters, Washington, D.C., at (202) 267–8783.

# Section 2. Temporary Flight Restrictions in the Vicinity of Disaster/Hazard Areas (14 CFR Section 91.137)

## 19–2–1. 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.

## 19–2–2. RATIONALE

TFRs in accordance with 14 CFR Section 91.137 are issued when necessary to:

**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.

**b.** 14 CFR 91.137(a)(2) – Provide a safe environment for the operation of disaster relief aircraft.

**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.

***NOTE–***
*This provision applies only to disaster/hazard incidents of limited duration that would attract an unsafe congestion of sightseeing aircraft.*

## 19–2–3. SITUATIONS FOR RESTRICTIONS

TFRs in accordance with 14 CFR Section 91.137 may be issued for, but are not limited to, the following situations:

**a.** 14 CFR 91.137(a)(1): 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 incident; and hijackings.

**b.** 14 CFR 91.137(a)(2): aviation or ground resources engaged in wildfire suppression; and aircraft relief activities following a disaster (for example, earthquake, tidal wave, flood, etc.).

**c.** 14 CFR 91.137(a)(3): disaster/hazard incidents of limited duration that would attract an unsafe congestion of sightseeing aircraft, such as aircraft accident sites.

## 19–2–4. 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.

## 19–2–5. ISSUING TFRs

**a.** FAA Headquarters or the ATO service area managers (or their designee) having jurisdiction over the area concerned may issue a TFR.

**b.** TFRs issued for hijacking events may be issued by FAA Headquarters or the ATO service area managers (or designee) with coordination through the Domestic Events Network (DEN) air traffic security coordinator (ATSC).

**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.

**e.** TFRs issued for law enforcement activities require approval from the ATO Director of System Operations Security (or designee).

***NOTE–***
*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, etc.).*

## 19–2–6. 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.

## 19–2–7. 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 managers (or designee) must:

**1.** Review all flight restrictions in their jurisdiction issued in accordance with 14 CFR 91.137 at least every 30 days.

**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 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.** Reroute IFR traffic around the TFR, unless prior approval is obtained from the on–scene coordinator.

**7.** 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.

**8.** 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.

**9.** 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.** Refer all media requests for information concerning TFRs to the SOSC at (202) 267–8276.

## 19–2–8. 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 3. Temporary Flight Restrictions in National Disaster Areas in the State of Hawaii (Section 91.138)

## 19–3–1. 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.

## 19–3–2. REQUESTING AUTHORITIES

The Governor of the State of Hawaii or the Governor's designee may request a TFR under 14 CFR 91.138.

## 19–3–3. 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.

## 19–3–4. 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.

# Section 4. Emergency Air Traffic Rules (14 CFR Section 91.139)

## 19–4–1. 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.

## 19–4–2. 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.

## 19–4–3. 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.

## 19–4–4. 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 5. Flight Restrictions in the Proximity of the Presidential and Other Parties (14 CFR Section 91.141)

## 19–5–1. PURPOSE

TFRs issued in accordance with 14 CFR Section 91.141 address air security with respect to airspace over presidential and other parties.

## 19–5–2. 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.

## 19–5–3. 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).

## 19–5–4. 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.

## 19–5–5. 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 6. Flight Limitation in the Proximity of Space Flight Operations (14 CFR Section 91.143)

## 19–6–1. PURPOSE

TFRs issued in accordance with 14 CFR Section 91.143 address space flight operations.

## 19–6–2. REQUESTING AUTHORITIES

FAA Headquarters or the Manager of Terminal or En Route and Oceanic Service Area Operations (or their designee) having control jurisdiction over the affected airspace can issue a TFR under 14 CFR Section 91.143.

## 19–6–3. 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 proponent for the flight operation.

# Section 7. Management of Aircraft Operations in the Vicinity of Aerial Demonstrations and Major Sporting Events (14 CFR Section 91.145)

## 19–7–1. 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.

## 19–7–2. POLICY

**a.** Situations that may warrant a TFR under this section include, but are not limited to: military and civilian aerial demonstrations or major sporting events of limited duration to protect persons or property on the surface or in the air, to maintain air safety and efficiency, or to prevent the unsafe congestion of aircraft in the vicinity of an aerial demonstration or major sporting event.

**b.** All ATC regulatory actions to be considered for events of this type that will require an interpretation of, or exemption from, 14 CFR, must be forwarded to System Operations Airspace and Aeronautical Information Management, at least 90–days in advance of the event.

**c.** All nonregulatory avenues (e.g., drafting and dissemination of procedural information, temporary control tower, etc.) must be exhausted before considering regulatory restrictions.

**d.** Restrictions issued under this section prohibit the operation of any aircraft or device, or 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.

**e.** Any procedural matters developed for the management of aircraft operations in the vicinity of aerial demonstrations and major sporting events that will require a procedural interpretation or waiver, must be forwarded to the Director of Terminal Operations at least 90–days in advance.

***NOTE–***
*ATC must coordinate with the official responsible for the aerial demonstration prior to authorizing VFR or IFR aircraft to operate within the restricted airspace.*

**f.** The ATCSCC is responsible for ensuring the balance of NAS demand with system capacity. As such, all efforts that address the management of aircraft operations in the NAS must be coordinated, prior to being finalized, with the ATCSCC to ensure that the planned operation would not overtly impact the system.

## 19–7–3. RESPONSIBILITIES

**a.** The Airspace and Rules Manager, System Operations Airspace and Aeronautical Information Management, oversees all regulatory actions issued under 14 CFR Section 91.145. Send TFR request information at least 45 days in advance of an aerial demonstration or major sporting event.

**b.** The Manager of Airspace Procedures oversees all procedures used in managing aircraft operations in the vicinity of aerial demonstrations and sporting events (refer to Chapter 18 of this order for additional guidelines regarding waiver and authorization responsibilities).

**c.** The regional ATO Service Area Managers (or their designee) is responsible for the grant or denial of Certificate of Waiver or Authorization (FAA Form 7711–1) for the following Sections/parts of 14 CFR:

**1.** Section 91.117, Aircraft Speed.

**2.** Section 91.126, operating on or in the vicinity of an airport in Class G airspace.

**3.** Sections 91.131, 130, 129, 127 Operations in Class B, C, D, and E airspace areas respectively.

**4.** Section 91.135, Operations in Class A Airspace.

**5.** Part 101, Moored Balloons, Kites, Unmanned Rockets, and Unmanned Free Balloons.

**6.** Part 103, Ultralight Vehicles.

**7.** Part 105, Parachute Operations (except those Sections delegated to Flight Standards, refer to 19–7–3d).

**d.** Flight Standards (AFS) is responsible for ensuring the qualification of civil pilots, airworthiness of civil aircraft participating in these events; as well as the safety of persons and property on the ground affected by these events. In addition, AFS has the responsibility for the grant or denial of Certificate of Waiver or Authorization from the following Sections of 14 CFR:

**1.** Section 91.119, Minimum Safe Altitudes.

**2.** Section 91.175, Takeoff and Landing Under IFR.

**3.** Section 91.209, Aircraft Lights.

**4.** Section 91.303, Aerobatic Flight, Authorizing Industrial and Agricultural Support Operations.

**5.** Any Section listed in Section 91.905 as appropriate for aerobatic demonstrations and other aviation events.

**6.** Section 105.15, Jumps Over or into Congested Areas or Open Air Assembly of Persons, as Appropriate for Aerobatic Demonstrations and Other Aviation Events.

***NOTE–***
*Applications for waiver or authorization that require both Air Traffic and Flight Standards technical considerations must be handled jointly. Additionally, a copy of all such waivers must be sent to the affected ATC facility(s) having control jurisdiction over the affected airspace and the regional (530) manager. Requests for a TFR, waiver, or authorization for an aviation event requires coordination with the appropriate ATC facility and the regional ATO Service Area Managers.*

## 19–7–4. RELATED DOCUMENTS

**a.** 14 CFR Section 91.145, Management of Aircraft Operations in the Vicinity of Aerial Demonstrations and Major Sporting Events.

**b.** Advisory Circular 91–63, Temporary Flight Restrictions.

**c.** Advisory Circular 91–45, Waivers: Aviation Events contains information to assist prospective sponsors and other interested parties in planning and conducting an aviation event.

**d.** FAAO 8700.1, General Aviation Operations Inspector's Handbook contains information pertaining to the issuance of a Certificate of Waiver or Authorization.

## 19–7–5. COORDINATION

Air traffic facilities receiving requests for flight restrictions in accordance with 14 CFR Section 91.145 must maintain a chronological log of all related actions.

**a.** Facilities receiving these types of requests must obtain the following information from the notifying agency/office:

**1.** Name and organization of the person requesting the waiver.

**2.** A brief description of the event/activity.

**3.** The estimated duration of the restrictions (e.g., start date/time and termination date/time).

**4.** The name/telephone number, or other communications arrangements, of the on–scene official that would respond to any required coordination during the event. In addition, the name of the agent responsible for any on–scene emergency activities, if different from the above.

**5.** A description of the affected area, and any requested airspace area, by reference to prominent geographical features depicted on aeronautical charts, or by geographical coordinates and fixes when the latter is available.

**6.** A signed, written request from the individual requesting the waiver, which states the reason for the restriction.

**b.** Sporting Events.

**1.** Requests for sporting event restrictions must be forwarded to the appropriate regional ATO Service Area Managers for action.

**2.** The regional ATO Service Area Managers will review the request, and if it meets the criteria in accordance with 14 CFR Section 91.145, forward the their recommendation and all applicable information (including the signed, written request from the originator) to the Airspace and Rules Manager at least 30–days prior to the event.

**3.** If the TFR is not approved as requested, the Airspace and Rules Manager must inform the regional ATO Service Area Managers, indicating the

basis for the disapproval. The regional ATO Service Area Managers must inform the requestor of the disapproval and any available alternatives.

**c.** Aerial Demonstrations. Any request for a TFR, waiver, or authorization for an aviation event requires coordination with the appropriate ATC facility and the regional ATO Service Area Managers at least 90 days prior to the event.

**1.** The NOTAM request and sample NOTAM must be submitted by the FSDO to the responsible ATC facility at least 90 days in advance of the aviation event. The NOTAM must reflect the dates, times, lateral and vertical limits of the airspace specified on the Certificate of Waiver or Authorization Application (FAA Form 7711–1).

**2.** The ATC facility coordinates the request with the regional ATO Service Area Managers.

**3.** The regional ATO Service Area Managers will review the request, and if it meets the criteria in accordance with 14 CFR Section 91.145, forward their recommendation and all applicable information (including the signed, written request from the originator) to the Airspace and Rules Manager at least 30–days prior to the event.

**4.** If approved by the Airspace and Rules Manager, the NOTAM will be forwarded to the U.S. NOTAM Office for publication. If at all possible, other means will be utilized to disseminate the information. (Class II publication, Airport/Facility Directory, AOPA website, etc.)

**5.** If the TFR is not approved as requested, the Airspace and Rules Manager must inform the regional ATO Service Area Managers, indicating the basis for the disapproval. The Regional ATO Service Area Managers must inform the requestor of the disapproval and any available alternatives.

## 19–7–6. SPECIAL TRAFFIC MANAGEMENT PROGRAM GUIDELINES

Each regional ATO Service Area Manager is responsible for the drafting of special traffic management plans for the management of aircraft operations in the vicinity of aerial demonstrations and major sporting events. Accordingly, the ATO Service Area Managers, in concert with the affected facility personnel, must:

**a.** Consider the following when developing procedures for managing aircraft operations in the vicinity of aerial demonstrations and open–air assembly major sporting events:

**1.** Refer to Chapter 17, Traffic Management National, Center, and Terminal, of this order for additional guidelines regarding special traffic management programs.

**2.** Consideration should be given to the number and types of aircraft involved in the operation (e.g., non–radio equipped aircraft).

**3.** Procedures should specify the minimum airspace/altitude requirements to manage aircraft operations in the vicinity of the event.

**4.** Determine whether the event warrants the use of a temporary control tower.

**b.** Coordinate the proposed procedures with the ATO Airspace and Rules Manager, as appropriate, and forward the information to the ATO Publications.

**c.** Airspace and Rules Manager will disseminate the procedures to affected airspace users via:

**1.** The Notices to Airmen publication. If this publication is used, the required information must be sent to ATO Publications for processing, at least 60–days in advance of the event.

**2.** The NOTAM will be forwarded to the U.S. NOTAM Office for publication no later than 5 days prior to the event.

## 19–7–7. PROCESS FOR TFRs

**a.** When recommending the use of Section 91.145 to manage aircraft operations in the vicinity of aerial demonstrations, the following guidelines should be used:

**1.** Aerial demonstrations and sporting events occurring within Class B airspace areas should be handled through existing procedures, without additional restrictions. However, each situation is unique and should be addressed as such.

**2.** At times it may be necessary to issue restrictions to protect airspace not contained within regulated airspace. For an aerial demonstration, if any segment of the requested airspace is outside of regulated airspace, a restriction may be issued if the following criteria are met:

**(a)** Military aircraft are conducting aerobatic demonstrations.

**(b)** Civilian aircraft that operate in excess of 200 knots are conducting aerobatic demonstrations.

**(c)** Parachute demonstration teams are performing.

***NOTE–***
*A Class D NOTAM (advisory NOTAM) will be issued for any aerial demonstration that does not require a TFR.*

**b.** Restrictions issued by the Airspace and Rules Manager are regulatory actions, and all restrictions issued must consider the impact on nonparticipating aircraft operations. Accordingly, restrictions for aerial demonstrations will normally be limited to a 5 nautical mile radius from the center of the demonstration, at an altitude equal to aircraft performance, but will be no greater than the minimum airspace necessary for the management of aircraft operations in the vicinity of the specified area. Flight management restrictions for major sporting events should be implemented 1 hour before until 1 hour after each event, limited to a 1 nautical mile radius from the center of the event and 2,500 feet above the surface. Traffic management plans are to include marshalling aircraft (e.g., blimps, banner towing aircraft, media) on the periphery of these events.

## 19–7–8. REVISIONS AND CANCELLATIONS

**a.** When restrictions are necessary beyond the published termination date/time, the regional ATO Service Area Managers must advise the Airspace and Rules Manager to ensure that a revised NOTAM and an appropriate cancellation are issued.

**b.** When it is obvious that the restrictions are no longer required, but no information to that effect has been received, the regional ATO Service Area Managers must take action to ascertain the status of the restrictions from the agency/person that requested the restrictions.

**c.** For an Aerial Demonstration– The event organizer should submit two separate requests:

**1.** One to the ATO Service Area Managers, at least 45 days prior to the event.

**2.** An application for a certificate of waiver or authorization (FAA Form 7711–2) for the restriction to the appropriate Flight Standards District Office, 90 days before the event for a civilian aerial demonstration and 120 days before the event for a military aerial demonstration.

**d.** For a Major Sporting Event– Submit the TFR request to the ATO Service Area Managers at least 45 days in advance of the major sporting event. The ATO Service Area Managers will assess the need for a TFR and forward their recommendation to the Airspace and Rules Manager. The Airspace and Rules Manager will determine whether a TFR is necessary and issue the TFR accordingly.

# Section 8. Special Security Instructions (14 CFR Section 99.7)

## 19–8–1. 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.

## 19–8–2. REQUESTING AUTHORITIES

**a.** The Department of Defense, or other Federal security/intelligence agency may request a TFR under 14 CFR Section 99.7.

**b.** The Director, System Operations Security, oversees TFR information issued under this section.

## 19–8–3. 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.

## 19–8–4. DEFINITIONS

**a.** *Air Defense Identification Zone (ADIZ)*– An area of airspace over land or water in which the ready identification, location, and control of all aircraft (except for Department of Defense and law enforcement aircraft) is required in the interest of national security.

**b.** *Defense Area*– Any airspace of the contiguous United States that is not an ADIZ in which the control of aircraft is required for reasons of national security.

# Section 9. Security Notice (SECNOT)

## 19–9–1. 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.

## 19–9–2. 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 TFRs. 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.

## 19–9–3. 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 cancelled.

**b.** SECNOT aircraft lookouts must be initiated by the ATSC via telephone to FSS 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 last reported 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 FLM/CIC. If information is not known, broadcast call sign on all frequencies and advise the FLM/CIC of the response. The FLM/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.

# Part 7. SYSTEM OPERATIONS SECURITY

# Chapter 20. Operations Security, Strategic and Tactical

## Section 1. Organizational Missions

### 20–1–1. SYSTEM OPERATIONS SECURITY MISSION

The System Operations Security mission is to balance the demands of homeland security/national defense with the operational integrity and economic consideration of the National Airspace System (NAS). System Operations Security coordinates to preserve national security regarding real time operational issues and events in the NAS. This commitment is fostered through interagency coordination at the strategic and tactical levels with the communication of dynamic decision making during real time events.

### 20–1–2. STRATEGIC OPERATIONS SECURITY MISSION

Strategic Operations Security is responsible for the planning and coordination of homeland security/national defense needs within the NAS. In this capacity, Strategic Operations Security is the focal point for all internal and external security requests that impact the NAS. Strategic Operations Security is responsible for communicating the implementation of all operational security procedures and any impacts on the NAS.

### 20–1–3. TACTICAL OPERATIONS SECURITY MISSION

Tactical Operations Security is responsible to ensure the real–time coordination and implementation of security procedures within the NAS mainly through the Domestic Events Network, (DEN) and National Capital Region Coordination Center, (NCRCC). Tactical Operations Security is the focal point for all active security measures and adjustments made for security and/or operational considerations. Tactical Operations Security is also responsible for the coordination of intelligence reporting and its nexus to the operational aspects of the NAS.

# Section 2. Organizational Responsibilities

## 20–2–1. STRATEGIC OPERATIONS SECURITY

Strategic Operations Security must:

**a.** Develop national NAS security programs.

**b.** Develop security related Temporary Flight Restriction (TFR) procedures.

**c.** Develop and coordinate Presidential airspace protection initiatives.

**d.** Coordinate security measures impacting the NAS directly with designated Service Area and facility representatives.

**e.** Ensure that all appropriate coordination has been accomplished prior to the implementation of a known security measure or program.

**f.** Provide guidance and direction to the maintainers and users of the NAS regarding security programs and procedures.

**g.** Provide briefings to appropriate levels within the FAA and industry on current and projected security measures and associated impacts.

**h.** Maintain close liaison with appropriate Service Areas and other FAA services on all security programs.

**i.** Maintain close liaison with external agencies and departments regarding security measures that impact the NAS.

## 20–2–2. TACTICAL OPERATIONS SECURITY

Tactical Operations Security must:

**a.** Staff and manage the Domestic Events Network (DEN).

**b.** Maintain a close liaison with homeland security/national defense at operational decision making levels.

**c.** Implement national security measures on a tactical dynamic basis, taking action to cancel or modify when appropriate.

**d.** Monitor and analyze active security measures, optimizing timely coordination to ensure minimal impact to the NAS.

**e.** Be the focal point for regulating daily security measures.

**f.** Recommend and approve alternative security measures when national initiatives are not appropriate or sufficient.

**g.** Be the final approving authority regarding all real–time security determinations regarding operations within the NAS.

**h.** Review operational security deficiencies (QARs, pilot deviations and external/internal complaints) and provide recommendations to the Director, System Operations Security.

**i.** Be responsible for the daily management of Presidential airspace security initiatives.

## 20–2–3. FIELD FACILITIES

Air Traffic facilities must ensure that:

**a.** NAS security measures are implemented and briefed to all operational personnel.

**b.** They are prepared to implement and coordinate known security measures. This is to include maintaining a listening watch of the Domestic Events Network when it is known that a facility is needed on the network.

**c.** Coordination and communication of operational impacts and considerations during security events is accomplished in a dynamic fashion.

**d.** All violators of NAS security programs are tracked and identified when possible.

**e.** Appropriate action is taken regarding identified violators.

# Section 3. Line of Authority

## 20–3–1. SYSTEM OPERATIONS SECURITY

Manager, Strategic Operations Security and Manager, Tactical Operations Security are under the general supervision of the Director, System Operations Security. And as such, have been delegated all the rights and responsibilities of the Director.

## 20–3–2. 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

## 20–4–1. DOMESTIC EVENTS NETWORK (DEN)

**a.** Domestic Event 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 (202) 493–4170.

**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.

## 20–4–2. PRESIDENTIAL/UNITED STATES SECRET SERVICE (USSS) SUPPORTED VIP MOVEMENT

**a.** Tactical Operations Security, 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 Strategic Operations Security working in concert with the USSS. The System Operations Support Center (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 (202) 493–4170.

## 20–4–3. 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.

## 20–4–4. 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.

## 20–4–5. 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.

## 20–4–6. 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.

# Section 5. Coordination

## 20–5–1. COORDINATION

Coordinate through verbal and automated methods. When available, use tools that permit common situational awareness.

## 20–5–2. 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.

## 20–5–3. 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.

# Appendix 1. Air Carrier Contact for the Distribution of Incident Reports

ABX AIR
Robert Gray
Director of Safety
145 Hunter Drive
Wilmington, OH 45177
Telephone: 800–736–3973 x62288

AIRTRAN AIRWAYS
J. P. Dagon
Director of Safety
9955 AirTran Boulevard
Orlando, FL 32827
Telephone: 407–318–5430

AIR WISCONSIN AIRLINES
Thomas J. Wittman
Managing Director of Safety
W6390 Challenger Drive, Suite 203
Appleton, WI 54914–9120
Telephone: 920–749–4172

ALASKA AIRLINES
Gary Beck
Director of Safety
P.O. Box 68900
Seattle, WA 98168
Telephone: 206–392–6043

AMERICAN AIRLINES
Captain Matt Wise
Manager Flight Safety
4333 Amon Carter Boulevard
Ft. Worth, TX 75261
Telephone: 817–931–1356

AMERICAN EAGLE
Dave Kennedy
Sr. Vice President Operations
4333 Amon Carter Boulevard
Fort Worth, TX 76155
Telephone: 817–967–1295

ARROW CARGO
Gerardo A. Delgado
Director – Safety & Compliance
1701 N. W. 63rd Avenue
Miami, FL 33122
Telephone: 305–876–6600

ASTAR AIR CARGO
John C. Chase
Senior Manager, Safety & IEP
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Wilmington, OH 45177
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ATLANTIC SOUTHEAST AIRLINES
Captain Les Stephens
Director of Safety, Security and Compliance
A–Tech Center
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Atlanta, GA 30354–1363
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ATLAS AIR
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Purchase, NY 10577
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CHAUTAUQUA AIRLINES
Joe Richardson
Director of Safety
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Indianapolis, IN 46268
Telephone: 317–471–2398

COLGAN AIR
Daryl LaClair
Director of Safety
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Manassas, VA 20110
Telephone: 703–656–2536

COMAIR
Mark Berner
Director of Safety
77 Comair Boulevard
Erlanger, KY 41018
Telephone: 859–767–2363

CONTINENTAL AIRLINES
Donald Gunther
Vice President, Safety & Regulatory Compliance
1600 5th Street
Houston, TX 77002
Telephone: 713–324–8502

DELTA AIR LINES
Kenneth Hylander
Director of Safety
P.O. Box 20706
Atlanta, GA 30320
Telephone: 404–715–0351

ERA AVIATION
Michelle Fabry
Director of Safety & Security
6160 Carl Brady Drive
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EVERGREEN INTERNATIONAL AIRLINES
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FEDERAL EXPRESS CORPORATION
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GULFSTREAM INTERNATIONAL
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PACE AIRLINES
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SHUTTLE AMERICA
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SPIRIT AIRLINES
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USA3000 AIRLINES
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WARBELOWS AIR VENTURES
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Director of Safety
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WORLD AIRWAYS
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# Appendix 2. Air Carrier Points of Contact for Aircraft Identification Problems

AIRTRAN AIRWAYS
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AIR CANADA
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AIR CANADA JAZZ
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AMERICA WEST AIRLINES
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ASTAR AIR CARGO
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FRONTIER AIRLINES
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# 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. Any recommended changes to this list must be forwarded to Air Traffic Classification, for action. No changes must be made to the following list without specific approval of ATO Workforce Services, Air Traffic Classification Division.

| Designator | Model |
|---|---|
| A124 | Antonov An–124 |
| A306 | A–300B4–600 |
| A30B | A–300B2/4–1/2/100/200, A–300C4–200 |
| A310 | A–310 (CC–150 Polaris) |
| A318 | A–318 |
| A319 | A–319, ACJ |
| A320 | A–320 |
| A321 | A–321 |
| A332 | A–330–200 |
| A333 | A–330–300 |
| A342 | A–340–200 |
| A343 | A–340–300 |
| A345 | A–340–500 |
| A346 | A–340–600 |
| A388 | Airbus A380–800 |
| AT72 | ATR–72 |
| ATP | ATP |
| B461 | BAe–146–100, Statesman |
| B462 | BAe–146–200, Quiet Trader, Statesman |
| B463 | BAe–146–300 |
| B701 | 707–100 (C–137B) |
| B703 | 707–300 (C–18, C–137C, E–8J–Stars, EC–18, EC–137, KC–137, T–17) |
| B712 | 717–200 |
| B720 | 720 |
| B721 | 727–100 (C–22) |
| B722 | 727–200 |
| B731 | 737–100 |

| Designator | Model |
|---|---|
| B732 | 737–200, Surveiller (CT–43, VC–96) |
| B733 | 737–300 |
| B734 | 737–400 |
| B735 | 737–500 |
| B736 | 737–600 |
| B737 | 737–700, BBJ, C–40 |
| B738 | 737–800, BBJ2 |
| B739 | 737–900 |
| B741 | 747–100 |
| B742 | 747–200 (E–4, VC–25) |
| B743 | 747–300 |
| B744 | 747–400 (International Winglets) (AL–1) |
| B74D | 747–400 (Domestic, no winglets) |
| B74R | 747SR |
| B74S | 747SP |
| B752 | 757–200 (C–32) |
| B753 | 757–300 |
| B762 | 767–200 |
| B763 | 767–300 |
| B764 | 767–400 |
| B772 | 777–200 |
| B773 | 777–300 |
| BA11 | 111 One–Eleven |
| BA46 | RJ–70 Avroliner |
| CONI | L–049/749/1049 Constellation, Super Constellation, Starliner (C–121, RC–121, EC–121, VC–121, WV, R7V, Warning Star) |

| Designator | Model |
|---|---|
| CRJ7 | Canadair CRJ–700 |
| CRJ9 | Canadair CRJ– 900 |
| CVLT | CL–66, CV–580 (CC–109 Cosmopolitan) |
| DC6 | Liftmaster |
| DC10 | DC–10 (KC–10 Extender, KDC–10, MD10) |
| DC85 | DC–8–50, Jet Trader (EC–24) |
| DC86 | DC–8–60 |
| DC87 | DC–8–70 |
| DC91 | DC–9–10 |
| DC92 | DC–9–20 |
| DC93 | DC–9–30 |
| DC94 | DC–9–40 |
| DC95 | DC–9–50 |
| DH8D | DH8C–400 Series |
| E170 | Embraer 170/175 |
| E190 | Embraer 190/195 |
| F100 | 100 |
| F28 | F–28 Fellowship |
| IL14 | IL–14 |
| IL18 | IL–18/20/22/24, Bizon, Zebra |
| IL28 | IL–28 |
| IL38 | IL–38 |
| IL62 | Il–62 |
| IL76 | Il–76/78/82, Gajaraj |

| Designator | Model |
|---|---|
| IL86 | Il–86/87 |
| IL96 | Il–96 |
| IP26 | IPAI–26 Tuca |
| L101 | L–1011 TriStar |
| L188 | L–188 Electra |
| MD11 | MD–11 |
| MD81 | MD–81 |
| MD82 | MD–82 |
| MD83 | MD–83 |
| MD87 | MD–87 |
| MD88 | MD–88 |
| MD90 | MD–90 |
| R721 | Boeing 727–100 RE Super 27 |
| R722 | Boeing 727–200 RE Super 27 |
| RJ70 | RJ–70 |
| RJ85 | RJ–85 |
| T134 | Tu–134 |
| T144 | Tu–144 |
| T154 | Tu–154 |
| T160 | Tu–160 |
| TU16 | Tu–16 |
| TU22 | Tu–22 |
| TU4 | Tu–4 |
| TU95 | Tu–95/142, Tu–20 |
| YK42 | Yak–42/142 |
| YS11 | YS–11 |

# Appendix 4. Glide Slope Outage Waiver Request

| Simultaneous ILS With Glide Slope Out Waiver for Operations After 29 Days | |
|---|---|
| Submit via Email to:<br><br>**AJT–2A3** 9–AJT–2–HQ–TerminalSafetyAndOperationsSupport@faa.gov<br>**AJS–5** 9–AWA–AJS–COR@faa.gov<br>**AOV–120** 9–AWA–AVS–AOV–COR@faa.gov<br>**AFS–400** ‘AFS–460–IFPV@faa.gov | |
| **Section 1** | |
| **Facility Identification:** | |
| **Runway (##) Glide Slope OTS:** | |
| **Simultaneous Approaches Impacted:** | |
| **Section 2** | |
| **Effective Paragraph(s):** | ☐ FAA Order JO 7110.65, 5–9–6<br>☐ FAA Order JO 7110.65, 5–9–7 |
| **Section 3** | |
| **Initial Outage Date:** | |
| **Reason Glide Slope is OTS:** | |
| **Expected Restoration Date:** | |
| **Reason outage will be longer than 29 days:** | |
| **Section 4** | |
| **Facility Safety Monitoring:** | |
| Facility Manager must include a narrative of any issues or problems that have been encountered. This narrative must identify any new safety requirements/mitigations that the facility implements. | |
| **Section 5** | |
| **Impact if Waiver is Not Granted:** | |
| Facility Manager must include a narrative of the operational impact if continuation of this procedure is not approved. | |
| **Section 6** | |
| Attach a copy of the facility Contingency Plan for Unplanned Glide Slope Out Procedures. | |

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# BRIEFING GUIDE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Initiated By: AJV−0
Vice President, Mission Support Services

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**1. PARAGRAPH NUMBER AND TITLE:**
2−3−1. GENERAL
2−3−2. APPLICATION
2−3−3. REQUIREMENTS
2−3−5. TRACKING

**2. BACKGROUND:** A multi-year Air Traffic Organization (ATO) effort to review/revamp currency and tracking requirements engaged the expertise of Operational Managers at Headquarters, field facilities, as well as representatives from the Air Traffic Supervisors Committee (SUPCOM) and National Air Traffic Controllers Association (NATCA).

**3. CHANGE:**

**OLD**

**SECTION 3: AIR TRAFFIC FAMILIARIZATION/CURRENCY REQUIREMENTS FOR EN ROUTE/ TERMINAL/FLIGHT SERVICE FACILITIES**

**2-3-1. GENERAL**

It must be the responsibility of the employees identified in para 2−3−2, Application, to adhere to the requirements of this section.

**NEW**

**SECTION 3: AIR TRAFFIC FAMILIARIZATION/CURRENCY REQUIREMENTS FOR EN ROUTE/ TERMINAL/SYSTEM OPERATIONS FACILITIES**

**2-3-1. GENERAL**

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

**OLD**

**2-3-2. APPLICATION**

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

**b.** First−level supervisors (including facility managers who also serve as first−level supervisors), ATCSs, developmental specialists, and air traffic assistants are required to maintain currency in order to perform their duties.

**NEW**

**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), front line managers (FLM), 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.

| OLD | NEW |
|---|---|
| **2-3-3. REQUIREMENTS** | **2-3-3. REQUIREMENTS** |
| **a.** *Familiarization.* As a minimum, non–operational personnel (see application a) must observe control room operations within their facility for 2 hours each week. | **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.* To maintain currency, personnel must rotate through all positions on which they are certified each calendar month. Additionally, they must meet the following minimum time requirements on control positions or operational positions, as appropriate, each calendar month: | **b.** *Currency.* **P**ersonnel must rotate through all positions on which they **maintain currency** each calendar month. Additionally, they must meet the following requirements: |
| **1.** First–level supervisors (including facility managers who also serve as first–level supervisors), and support specialists who are required to maintain currency by their air traffic managers: | **1. Number of positions required to maintain currency.** |
| **(a)** Radar/tower control/operational positions (excluding the operational supervisor in charge (OSIC) position): Four hours tower and four hours radar. If certified in only one area of operation (tower or radar), then a total of eight hours in that area. | **(a) ATCSs, TMCs, NTMSs, developmental specialists (ATCS/TMC/NTMS) and ATAs must maintain currency on all operational/control positions on which certified.** |
| **(b)** All other facilities: Eight hours in control/operational positions (excluding the OSIC position). | **(b) First-level supervisors (OS, FLM, STMC, NTMO) and support specialists (who maintain currency) must maintain currency on a minimum of two and a maximum of eight operational/control positions.** |
| Add | ***NOTE-*** ***Hand-off, Tracker, and CAB/TRACON coordinator positions do not count towards the minimum of two and maximum of eight operational/control positions.*** |
| Add | **(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 and a maximum of eight operational/control positions outside the TMU.** |
| Add | **(d) Waivers to any requirements contained in paragraph 2-3-3b(1), may only be approved by the respective Director of Operations, who is required to forward all waiver requests and dispositions to the Director of Operations Support for tracking and oversight.** |

| | |
|---|---|
| Add | **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. Except for flight service station (FSS) and air traffic assistants, time working the assistant controller, flight data communications, flight data, and clearance delivery positions is not counted toward total currency time requirements; however, the one-hour minimum time per position is required to maintain currency.** |
| ***NOTE–***<br>**1.** *Although the OSIC position is an operational position, time working as an OSIC is not counted toward currency time.* | ***NOTE-***<br>***Hand-off, Tracker, CAB/TRACON coordinator, Final Monitor, FLM/FLMIC, and managerial (in-charge) positions do not have a currency requirement and time spent working those positions is not counted.*** |
| **2.** *Time working Flight Data communications, Flight Data, or Clearance Delivery positions does not count towards currency requirements.* | Delete |
| **2.** Supervisory traffic management coordinators not covered in subpara b3 and traffic management coordinators are required to maintain currency and must rotate through all positions on which they are certified each calendar month. Additionally, they must work a minimum of eight hours per calendar month on control positions. | Delete |
| **3.** Supervisory traffic management coordinators at all ARTCCs and at A80, N90, PCT, NCT, and SCT are required to maintain currency and must rotate through all positions within the Traffic Management Unit (TMU) only. Additionally, they must work a minimum of eight hours per calendar month on these positions. | Delete |
| **4.** All other employees who are required to maintain currency: | Delete |
| **(a)** Radar/tower control/operational positions: Eight hours tower and eight hours radar. If certified in only one area of operation (tower or radar), a total of sixteen hours in that area. | Delete |
| **(b)** All other facilities: Sixteen hours in control/operational positions. | Delete |
| **5.** ASR approach (where published): Three each calendar quarter; one of which must be a no–gyro. Radar simulation may be used to satisfy these requirements. | Delete |
| Add | **(a) ATCSs, Developmental (Dev) ATCSs, and ATAs.** |

Add **(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.**

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

Add **(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.**

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

Add **(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.**

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

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

Add **(1) TERMINAL. Radar/tower operational/control positions (excluding the FLM/FLMIC 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.**

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

Add **(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.**

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

Add **(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.**

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

Add **(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.**

Add **(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.**

Add **3. Time spent performing on-the-job-training (OJT) instruction as an OJT instructor is not counted toward operational/control position currency.**

Add **4. Time spent receiving OJT on combined positions, where the employee is certified on some of the combined positions, is not counted toward operational/control position currency.**

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

Add ***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***

Add ***TBL 2-3-1.***

**CURRENCY REQUIREMENTS**

| OLD | NEW |
|---|---|
| **Add** | **2-3-5. TRACKING** |
| Add | **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.** |
| Add | **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.** |

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**1. PARAGRAPH NUMBER AND TITLE:** 6-3-5 MTR (IR) AND CHANGES TO PUBLISHED MOA ACTIVITY SCHEDULES

**2. BACKGROUND:** FAA JO 7210.3, Paragraph 6-3-5, MTR (IR) and changes to Published MOA Activity Schedules, described procedures as outlined in FAA JO 7110.10, Flight Services, Paragraph 6-5-1. However, Paragraph 6-5-1 has been deleted from the 7110.10, which makes current references to this paragraph obsolete and the content of the Paragraph 6-3-5 no longer valid. Procedures for changing MTR and MOA published activity are now published in FAA JO 7930.2, Notices to Airmen (NOTAM), Paragraph 6-1-2, Special Activity Airspace (SAA). Paragraph 6-3-5 is being changed to reflect the reference to the 7930.2.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **6-3-5 MTR (IR) AND CHANGES TO PUBLISHED MOA ACTIVITY SCHEDULES** | **6-3-5 CHANGES TO MTR AND MOA PUBLISHED ACTIVITY SCHEDULES** |
| **a.** ARTCCs must use the procedures as outlined in FAAO JO 7110.10, Flight Services, para 6−5−1 for forwarding these schedules or changes via Service B. | Delete |
| ***NOTE−*** *Facilities may develop procedures for forwarding these scheduled MTR/MOA via the GI message provided the "all" option is not utilized and there is no adverse impact on computer processing.* | Delete |
| b. The message(s) containing these schedules must be forwarded not more than 24 hours in advance of confirmation of the planned activity. | Delete |
| **c.** The message must only contain the following and be formatted as per FAAO JO 7110.10, Flight Services, para 6−5−1: | Delete |
| **1.** The name of the MTR or MOA. | Delete |
| **2.** The scheduled use times.(MOA−only if different from published periods). | Delete |

| | |
|---|---|
| **3.** The planned altitudes. (MOA–only if different from published altitudes). | Delete |
| Add | **ARTCCs must use the procedures as outlined in FAA ,JO 7930.2, Notices 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.** |

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**1. PARAGRAPH NUMBER AND TITLE:** 6–6–5. MESSAGE CONTENT

**2. BACKGROUND:** The aircraft information in FAA Order 7340.2, Contractions, over the past decade, contained erroneous information and was not being updated as new aircraft type designator were introduced into the aviation community. Removing duplication and providing a single-source eliminates the possibilities of data becoming out of sync with other directives.

There is a new comprehensive database of nearly 10,000 combinations of aircraft manufacturers and models that was compiled from over five years of research using FAA resources, manufacturers' resources and "Jane's All the World's Aircraft", an authoritative source sanctioned by Flight Standards, for aircraft throughout the world. From these combinations, there are approximately 2,500 unique ICAO-approved type designators. Updates to this data will be made as new aircraft type designators are introduced, which is approximately twice a year.

The provided information contained in this database is expressly for use by the Federal Aviation Administration (FAA) to provide air traffic control (ATC) services. Pilots, airlines, and other flight planning services, may use this information to select the appropriate data used in flight plans or other administrative functions.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **6-6-5. MESSAGE CONTENT** | **6-6-5. MESSAGE CONTENT** |
| **Title** thru **h1** | No Change |
| 2. Type of Aircraft: This element is mandatory and contains two to four characters consisting of the authorized aircraft designator as contained in the FAAO JO 7340.2, Contractions. | 2. Type of Aircraft: This element is mandatory and contains two **-**to **-** four characters consisting of the **ICAO** authorized aircraft **type** designator as **specified** in the **aircraft characteristics database, located on the Air Traffic Plans and Publication Web site at http://www.faa.gov/air_traffic/publications/** |

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**1. PARAGRAPH NUMBER AND TITLE:** 6–9–6. EQUIPMENT SUFFIX AND DISPLAY MANAGEMENT

**2. BACKGROUND:** This paragraph needs to be updated to be consistent with the updates to JO 7110.65 Section 2-3-8. The updates eliminate /Q as a valid suffix and identify other suffixes as RVSM capable (/H, /L, and /Z). In addition, the existing paragraph does not recognize that RVSM capability can be filed in an ICAO flight plan.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **6-9-6. EQUIPMENT SUFFIX AND DISPLAY MANAGEMENT** | **6-9-6. EQUIPMENT SUFFIX AND DISPLAY MANAGEMENT** |
| RVSM aircraft will file the equipment suffix "W" or "Q". NAS automation has been modified to reflect non−RVSM aircraft with a coral box around the fourth character in the altitude segment of the data block. Conflict alert parameters will distinguish between RVSM and non−RVSM aircraft based upon the "W" or "Q" suffix for the appropriate separation standard to be applied. | **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.** |

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**1. PARAGRAPH NUMBER AND TITLE:** 10-4-7. SIMULTANEOUS INDEPENDENT CLOSE PARALLEL APPROACHES – HIGH UPDATE RADAR NOT REQUIRED

**2. BACKGROUND:** Through the use of blunder assumptions, modified Test Criteria Violation volume, fast-time simulations, human-factors analysis, and other programs, the current minimum requirement of 4,300 feet between runway centerlines is being reduced to 3,600 feet or greater. A Document Change Proposal (DCP) has been submitted to the ATC Procedures Office (AJV-11) requesting to add a new paragraph into FAA Order JO 7110.65. As such, the procedures identified in this new paragraph will also require facility ATM's to ensure their airports comply with the new procedures prior to authorizing their use. Guidance for facility ATMs is identified below. Final results indicate close parallel runway separation of 3,600 feet or greater meets current safety standards without the use of high update rate (HUR) surveillance.

This spacing reduction study used the following: Airport Surveillance Radar (ASR-9), Standard Terminal Automation Replacement System (STARS) plus Final Monitor Aid (FMA) with visual and audible alerts, a display Aspect Ratio (AR) of 4:1 and ILS/GLS/LPV navigation systems only (vertical guidance required).

**3. CHANGE:**

| OLD | NEW |
|---|---|
| Add | **10-4-7. SIMULTANEOUS INDEPENDENT CLOSE PARALLEL APPROACHES – HIGH UPDATE RADAR NOT REQUIRED** |
| Add | ***TERMINAL*** |
| Add | **a. Simultaneous close parallel approaches may only be conducted where instrument approach charts specifically authorize simultaneous approaches to parallel runways.** |
| Add | **b. Apply the following minimum separation when conducting simultaneous independent close parallel approaches:** |
| Add | **1. Provide a minimum of 1,000 feet vertical or a minimum of 3 miles radar separation between aircraft during turn-on to parallel final approach courses.** |

| | |
|---|---|
| Add | ***NOTE-*** ***Communications transfer to the tower controller's frequency will be completed prior to losing vertical separation between aircraft.*** |
| Add | **2. Parallel runway centerlines are separated by a minimum of 3,600 feet or more, and the airport elevation is less than 1,000' MSL.** |
| Add | **3. Provide the minimum applicable radar separation between aircraft on the same final approach course.** |
| Add | ***REFERENCE–*** ***FAAO JO 7110.65, Para 5-5-4, Minima*** |
| Add | **c. A high-resolution color monitor with alert algorithms, such as the final monitor aid, must be used to monitor close parallel approaches.** |
| Add | **d. In addition to subparagraphs a through c above, facility ATMs must ensure that operational personnel comply with the procedures specified in FAA Order JO 7110.65, paragraph 5-9-9d through 5-9-9f.** |
| Add | ***REFERENCE–*** ***FAAO JO 7110.65, Para 5-9-9, Simultaneous Independent Close Parallel Approaches – High Update Radar Not Required*** |
| Add | **e. Facility managers must verify that adequate radar coverage exists to safely perform simultaneous approach operations to closely space runways.** |
| **Paragraph 10-4-7** thru **10-4-10** | **Renumber 10-4-8** thru **10-4-11** |

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**1. PARAGRAPH NUMBER AND TITLE:**
19–2–5. ISSUING TFRs
19–2–7. RESPONSIBILITIES

**2. BACKGROUND:** The Transportation Security Administration (TSA) is no longer the FAA's primary consulting or coordination agency regarding TFRs for hijacking events. Coordinating with the Domestic Events Network (DEN) air traffic security coordinator (ATSC) instead of TSA will ensure the appropriate agencies are notified and consulted with for hijacking events.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| **19-2-5 ISSUING TFRs** | **19-2-5 ISSUING TFRs** |
| **Title** thru **a** | No change. |
| **b.** TFRs issued for hijacking events may be issued by FAA Headquarters or the ATO service area managers (or designee) in consultation with Transportation Security Administration (TSA). | **b.** TFRs issued for hijacking events may be issued by FAA Headquarters or the ATO service area managers (or designee) **with coordination through the Domestic Events Network (DEN) air traffic security coordinator (ATSC)**. |

| OLD | NEW |
|---|---|
| **19-2-7 RESPONSIBILITIES** | **19-2-7 RESPONSIBILITIES** |
| **a** thru **c2** | No change |
| **3.** Coordinate with TSA when hijacking situations are involved. | **3. Coordinate with the Domestic Events Network (DEN) air traffic security coordinator (ATSC)** when hijacking situations are involved. |

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**1. PARAGRAPH NUMBER AND TITLE:** 19-8-4. DEFINITIONS

**2. BACKGROUND:** The 7210.3X, paragraph 19-8-4, definitions of Air Defense Identification Zone (ADIZ) and Defense Area were found to be different from the 14 CFR 99.3 definitions. This change makes those definitions compliant with 14 CFR 99.3.

**3. CHANGE:**

| OLD | NEW |
|---|---|
| 19-8-4. DEFINITIONS | 19-8-4. DEFINITIONS. |
| **a.** *Air Defense Identification Zone (ADIZ)*– An area of airspace over land or water in which the ready identification, location, and control of civil aircraft is required in the interest of national security. | **a.** *Air Defense Identification Zone (ADIZ)*– An area of airspace over land or water in which the ready identification, location, and control of **all** aircraft **(except for Department of Defense and law enforcement aircraft)** is required in the interest of national security. |
| **b.** *Defense Area*– Unless designated as an ADIZ, a Defense Area is any airspace of the U.S., or its territories, in which the control of aircraft is required for reasons of national security. | **b.** *Defense Area*– **Any airspace of the contiguous United States that is not an ADIZ** in which the control of aircraft is required for reasons of national security. |