

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

JO 7210.3BB CHG 2

Air Traffic Organization Policy

Effective Date: July 16, 2020

SUBJ: Facility Operation and Administration

1. Purpose of This Change. This change transmits revised pages to Federal Aviation Administration Order JO 7210.3BB, Facility Operation and Administration, and the Briefing Guide.

2. Audience. This change applies to all Air Traffic Organization (ATO) personnel and anyone using ATO directives.

3. Where Can I Find This Change? This change is available on the FAA website at http://faa.gov/air_traffic/publications and https://employees.faa.gov/tools_resources/orders_notices/.

4. Explanation of Policy Change. See the Explanation of Changes attachment which has editorial corrections and changes submitted through normal procedures. The Briefing Guide lists only new or modified material, along with background.

5. Distribution. This change 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.

6. Disposition of Transmittal. Retain this transmittal until superseded by a new basic order.

7. Page Control Chart. See the page control chart attachment.

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Angela McCullough Vice President, Mission Support Services Air Traffic Organization

Date: <u>6/12/2020</u>

Explanation of Changes Change 2

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

a. 2-6-7. BASIC WATCH SCHEDULE

This change adds a subparagraph that requires air traffic control specialists whose primary duties are directly related to the control and separation of aircraft to have at least 30 consecutive hours off-duty within each 7-day period.

b. 2-9-6. VISIBILITY CHARTS

This change adds "tower visibility observations" to the list of observations that require facilities to follow the criteria outlined in this paragraph.

c. 3–6–1. COMMISSIONING RADAR FACILITIES 20–7–6. SPECIAL TRAFFIC

MANAGEMENT PROGRAM GUIDELINES

This change removes all mention of the discontinued Notices to Airmen Publication (NTAP). This change also provides guidance to pilot weather briefers and pilots on the location of Domestic Notices migrated from the NTAP. This change also offers detailed instructions in paragraph 3–6–1 on how to update Domestic Notices, International Notices and Chart Supplement information.

d. 3–6–2. ATC SURVEILLANCE SOURCE USE

8-2-1. THREE MILE OPERATIONS

This change deletes the constraints against using ADS–B surveillance data for 3 NM separation in ERAM. This change cancels and incorporates N JO 7210.920, which was effective April 16, 2020.

e. 4–3–3. DEVELOPING AN LOA 4–3–6. COMMERCIAL SPACE LOA Appendix 6. Commercial Space LOA Templates

This change incorporates the commercial space Letters of Agreement (LOA) requirements under paragraph 4–3–6 and moves Automated Information Transfers (AIT) to paragraph 4–3–9. This change also includes two LOA templates under Appendix 6. This change cancels and incorporates N JO 7210.916, which was effective December 26, 2019.

f. 4–4–2. USE OF AIRCRAFT CALL SIGNS

This change deletes subparagraphs 4–4–2b and 4–4–2c, while reformatting/re–lettering 4–4–2a. This change deletes the requirement to verify local law enforcement call signs with System Operations Security. A NOTE is added that provides information pertaining to U.S. Army call sign requests. The existing NOTE is changed to delete flight schools. Also, a new reference is added to FAA Order JO 7610.12. General clarifications and edits are made throughout the paragraph.

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

This change renames "atmosphere sampling" missions flown by the Department of Energy and other U.S. Government agencies to "aerial sampling/surveying." For consistency, in paragraph 5–3–4a the opening sentence is changed to mirror the opening sentence of Paragraph 12–4–3, Atmospheric Sampling for Nuclear Contamination, of FAA Order JO 7610.4. The word "survey" or "surveying" was added alongside any reference to "sampler" and/or "sampling," so as to read, "sampler/survey" or "sampling/ surveying."

h. 5–3–6. WEATHER RECONNAISSANCE FLIGHTS

This change revises and updates the winter season mission procedures in subparagraph 5–3–6a to align with the 2019 National Winter Storm Operations Plan (NWSOP). The National Winter Storm Operations Plan is changed to the National Winter Season Operations Plan. Outdated procedures concerning Central Altitude Reservation Function (CARF) and Altitude Reservations (ALTRVs) have been deleted and replaced by current procedures that include the 53rd Weather Reconnaissance Squadron (53WRS) and National Oceanic and Atmospheric Administration (NOAA) Aircraft Operations Center (AOC) having to coordinate winter season missions directly with the Air Route Traffic Control Centers (ARTCCs).

i. 5–5–1. TYPES AND AUTHORITY 5–5–2. OPERATIONS 5–5–3. RESPONSIBILITIES

5–5–4. OPERATIONS IN CLASS A AIRSPACE

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

5–5–6. OPERATIONS IN CLASS B AIRSPACE

5–5–7. OPERATIONS IN CLASS C AIRSPACE

5–5–8. OPERATIONS IN CLASS D AIRSPACE

5–5–9. OPERATIONS IN CLASS E AIRSPACE

5–5–10. OPERATIONS IN CLASS G AIRSPACE

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

This change incorporates policy established for UAS operations under 14 CFR Part 91 in the National Airspace System (NAS).

j. 9–1–5 USE OF AUTOMATED COUNTS 9–1–6 FAA FORM 7230–14, ARTCC OPERATIONS DAILY SUMMARY 9–1–7 INSTRUCTIONS FOR COMPLETING FAA FORM 7230–14

These changes allow a facility to use Form 7230–14 to report traffic counts, to report traffic counts via automated means, or a combination of the two.

k. 12–2–1. OPERATIONAL USE 12–2–2. DATA ENTRIES 12–2–3. DISPLAY DATA 12–2–4. USE OF MODIFY AND QUICK LOOK FUNCTIONS

12–2–5. AUTOMATION PROGRAM CHANGES

12–2–6. AUTOMATIC ACQUISITION/ TERMINATION AREAS

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

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

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

12–2–10. DIGITAL MAP VERIFICATION 12–7–7. MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA)

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

This changes removes the ATTS section in full, removes obsolete references resulting from this change, and revises office designations.

I. 12–8–3 MONITOR ALERTS AND ENSURE CORRECTIVE ACTION

This change amends FAA Order JO 7210.3, Facility Operation and Administration, 12–8–3, Monitor Alerts and Ensure Corrective Action, to list a reference in the paragraph to FAA Order JO 7210.632, Air Traffic Organization Occurrence Reporting.

m. 12–10–1 POLICY 12–10–2 RESPONSIBILITY 12–10–3 ASSUMPTIONS 12–10–4 AUTHORIZATION MAP DESIGN PROCEDURES CLASS B/C/D

AIRSPACE

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

12-10-6 PART 107 OPERATION APPROVALS

This change provides the Air Traffic Manager (ATM) guidance in the creation/maintenance of the facility's UASFM.

n. 19-6-1 GENERAL

19-6-2 LOW ALTITUDE AUTHORIZATION AND NOTIFICATION CAPABILITY (LAANC) 19-6-3 MANUAL AIRSPACE AUTHORIZATION PROCEDURES (VIA

DRONEZONE)

19-6-4 HEADQUARTERS AIRSPACE WAIVER PROCESS

This change incorporated requirements including applicable waiver or airspace authorization, for remote pilots that fly under 14 CFR PART 107, sUAS OPERATIONS.

o. Editorials

Editorial changes included a removal of an outdated reference to JO 7200.23A, a replacement of ATTS terms with STARS as well as minor changes and corrections throughout. Change bars were not used for most of these changes due to their insignificance.

p. Entire Publication

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

PAGE CONTROL CHART Change 2

REMOVE PAGES	DATED	INSERT PAGES	DATED
Table of Contents i through xxv	1/30/20	Table of Contents i through xxvi	7/16/20
1–2–1	8/15/19	1–2–1	8/15/19
1–2–2 and 1–2–3	8/15/19	1–2–2 and 1–2–3	7/16/20
1–2–4 and 1–2–5	1/30/20	1–2–4 and 1–2–5	7/16/20
2–1–1	8/15/19	2–1–1	7/16/20
2-1-2	8/15/19	2–1–2	8/15/19
2-1-3	8/15/19	2–1–3	7/16/20
2–1–4	8/15/19	2–1–4	8/15/19
2-1-5	8/15/19	2–1–5	7/16/20
2-1-6	8/15/19	2–1–6	8/15/19
2–1–11	1/30/20	2–1–11	1/30/20
2–1–12	1/30/20	2–1–12	7/16/20
2–2–7	1/30/20	2–2–7	7/16/20
2–6–3 and 2–6–4	8/15/19	2–6–3 and 2–6–4	7/16/20
2-9-1	8/15/19	2–9–1	8/15/19
2-9-2	1/30/20	2–9–2	7/16/20
3–6–1 through 3–6–4	8/15/19	3–6–1 through 3–6–4	7/16/20
4–3–3 through 4–3–7	8/15/19	4–3–3 through 4–3–8	7/16/20
4–4–1 and 4–4–2	8/15/19	4–4–1 and 4–4–2	7/16/20
5-3-1	1/30/20	5–3–1	7/16/20
5–3–2 and 5–3–3	8/15/19	5–3–2 and 5–3–3	7/16/20
5–3–4	8/15/19	5–3–4	8/15/19
		5–5–1 through 5–5–3	7/16/20
8–2–1 through 8–2–3	8/15/19	8–2–1 through 8–2–3	7/16/20
9–1–3 and 9–1–4	8/15/19	9–1–3 and 9–1–4	7/16/20
10–1–3	8/15/19	10–1–3	8/15/19
10–1–4 through 10–1–7	8/15/19	10–1–4 through 10–1–6	7/16/20
10–5–1	8/15/19	10–5–1	7/16/20
10–5–2	8/15/19	10–5–2	8/15/19
12–2–1 through 12–2–4	8/15/19	12–2–1 and 12–2–2	7/16/20
12–3–1 and 12–3–2	8/15/19	12–3–1 and 12–3–2	7/16/20
12–4–1 and 12–4–2	8/15/19	12-4-1 through 12-4-3	7/16/20
12–5–1 through 12–5–3	8/15/19	12–5–1 and 12–5–2	7/16/20
12–6–1 and 12–6–2	8/15/19	12–6–1 through 12–6–4	7/16/20
12–7–1 and 12–7–2	8/15/19	12–7–1 and 12–7–2	7/16/20
12–7–3	1/30/20	12–7–3	7/16/20

12–7–4 and 12–7–5	8/15/19		
12–8–1 through 12–8–3	8/15/19	12–8–1 through 12–8–3	7/16/20
12–9–1	8/15/19	12–9–1	7/16/20
12–9–2	1/30/20	12-9-2	7/16/20
12–9–3	8/15/19		
12–10–1 and 12–10–2	1/30/20	12–10–1 through 12–10–5	7/16/20
		19–6–1 and 19–6–2	7/16/20
20–7–3 and 20–7–4	8/15/19	20–7–3 and 20–7–4	7/16/20
		Appendix 6–1 through Appendix 6–8	7/16/20
Index I–1 through I–10	1/30/20	Index I–1 through I–10	7/16/20

Table of Contents

Part 1. BASIC

Chapter 1. General

Section 1. Introduction

Paragraph	Page
1–1–1. PURPOSE OF THIS ORDER	1-1-1
1–1–2. AUDIENCE	1-1-1
1–1–3. WHERE TO FIND THIS ORDER	1-1-1
1–1–4. WHAT THIS ORDER CANCELS	1-1-1
1–1–5. EXPLANATION OF CHANGES	1-1-1
1–1–6. EFFECTIVE DATES AND SUBMISSIONS FOR CHANGES	1-1-1
1–1–7. DELIVERY DATES	1-1-1
1–1–8. RECOMMENDATIONS FOR PROCEDURAL CHANGES	1-1-2
1–1–9. CONSTRAINTS GOVERNING SUPPLEMENTS AND PROCEDURAL	
DEVIATIONS	1-1-2
1–1–10. SAFETY MANAGEMENT SYSTEM (SMS)	1-1-2
1–1–11. REFERENCES TO FAA NON–AIR TRAFFIC ORGANIZATION	1-1-2
1–1–12. DISTRIBUTION	1-1-2

Section 2. Order Use

1–2–1. POLICY	1-2-1
1–2–2. ANNOTATIONS	1-2-1
1–2–3. WORD MEANINGS	1-2-1
1–2–4. ABBREVIATIONS	1-2-1

Chapter 2. Administration of Facilities

Section 1. General

2–1–1. INTERREGIONAL REQUIREMENTS	2-1-1
2–1–2. FACILITY STANDARD OPERATING PROCEDURES DIRECTIVE	2-1-1
2–1–3. POSITION/SECTOR BINDERS	2-1-1
2–1–4. REFERENCE FILES	2-1-1
2–1–5. RELEASE OF INFORMATION	2-1-2
2–1–6. CHECKING ACCURACY OF PUBLISHED DATA	2-1-3
2-1-7. AIR TRAFFIC SERVICE DURING PLANNED AND UNPLANNED OUTAGES	2-1-3
2-1-8. OPERATIONS DURING A STAFFING CONSTRAINT	2-1-3
2–1–9. HANDLING BOMB THREAT INCIDENTS	2-1-4
2–1–10. HANDLING MANPADS INCIDENTS	2-1-5
2–1–11. AIRPORT EMERGENCY PLANS	2-1-5
2–1–12. EXPLOSIVES DETECTION K–9 TEAMS	2-1-6
2–1–13. INTERSECTION TAKEOFFS	2-1-6
2–1–14. AIRCRAFT IDENTIFICATION PROBLEMS	2-1-6
2–1–15. APPROACH CONTROL AIRSPACE	2-1-7
2–1–16. AUTHORIZATION FOR SEPARATION SERVICES BY TOWERS	2-1-7
2–1–17. BIRD HAZARDS	2-1-8

Paragr	aph	Page
2-1-18.	PROHIBITED/RESTRICTED AREAS AND STATIONARY ALTRVS	2-1-8
2–1–19.	SPECIAL AIR TRAFFIC RULES (SATR) AND SPECIAL FLIGHT RULES AREA (SFRA)	2-1-9
2-1-20.	ATC SECURITY SERVICES FOR THE WASHINGTON, DC, SPECIAL FLIGHT RULES AREA (DC SFRA)	2-1-9
2-1-21.	AIRPORT TRAFFIC PATTERNS	2-1-10
2–1–22.	OBSTACLE IDENTIFICATION SURFACES, OBSTACLE FREE ZONES, RUNWAY SAFETY AREAS, APPROACH/ DEPARTURE HOLD AREAS, AND CLEARWAYS	2-1-10
2-1-23.	FACILITY IDENTIFICATION	2-1-10
2-1-24.	DISPOSITION OF OBSOLETE CHARTS	2-1-10
2-1-25.	OUTDOOR LASER DEMONSTRATIONS	2-1-11
2-1-26.	COMBINE/RECOMBINE AN ATCT/TRACON	2-1-11
2–1–27.	SUBMISSION OF AIR TRAFFIC CONTROL ASSIGNED AIRSPACE (ATCAA) DATA	2-1-11
2-1-28.	SUBMISSION OF SUA AND PAJA FREQUENCY INFORMATION	2-1-11
2-1-29.	REPORTING UNAUTHORIZED LASER ILLUMINATION OF AIRCRAFT	2-1-11
2-1-30.	REPORTING SUSPICIOUS AIRCRAFT/PILOT ACTIVITIES	2-1-12
2-1-31.	REPORTING DIVERTED AIRCRAFT ARRIVING FROM INTERNATIONAL LOCATIONS	2-1-13
2-1-32.	REPORTING UNAUTHORIZED, HAZARDOUS, OR SUSPICIOUS UAS ACTIVITIES	2-1-13
2-1-33.	REPORTING DEATH, ILLNESS, OR OTHER PUBLIC HEALTH RISK ON BOARD AIRCRAFT	2-1-13
2-1-34.	OPPOSITE DIRECTION OPERATIONS	2-1-14
2-1-35.	SPECIAL INTEREST SITES	2-1-15
2-1-36.	TRANSPORTATION SECURITY ADMINISTRATION AND FAA JOINT OPERATING PROCEDURES	2-1-15

Section 2. Responsibilities

2–2–1. LEGAL LIABILITIES OF PERSONNEL	2-2-1
2–2–2. JOB REQUIREMENTS	2-2-1
2–2–3. POSITION RESPONSIBILITY	2-2-1
2–2–4. DUTY FAMILIARIZATION AND THE TRANSFER OF POSITION	
RESPONSIBILITY	2-2-1
2–2–5. OPERATING INITIALS	2-2-3
2–2–6. SIGN IN/OUT AND ON/OFF PROCEDURES	2-2-3
2–2–7. CIRNOT HANDLING	2-2-4
2–2–8. GENOT HANDLING	2-2-4
2–2–9. PERSONNEL BRIEFINGS REGARDING AIR TRAFFIC BULLETIN ITEMS	2-2-5
2–2–10. LAW ENFORCEMENT INFORMATION	2-2-5
2-2-11. PERSONNEL BRIEFINGS REGARDING ORDERS, PUBLISHED	
AERONAUTICAL DATA, AND FLIGHT PROCEDURES	2-2-6
2–2–12. SYSTEMS MANAGEMENT OF VSCS EQUIPMENT	2-2-6
2–2–13. REPORTING EQUIPMENT TROUBLE	2-2-6
2–2–14. FACILITY DIRECTIVES REPOSITORY (FDR)	2-2-6

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

2–3–1. GENERAL	2-3-1
2–3–2. APPLICATION	2-3-1
2–3–3. REQUIREMENTS	2-3-1

Paragraph	
2–3–4. DIFFERENTIAL	2-3-3
2–3–5. TRACKING	2-3-3

Section 4. Hours of Duty

2-4-1.	SERVICE HOURS	2-4-1
2-4-2.	TIME STANDARDS	2-4-1
2-4-3.	TIME CHECKS	2-4-1
2-4-4.	STATUS OF SERVICE	2-4-1

Section 5. Watch Coverage-Flight Service Stations

2–5–1. BASIC WATCH SCHEDULES	2 - 5 - 1
2–5–2. DESIGNATING WATCH SUPERVISION COVERAGE	2-5-1
2–5–3. AREA SUPERVISION	2-5-1
2–5–4. RELIEF PERIODS	2-5-1
2–5–5. OVERTIME DUTY	2-5-2
2–5–6. HOLIDAY STAFFING	2-5-2
2–5–7. CONSOLIDATING POSITIONS	2-5-2
2–5–8. SUPERVISORS HOURS OF DUTY	2-5-2
2–5–9. FACILITY COMPLEMENTS	2-5-2
2–5–10. CONTROLLER–IN–CHARGE (CIC) TRAINING	2-5-2

Section 6. Watch Supervision-Terminal/En Route

2–6–1. WATCH SUPERVISION	2-6-1
2–6–2. WATCH SUPERVISION ASSIGNMENTS	2-6-1
2-6-3. CONTROLLER-IN-CHARGE (CIC) DESIGNATION	2-6-2
2-6-4. CONTROLLER-IN-CHARGE (CIC) SELECTION PROCESS	2-6-3
2–6–5. CONSOLIDATING POSITIONS	2-6-3
2–6–6. RELIEF PERIODS	2-6-3
2–6–7. BASIC WATCH SCHEDULE	2-6-4
2–6–8. OVERTIME DUTY	2-6-4
2–6–9. HOLIDAY STAFFING	2-6-4
2–6–10. ADMINISTRATIVE HOURS OF DUTY	2-6-4
2–6–11. FACILITY COMPLEMENTS	2-6-4
2–6–12. CONSOLIDATING TOWER/TRACON FUNCTIONS	2-6-5
2–6–13. SINGLE PERSON MIDNIGHT OPERATIONS	2-6-5
2-6-14. WORK ASSIGNMENTS AFTER SUSPENSION OR TERMINATION OF	
TRAINING	2-6-5

Section 7. Appearance and Security

2–7–1.	PERSONNEL APPEARANCE	2-7-1
2–7–2.	QUARTERS APPEARANCE	2-7-1
2-7-3.	BULLETIN BOARDS	2-7-1
2–7–4.	FOOD AND BEVERAGES	2-7-1
2–7–5.	FACILITY SECURITY	2-7-1
2–7–6.	SUSPICIOUS ACTIVITIES	2-7-1
2–7–7.	COOPERATION WITH LAW ENFORCEMENT AGENCIES	2-7-1
2-7-8.	FACILITY VISITORS	2-7-2
2–7–9.	SECURITY OF JOINT-USE RADAR DATA	2-7-2

Section 8. Medical

2-8-1	GENERAL	2 - 8 - 1

Paragraph	Page
2–8–2. MEDICAL CLEARANCE REQUIREMENTS	2-8-1
2–8–3. SPECIAL MEDICAL EVALUATIONS	2-8-1
2–8–4. SPECIAL CONSIDERATION	2-8-1
2–8–5. USE OF DRUGS AND SEDATIVES	2-8-1
2–8–6. RESTRICTED DRUGS	2-8-2
2–8–7. BLOOD DONORS	2-8-2
2–8–8. USE OF ALCOHOL AND OTHER DRUGS	2-8-2
2–8–9. MEDICAL STATUS DETERMINATIONS ON FG–2154s	2-8-2

Section 9. Weather/Visibility

2–9–1. BACKUP/AUGMENTATION OF WEATHER OBSERVATIONS 2–	-9-1
2-9-2. RECEIPT AND DISSEMINATION OF WEATHER OBSERVATIONS 2-	-9-1
2–9–3. LIMITED AVIATION WEATHER REPORTING STATION (LAWRS) HOURS OF OPERATION	-9–1
2–9–4. NONAVIATION WEATHER SERVICE	-9-2
2–9–5. NATIONAL WEATHER RECORDS CENTER	-9-2
2–9–6. VISIBILITY CHARTS	-9-2
2–9–7. SITING CRITERIA FOR VISUAL WEATHER OBSERVATIONS 2-	-9-2
2–9–8. RUNWAY VISUAL RANGE (RVR) EQUIPMENT 2-	-9-2
2–9–9. SPECIFIC AREA MESSAGE ENCODING (SAME) WEATHER RADIOS 2-	-9-3

Section 10. Wind/Altimeter Information

2–10–1. WIND INSTRUMENT SENSORS	2-10-1
2–10–2. WIND INDICATOR CROSS CHECK	2-10-1
2–10–3. ALTIMETER REQUIREMENTS	2-10-1
2–10–4. COMPARISON CHECKS	2-10-1
2–10–5. DELIVERY OF ALTIMETER SETTING TO ARTCC	2-10-2
2–10–6. BROADCAST DENSITY ALTITUDE ADVISORY	2-10-3

Chapter 3. Facility Equipment

Section 1. General

3-1-1.	BASIC EQUIPMENT	3-1-1
3-1-2.	PERIODIC MAINTENANCE	3-1-1
3-1-3.	NATIONAL AIRSPACE SYSTEM (NAS) CHANGES	3-1-2
3-1-4.	TRAFFIC LIGHTS, GATES, AND SIGNALS	3-1-2
3-1-5.	CLEANING INSTRUMENT COVERS	3-1-2
3-1-6.	ENGINE GENERATOR TRANSFER PROCEDURES FOR ANTICIPATED POWER FAILURE	3-1-2

Section 2. Use of Communications

3-2-1.	RESPONSIBILITY	3-2-1
3-2-2.	AUTHORIZED MESSAGES NOT DIRECTLY ASSOCIATED WITH AIR TRAFFIC SERVICES	3-2-1
3-2-3.	USE OF OTHER THAN FAA COMMUNICATIONS CIRCUITS	3-2-1
3-2-4.	FBI USE OF FAA FREQUENCIES	3-2-1
3-2-5.	AERONAUTICAL ADVISORY STATIONS (UNICOM/MULTICOM)	3-2-2

Section 3. Communications Procedures

3–3–1 SERVICE "F" COMMUNICATIONS	3-3-1
	551

Paragraph	Page
3–3–2. TELEPHONE COMMUNICATIONS	3-3-1
3–3–3. MONITORING FREQUENCIES	3-3-1
3–3–4. EMERGENCY FREQUENCIES 121.5 AND 243.0 MHz	3-3-1
3–3–5. BATTERY–POWERED TRANSCEIVERS	3-3-2
3–3–6. FACILITY STATUS REPORT	3-3-2
3–3–7. TESTING EMERGENCY LOCATOR TRANSMITTERS	3-3-2
3–3–8. VSCS FREQUENCY BACKUP	3-3-3
3–3–9. VSCS RECONFIGURATIONS	3-3-3
3–3–10. VTABS (VSCS TRAINING AND BACKUP SYSTEM)	3-3-3
3–3–11. HEADSET TONE INCIDENTS	3-3-3
3–3–12. USE OF CORDLESS HEADSETS IN OPERATIONAL AREAS	3-3-3

Section 4. Recorders

3–4–1. USE OF RECORDERS	3-4-1
3-4-2. ASSIGNMENT OF RECORDER CHANNELS	3-4-1
3–4–3. CHECKING AND CHANGING RECORDING EQUIPMENT	3-4-2
3–4–4. HANDLING RECORDER TAPES, DATs, OR DALR STORAGE	3-4-2
3-4-5. VSCS DATA RETENTION	3-4-3

Section 5. Navigational Aids

3-5-1.	NAVAID MONITORING	3-5-1
3-5-2.	SYSTEM COMPONENT MALFUNCTIONS	3-5-2
3-5-3.	PROCESSING GPS ANOMALY REPORTS	3-5-2
3-5-4.	ORIGINATING NOTAMs CONCERNING NAVAIDs	3-5-2

Section 6. Surveillance Source Use

3-6-1.	COMMISSIONING RADAR FACILITIES	3-6-1
3-6-2.	ATC SURVEILLANCE SOURCE USE	3-6-2
3-6-3.	ATC RADAR BEACON SYSTEM DECODER CONTROL BOX CHECKS	3-6-2
3-6-4.	MONITORING OF MODE 3/A RADAR BEACON CODES	3-6-3
3-6-5.	RADAR TARGET SIZING	3-6-3
3-6-6.	TERMINAL DIGITAL RADAR SYSTEM AND DISPLAY SETTINGS	3-6-3
3-6-7.	PREARRANGED COORDINATION	3-6-3
3-6-8.	OPERATIONAL GUIDANCE FOR FUSION	3-6-4

Section 7. Video Maps

3-7-1.	TOLERANCE FOR RADAR FIX ACCURACY	3-7-1
3-7-2.	RADAR MAPPING STANDARDS	3-7-1
3-7-3.	DISPLAY MAP DATA	3-7-1
3-7-4.	INTENSITY	3-7-2
3-7-5.	COMMON REFERENCE POINTS	3-7-2

Section 8. Other Displays

PROVIDING TERMINAL APPROACH CONTROL SERVICES	0 1
3–8–2. MINIMUM VECTORING ALTITUDE CHARTS (MVAC) PREPARATION (TERMINAL/MEARTS)	8–1
3–8–3. ALTITUDE ASSIGNMENTS TO S/VFR AND VFR AIRCRAFT	8–4
3-8-4. EMERGENCY OBSTRUCTION VIDEO MAP (EOVM) 3-4	8–4

Paragraph 3–8–5. ESTABLISHING DIVERSE VECTOR AREA/S (DVA)	
Section 9. Color Displays-Terminal	
3–9–1. COLOR USE ON ATC DISPLAYS	3-9-1

Chapter 4. Correspondence, Conferences, Records, and Reports

Section 1. General

4–1–1. CORRESPONDENCE STANDARDS	4-1-1
4–1–2. SIGNATURE	4-1-1
4–1–3. SERVICE AREA REVIEW	4-1-1
4–1–4. CORRESPONDENCE REGARDING POLICY/PROCEDURES	4-1-1
4–1–5. IRREGULAR OPERATION	4-1-1
4–1–6. PRELIMINARY ENVIRONMENTAL REVIEW	4-1-1

Section 2. User Coordination/Conferences/Publicity

4–2–1. LOCAL CONFERENCES	4-2-1
4–2–2. PILOT/CONTROLLER OUTREACH: OPERATION RAIN CHECK	4-2-1
4–2–3. PUBLISHED ITEMS	4-2-2
4–2–4. COORDINATION OF ATC PROCEDURES	4-2-2

Section 3. Letters of Agreement (LOA)

4-3-1.	LETTERS OF AGREEMENT	4-3-1
4–3–2.	APPROPRIATE SUBJECTS	4-3-2
4-3-3.	DEVELOPING LOA	4-3-3
4-3-4.	REVIEW BY SERVICE AREA OFFICE	4-3-3
4-3-5.	APPROVAL	4-3-4
4-3-6.	COMMERCIAL SPACE LOAs	4-3-4
4–3–7.	ANNUAL REVIEW/REVISIONS	4-3-4
4-3-8.	CANCELLATION	4-3-5
4-3-9.	AUTOMATED INFORMATION TRANSFER (AIT)	4-3-7

Section 4. Application

4–4–1. OPERATIONS UNDER EXEMPTIONS FROM SECTION 3 OF APPENDIX D TO	
WHICH SPECIAL VFR WEATHER MINIMUMS ARE NOT AUTHORIZED	
FOR FIXED–WING AIRCRAFT	4-4-1
4–4–2. USE OF AIRCRAFT CALL SIGNS	4-4-1
4–4–3. RUNWAY SUPERVISORY UNITS (RSU)	4-4-1

Section 5. Other Correspondence

4–5–1. LETTERS OF PROCEDURES	4-5-1
4–5–2. LETTERS TO AIRMEN	4-5-1
4–5–3. DISPOSITION OF VOLCANIC ACTIVITY REPORTING (VAR) FORMS	4-5-2

Section 6. Records

 4-6-1

Paragraph	Page
4–6–2. COLLECTION OF OPERATIONAL DATA	4-6-1
4–6–3. FORMS PREPARATION	4-6-1
4–6–4. FAA FORM 7230–4, DAILY RECORD OF FACILITY OPERATION	4-6-1
4–6–5. PREPARATION OF FAA FORM 7230–4	4-6-1
4–6–6. FAA FORM 7230–10, POSITION LOG	4-6-3
4–6–7. AUTOMATED POSITION SIGN ON/OFF	4-6-5
4–6–8. TIME AND ATTENDANCE (T&A) RECORDING	4-6-5

Section 7. Reports

4–7–1.	MONTHLY REPORTS	4-7-1
4–7–2.	DELAY REPORTING	4-7-1
4–7–3.	SYSTEM IMPACT REPORTS	4-7-1
4-7-4.	UNIDENTIFIED FLYING OBJECT (UFO) REPORTS	4-7-1

Section 8. Freedom of Information Act (FOIA)

4–8–1. ACCIDENT/INCIDENT RECORDINGS	4-8-1
4–8–2. RADAR AND/OR COMPUTER DATA	4-8-1
4–8–3. FEES	4-8-1

Chapter 5. Special Flight Handling

Section 1. Presidential Aircraft

5–1–1. ADVANCE COORDINATION	5-1-1
5-1-2. THE PRESIDENT, VICE PRESIDENT, AND EXEC1F AIRCRAFT MONITORING	5-1-2
5–1–3. USE OF FAA COMMUNICATIONS CIRCUITS	5-1-2
5–1–4. SECURITY OF INFORMATION	5-1-3
5–1–5. MOVEMENT INFORMATION	5-1-3
5–1–6. COORDINATION	5-1-3
5–1–7. RESCUE SUPPORT AIRCRAFT	5-1-3

Section 2. FAA Aircraft

5-2-1.	IDENTIFYING DEPARTMENT OF TRANSPORTATION (DOT) AND FAA	
	FLIGHTS	5-2-1
5-2-2.	FLIGHT INSPECTION AIRCRAFT	5-2-1
5-2-3.	HIGH ALTITUDE INSPECTIONS	5-2-1
5-2-4.	RESEARCH AND DEVELOPMENT FLIGHTS	5-2-1

Section 3. DOE and Other Aircraft

5–3–1. DEPARTMENT OF ENERGY (DOE) FLIGHTS	5-3-1
5–3–2. IDENTIFICATION OF SPECIAL DOE FLIGHTS	5-3-1
5–3–3. NOTIFICATION OF DOE REPORTED ACCIDENT/UNREPORTED AIRCRAFT .	5-3-1
5–3–4. AERIAL SAMPLING/SURVEYING FOR NUCLEAR CONTAMINATION	5-3-1
5–3–5. DUE REGARD OPERATIONS	5-3-1
5–3–6. WEATHER RECONNAISSANCE FLIGHTS	5-3-2
5–3–7. OPEN SKIES TREATY AIRCRAFT PRIORITY FLIGHTS (F and D)	5-3-3
5–3–8. FOREIGN STATE DIPLOMATIC FLIGHTS	5-3-4

Section 4. Other Flight Requests

5 - 4 - 1	REQUESTS FOR	DEVIATION ER	OM TRANSPONDER	REQUIREMENTS	5-4-1
3-4-1.	REQUESTS FOR	DEVIATION FRO	JWI IKANSI UNDEK	REQUIREMENTS	 5-4-1

Paragraph	Page
5–4–2. REQUESTS FOR DEVIATION FROM ADS–B OUT REQUIREMENTS	5-4-2
5–4–3. CROP DUSTER/ANTIQUE AIRCRAFT	5-4-3
5–4–4. FLIGHT TEST OPERATIONS	5-4-4
5–4–5. SANCTIONED SPEED RECORDS	5-4-4
5–4–6. CERTIFYING RECORD ATTEMPTS	5-4-4
5–4–7. PHOTOGRAMMETRIC FLIGHTS	5-4-4
5–4–8. AEROBATIC PRACTICE AREAS	5-4-5
5–4–9. ADS–B OUT OFF OPERATIONS	5-4-5

Section 5. 14 CFR Part 91, UAS Operations

5–5–1. TYPES AND AUTHORITY	5-5-1
5–5–2. OPERATIONS	5-5-1
5–5–3. RESPONSIBILITIES	5-5-1
5–5–4. OPERATIONS IN CLASS A AIRSPACE	5-5-2
5–5–5. OPERATIONS IN TERMINAL RADAR SERVICE AREA (TRSA)	5-5-2
5–5–6. OPERATIONS IN CLASS B AIRSPACE	5-5-2
5–5–7. OPERATIONS IN CLASS C AIRSPACE	5-5-2
5–5–8. OPERATIONS IN CLASS D AIRSPACE	5-5-2
5–5–9. OPERATIONS IN CLASS E AIRSPACE	5-5-2
5–5–10. OPERATIONS IN CLASS G AIRSPACE	5-5-2
5–5–11. LETTERS OF AGREEMENT (LOA)/MEMORANDUMS	5-5-2

Part 2. AIR ROUTE TRAFFIC CONTROL CENTERS

Chapter 6. En Route Operations and Services

Section 1. General

6–1–1. AREAS OF OPERATION	6–1–1
6-1-2. SECTORS	6–1–1
6–1–3. SECTOR CONFIGURATION	6–1–1
6–1–4. AREAS OF SPECIALIZATION	6–1–1
6–1–5. OPERATING POSITION DESIGNATORS	6–1–1
6–1–6. FLIGHT PROGRESS STRIP USAGE	6-1-2
6-1-7. DISPLAY OF TIME BASED FLOW MANAGEMENT (TBFM) INFORMATION	N 6-1-2

Section 2. Sector Information Binders

6-2-1.	EN ROUTE OR OCEANIC CONTROLLER TEAM CONCEPT	6-2-1
6-2-2.	EN ROUTE SECTOR INFORMATION BINDER	6-2-1

Section 3. Operations

6-3-1.	HANDLING OF SIGMETs, CWAs, AND PIREPs	6-3-1
6-3-2.	RECEIPT OF NOTAM DATA	6-3-1
6-3-3.	REVIEW AIRSPACE STRUCTURE	6-3-1
6-3-4.	FLIGHT DATA UNIT	6-3-2
6-3-5.	CHANGES TO MTR AND MOA PUBLISHED ACTIVITY SCHEDULES	6-3-3

Section 4. Services

6-4-1. ADVANCE APPROACH INFORMATION	 6-4-1
	 • • •

Paragraph	
6–4–2. MINIMUM IFR ALTITUDES (MIA)	6-4-1
6–4–3. SPECIAL USE FREQUENCIES	6-4-1
6–4–4. PRACTICE INSTRUMENT APPROACHES	6-4-1

Section 5. Stored Flight Plan Program

A	6-5-1
ENTATION AND COORDINATION	6-5-2
ATION AND MAINTENANCE OF BULK STORE FILE	6–5–2
SS DATA	6–5–2
2	A ENTATION AND COORDINATION ATION AND MAINTENANCE OF BULK STORE FILE KS DATA

Section 6. Air Carrier Computer Interface Program

6-6-1.	GENERAL	6-6-1
6-6-2.	FACILITY RESPONSIBILITIES	6-6-1
6-6-3.	CRITERIA FOR PARTICIPATION	6-6-1
6-6-4.	FORMAT CONVENTIONS	6-6-1
6-6-5.	MESSAGE CONTENT	6-6-1

Section 7. En Route Decision Support Tool (EDST)

6–7–1. GENERAL	6-7-1
6–7–2. OPERATIONS SUPERVISOR–IN–CHARGE RESPONSIBILITIES	6-7-1
6-7-3. OPERATIONs MANAGER-IN-CHARGE RESPONSIBILITIES	6-7-1
6–7–4. FACILITY MANAGER RESPONSIBILITIES	6-7-1
6–7–5. EDST AIRSPACE CONFIGURATION ELEMENTS	6-7-2
6–7–6. STANDARD USE OF AUTOMATED FLIGHT DATA MANAGEMENT	6-7-2
6–7–7. EDST OUTAGES	6-7-2
6–7–8. RESTRICTIONS INVENTORY AND EVALUATION	6-7-3
6–7–9. TRAFFIC COUNTS AND DELAY REPORTING	6-7-3
6–7–10. COMPUTER DATA RETENTION	6-7-3
6–7–11. WAIVER TO INTERIM ALTITUDE REQUIREMENTS	6-7-3
6–7–12. TRANSFER OF POSITION RESPONSIBILITY	6-7-4

Section 8. Advanced Technologies and Oceanic Procedures (ATOP)

6–8–1. GENERAL	6-8-1
6–8–2. OPERATIONAL SUPERVISOR–IN–CHARGE RESPONSIBILITIES	6-8-1
6–8–3. ERROR REPAIR POSITION RESPONSIBILITIES	6-8-1
6–8–4. FACILITY MANAGER RESPONSIBILITIES	6-8-1
6–8–5. TRANSFER OF POSITION	6-8-2
6–8–6. ATOP CHANNEL CHANGEOVERS	6-8-2
6–8–7. OUTAGES	6-8-2
6–8–8. CONTROLLER PILOT DATA LINK COMMUNICATIONS	6-8-2

Section 9. Reduced Vertical Separation Minimum (RVSM)

6-9-1.	GENERAL	6-9-1
6-9-2.	FACILITY MANAGER RESPONSIBILITIES	6-9-1
6-9-3.	OPERATIONS MANAGER-IN-CHARGE RESPONSIBILITIES	6-9-2
6-9-4.	OPERATIONS SUPERVISOR–IN–CHARGE/CONTROLLER–IN–CHARGE RESPONSIBILITIES	6-9-2
6-9-5.	NON-RVSM REQUIREMENTS	6-9-2
6-9-6.	EQUIPMENT SUFFIX AND DISPLAY MANAGEMENT	6-9-2

Paragraph	Page
6–9–7. MOUNTAIN WAVE ACTIVITY (MWA)	6-9-3
6–9–8. WAKE TURBULENCE AND WEATHER RELATED TURBULENCE	6-9-3
6–9–9. SUSPENSION OF RVSM	6-9-3

Section 10. En Route Information Display System (ERIDS)

6-10-1.	GENERAL	6-10-1
6-10-2.	REQUIREMENTS	6–10–1

Chapter 7. En Route Data

Section 1. Performance Checks

7–1–1. RADAR PERFORMANCE CHECKS	7-1-1
7–1–2. SPECIAL RADAR ACCURACY CHECKS	7-1-1

Section 2. Deficiencies

7–2–1. DEFICIENCIES IN SYSTEM	7-2-1
7–2–2. AMPLITRON OR PARAMETRIC AMPLIFIER FAILURE	7-2-1
7–2–3. ELECTRONIC ATTACK (EA)	7-2-1

Chapter 8. NAS En Route Automation

Section 1. General

8-1-1.	TRANSITION PROCEDURES	8-1-1
8-1-2.	ALTRV FLIGHT DATA PROCESSING	8-1-1
8-1-3.	COMPUTER DATA RETENTION	8-1-2
8-1-4.	FLIGHT PLAN DROP INTERVAL	8-1-2

Section 2. Procedures

8–2–1. THREE MILE OPERATIONS	8-2-1
8–2–2. ADAPTED ALTIMETER SETTINGS	8-2-1
8–2–3. ADAPTATION OF EXTERNAL ALTIMETER SETTINGS	8-2-1
8–2–4. CONFLICT ALERT FUNCTION PARAMETERS	8-2-1
8–2–5. MODE C INTRUDER (MCI) ALERT PARAMETERS	8-2-1
8–2–6. E–MSAW ADAPTATION	8-2-2
8–2–7. WAIVER TO INTERIM ALTITUDE REQUIREMENTS	8-2-2
8–2–8. REQUIREMENTS FOR ERAM DATA BLOCK CHANGES WITHOUT COORDINATION	8-2-2
8–2–9. ERAM HOLD INFORMATION FACILITY DIRECTIVE REQUIREMENTS	8-2-2
8-2-10. ERAM SPECIAL ACTIVITY AIRSPACE (SAA) ADAPTATION	8-2-2
8–2–11. ERAM HOLDING PATTERN ADAPTATION	8-2-2
8–2–12. ERAM MASTER TOOLBAR MAP BUTTON LABEL	8-2-3
8–2–13. LOCAL INTERIM ALTITUDE	8-2-3

Section 3. Displays

8–3–1. DIGITAL MAP VERIFICATION	8-3-1
8–3–2. DATA DISPLAY FOR BLOCK ALTITUDE FLIGHTS	8-3-1
8–3–3. SELECTED ALTITUDE LIMITS	8-3-1

Paragraph	
8–3–4. AUTOMATED WEATHER DISPLAY STATUS	8-3-1

Chapter 9. Facility Statistical Data, Reports, and Forms

Section 1. Operational Count Data

9-1-1.	IFR AIRCRAFT HANDLED	9-1-1
9-1-2.	CATEGORIES OF OPERATIONS	9-1-1
9-1-3.	CRITERIA FOR IFR AIRCRAFT HANDLED COUNT	9-1-1
9-1-4.	MILITARY AIRCRAFT MOVEMENTS	9-1-2
9–1–5.	USE OF AUTOMATED COUNTS	9-1-3
9–1–6.	FAA FORM 7230–14, ARTCC OPERATIONS DAILY SUMMARY	9-1-3
9–1–7.	INSTRUCTIONS FOR COMPLETING FAA FORM 7230–14	9-1-3
9–1–8.	DISTRIBUTION AND AMENDMENT	9-1-4

Section 2. Instrument Approach Data

9–2–1. GENERAL	9-2-1
9–2–2. INSTRUMENT APPROACHES	9-2-1
9–2–3. AIRPORTS REPORTED	9-2-1
9–2–4. FAA FORM 7230–16, APPROACH DATA WORKSHEET	9-2-1
9–2–5. FAA FORM 7230–12, INSTRUMENT APPROACHES MONTHLY SUMMARY	9-2-1
9–2–6. DISTRIBUTION AND AMENDMENT	9-2-2
9–2–7. FORWARD COPY TO ADJACENT SERVICE AREA	9-2-2

Section 3. Other Reports and Forms

9-3-1.	FAA FORM 7210-8.	ELT INCIDENT	 	 9-3-1
/ 5/1.	11010101/210 0,	LEI INCIDENT	 	 / 5/1

Part 3. TERMINAL AIR TRAFFIC CONTROL FACILITIES

Chapter 10. Terminal Operations, Services, and Equipment

Section 1. General

10–1–1. OPERATING POSITION DESIGNATORS	10-1-1
10–1–2. TOWER/RADAR TEAM CONCEPTS	10-1-1
10–1–3. MILITARY ATC BOARDS	10-1-1
10–1–4. SECTIONAL AERONAUTICAL AND TERMINAL AREA CHARTS	10-1-1
10–1–5. AREAS OF NONVISIBILITY	10-1-2
10–1–6. SELECTING ACTIVE RUNWAYS	10-1-2
10–1–7. USE OF ACTIVE RUNWAYS	10-1-2
10–1–8. PROCEDURES FOR OPENING AND CLOSING RUNWAYS	10-1-4
10–1–9. FLIGHT PROGRESS STRIP USAGE	10-1-4
10–1–10. LOW VISIBILITY OPERATIONS	10-1-5
10–1–11. MOBILE CONTROL TOWERS	10-1-5
10–1–12. PARTICIPATION IN LOCAL AIRPORT DEICING PLAN (LADP)	10-1-5
10–1–13. PRECISION OBSTACLE FREE ZONE (POFZ)	10-1-7

Section 2. Position Binders

10-2-1. POSITION DUTIES AND RESPONSIBILITIES		10-2-1
10 2 1. I COITION DUTIES AND REDICTORDIDIENTES	· · · · · · · · · · · · · · · · · · ·	10 2 1

Paragraph	Page
10-2-2. TOWER/RADAR TEAM POSITION BINDERS	 10-2-1

Section 3. Operations

10–3–1. DISSEMINATION OF WEATHER INFORMATION	10-3-1
10–3–2. WIND INSTRUMENTS AT APPROACH CONTROL FACILITIES	10-3-1
10–3–3. LOW LEVEL WIND SHEAR/MICROBURST DETECTION SYSTEMS	10-3-1
10–3–4. RELAY OF RVR VALUES	10-3-2
10–3–5. ADVANCE APPROACH INFORMATION	10-3-2
10–3–6. ILS HEIGHT/DISTANCE LIMITATIONS	10-3-2
10–3–7. LAND AND HOLD SHORT OPERATIONS (LAHSO)	10-3-2
10–3–8. LINE UP AND WAIT (LUAW) OPERATIONS	10-3-3
10–3–9. VISUAL SEPARATION	10-3-4
10–3–10. TAKEOFF CLEARANCE	10-3-5
10–3–11. MULTIPLE RUNWAY CROSSINGS	10-3-5
10–3–12. AIRPORT CONSTRUCTION	10-3-5
10–3–13. CHANGE IN RUNWAY LENGTH DUE TO CONSTRUCTION	10-3-6
10–3–14. APPROACHES TO PARALLEL RUNWAYS	10-3-6
10–3–15. GO–AROUND/MISSED APPROACH	10-3-7
10–3–16. EQUIVALENT LATERAL SPACING OPERATIONS (ELSO)	10-3-7

Section 4. Services

10–4–1. AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS)	10-4-1
10–4–2. PRETAXI CLEARANCE PROCEDURES	10-4-2
10–4–3. GATE HOLD PROCEDURES	10-4-2
10–4–4. ADVISORY SERVICE TO ARRIVING VFR FLIGHTS	10-4-2
10–4–5. PRACTICE INSTRUMENT APPROACHES	10-4-3
10–4–6. SIMULTANEOUS INDEPENDENT APPROACHES	10-4-3
10–4–7. SIMULTANEOUS WIDELY– SPACED PARALLEL OPERATIONS	10-4-4
10–4–8. SIMULTANEOUS CONVERGING INSTRUMENT APPROACHES	10-4-5
10–4–9. SIMULTANEOUS OFFSET INSTRUMENT APPROACHES	10-4-6
10–4–10. REDUCED SEPARATION ON FINAL	10-4-8
10–4–11. MINIMUM IFR ALTITUDES (MIA)	10-4-8

Section 5. Terminal Radar

10–5–1. SHUTDOWN OF PAR ANTENNAS	10-5-1
10–5–2. RADAR DISPLAY INDICATORS	10-5-1
10–5–3. FUNCTIONAL USE OF CERTIFIED TOWER RADAR DISPLAYS	10-5-1
10–5–4. ASR PERFORMANCE CHECKS	10-5-2
10–5–5. DEFICIENCIES IN SYSTEM	10-5-2
10–5–6. RADAR TOLERANCES	10-5-3
10–5–7. RECOMMENDED ALTITUDES FOR SURVEILLANCE APPROACHES	10-5-3
10–5–8. ASDE PERFORMANCE CHECKS	10-5-3

Section 6. Airport Lighting

10–6–1. GENERAL	10-6-1
10–6–2. OPERATION OF LIGHTS WHEN TOWER IS CLOSED	10-6-1
10–6–3. INCOMPATIBLE LIGHT SYSTEM OPERATION	10-6-1
10–6–4. APPROACH LIGHT SYSTEMS	10-6-2
10-6-5. VISUAL APPROACH SLOPE INDICATOR (VASI) SYSTEMS	10-6-3

Paragraph	Page
10–6–6. PRECISION APPROACH PATH INDICATOR (PAPI) SYSTEMS	10-6-3
10–6–7. RUNWAY AND TAXIWAY LIGHTS	10-6-4
10–6–8. RUNWAY FLOODLIGHTS	10-6-4
10–6–9. RUNWAY EDGE LIGHTS ASSOCIATED WITH MEDIUM APPROACH LIGHT	
SYSTEM/RUNWAY ALIGNMENT INDICATOR LIGHTS	10-6-4
10–6–10. RUNWAY STATUS LIGHTS (RWSL)	10-6-4

Section 7. Airport Arrival Rate (AAR)

10–7–1. PURPOSE	10-7-1
10–7–2. POLICY	10-7-1
10–7–3. DEFINITIONS	10-7-1
10–7–4. RESPONSIBILITIES	10-7-1
10–7–5. CALCULATING AARs	10-7-1
10–7–6. OPERATIONAL AARs	10-7-2

Chapter 11. FAA Contract Tower Operation and Administration

Section 1. Organizational Responsibilities

11–1–1. ATO LEVEL OF SUPPORT	11-1-1
11–1–2. FAA HEADQUARTERS	11-1-1
11–1–3. ATO SERVICE CENTERS	11-1-1
11–1–4. AJT DISTRICT OFFICES	11-1-1

Section 2. Operations and Staffing

11–2–1. REQUESTS FOR ADDITIONAL SERVICES	11-2-1
11–2–2. FAA STAFFING FOR SPECIAL EVENTS	11-2-1
11–2–3. LETTERS OF AGREEMENT (LOA)	11-2-1
11–2–4. EMERGENCY AND CONTINGENCY SITUATIONS	11-2-1
11–2–5. FACILITY DIRECTIVES REPOSITORY (FDR)	11-2-1
11–2–6. FCT AIR TRAFFIC CONTROLLER ELIGIBILITY	11-2-1

Section 3. Training

11-3-1.	TESTING AND CERTIFICATION	11-3-1
11-3-2.	BRIEFING/TRAINING ITEMS	11-3-1

Section 4. Documents, Forms, and Charts

11-4-1.	OPERATIONAL DIRECTIVES	11-4-1
11-4-2.	PROVISION OF INFORMATION AND DATA	11-4-1
11-4-3.	FORMS AND CHARTS	11 - 4 - 1
11-4-4.	TRAINING MATERIAL	11 - 4 - 1

Section 5. Operational Documents, Directives, and Regulations

11-5-1. FAA DOCUMENTS	, DIRECTIVES, AND REGULATIONS	11-5-1

Chapter 12. National Programs

Section 1. Terminal VFR Radar Services

12-1-1. PROGRAM INTENT	 12-1-1

Paragraph	Page
12–1–2. IMPLEMENTATION	12-1-1
12–1–3. TRSA	12-1-2
12–1–4. CLASS C AIRSPACE	12-1-2
12–1–5. CLASS B AIRSPACE	12-1-3

Section 2. Data Recording and Retention

12–2–1. DATA RECORDING	12-2-1
12–2–2. DATA RETENTION	12-2-1
12–2–3. FAULT LOG	12-2-2

Section 3. Charted VFR Flyway Planning Chart Program

12-3-1.	DEFINITION	12-3-1
12-3-2.	CRITERIA	12-3-1
12-3-3.	RESPONSIBILITIES	12-3-1

Section 4. Helicopter Route Chart Program

12–4–1. POLICY	12-4-1
12–4–2. DEFINITION	12-4-1
12–4–3. CRITERIA	12-4-1
12–4–4. RESPONSIBILITIES	12-4-2

Section 5. Terminal Area VFR Route Program

12–5–1. POLICY	12-5-1
12–5–2. DEFINITION	12-5-1
12–5–3. CRITERIA	12-5-1
12–5–4. RESPONSIBILITIES	12-5-1

Section 6. Standard Terminal Automation Replacement System (STARS)

12–6–1. OPERATIONAL USE	12-6-1
12–6–2. DATA ENTRIES	12-6-1
12–6–3. DISPLAY DATA	12-6-1
12–6–4. USE OF STARS QUICK LOOK FUNCTIONS	12-6-1
12–6–5. AUTOMATION PROGRAM CHANGES	12-6-1
12–6–6. AUTOMATIC ACQUISITION/TERMINATION AREAS	12-6-2
12-6-7. MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT	
(CA)	12-6-2
12–6–8. MAGNETIC VARIATION AT STARS FACILITIES	12-6-3
12-6-9. MSAW GTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND	
RECOMPILATION	12-6-3
12–6–10. DIGITAL MAP VERIFICATION	12-6-3
12–6–11. MODE C INTRUDER (MCI) ALERT PARAMETERS	12-6-3
12–6–12. OPERATIONAL MODE TRANSITION PROCEDURES	12-6-3
12–6–13. RADAR SELECTION PROCEDURES	12-6-4
12-6-14. MULTI-SENSOR RADAR OPERATIONS	12-6-4

Section 7. Safety Logic Systems Operations Supervisor/CIC Procedures

12–7–1. ASDE SYSTEM OPERATION	12–7	7-1

Paragraph	Page
12–7–2. ENSURE STATUS	12-7-2
12–7–3. MONITOR ALERTS AND ENSURE CORRECTIVE ACTION	12-7-2
12–7–4. RAIN CONFIGURATION	12-7-2
12–7–5. LIMITED CONFIGURATION	12-7-2
12–7–6. WATCH CHECKLIST	12-7-3

Section 8. VFR Waypoint Chart Program

12-8-1.	POLICY	12-8-1
12-8-2.	DEFINITION	12-8-1
12-8-3.	CRITERIA	12-8-1
12-8-4.	RESPONSIBILITIES	12-8-2

Section 9. Low Altitude Authorization Notification Capability

12–9–1. PROGRAM DESCRIPTION	12-9-1
12–9–2. UAS FACILITY MAPS (UASFM)	12-9-1
12–9–3. SMALL UAS (sUAS) ATC AUTHORIZATIONS	12-9-1
12–9–4. FURTHER COORDINATION	12-9-1
12–9–5. FACILITY RESPONSIBILITIES	12-9-2

Section 10. UAS Facility Maps (UASFM)

12–10–1. POLICY	12–10–1
12–10–2. RESPONSIBILITY	12–10–1
12–10–3. ASSUMPTIONS	12–10–1
12-10-4. AUTHORIZATION MAP DESIGN PROCEDURES CLASS B/C/D A	IRSPACE . 12–10–2
12–10–5. UAS FACILITY MAP (UASFM) DESIGN	12–10–2
12–10–6. PART 107 OPERATION APPROVALS	12–10–4

Chapter 13. Facility Statistical Data, Reports, and Forms

Section 1. General Information

13–1–1. GENERAL	13-1-1
13–1–2. COUNTING METHODS	13-1-1
13–1–3. QUESTIONS OR CHANGES	13-1-1
13–1–4. SUMMARY OF STATISTICAL REPORTS AND FORMS	13-1-1
13–1–5. CATEGORIES OF OPERATIONS	13-1-2
Section 2. Itinerant Operations	
13–2–1. TABULATION	13-2-1
Section 3. Local Operations	
13–3–1. TABULATION	13-3-1

13–3–1. TABULATION

Section 4. Overflight Operations

13–4–1. TABULATION 13-4-1

Section 5. Amending and Reviewing Data

13–5–1. AMENDED OPSNET DATA 13-5-1

Paragraph	
13–5–2. ANALYSIS AND REVIEW	

Part 4. FLIGHT SERVICE STATIONS

Chapter 14. Flight Service Operations and Services

Section 1. General

14–1–1. OPERATING POSITION DESIGNATORS	. 14–1–1
14–1–2. TEMPORARY FSS	. 14–1–1
14–1–3. FLIGHT PLAN AREA	. 14–1–1
14–1–4. ICSS INTRODUCTORY ANNOUNCEMENT	. 14–1–1

Section 2. Position/Service Information Binders

14-2-1.	RESPONSIBILITY	14-2-1
14-2-2.	BOUNDARIES	14-2-1
14-2-3.	POSITIONS/SERVICES	14-2-1

Section 3. Operations

14–3–1. AIRPORT CONDITION FILE	14-3-1
14–3–2. LANDING AREA STATUS CHECKS	14-3-1
14–3–3. AIRPORT SEARCH ARRANGEMENTS	14-3-1
14–3–4. LIAISON VISITS	14-3-1
14–3–5. DUTIES	14-3-1
14–3–6. TIE–IN NOTAM RESPONSIBILITY	14-3-1

Section 4. Services

14-4-1. PRE	FILED FLIGHT PLANS	14 - 4 - 1
14-4-2. PRA	ACTICE INSTRUMENT APPROACHES	14 - 4 - 1
14-4-3. OPE	ERATION OF AIRPORT LIGHTS	14-4-1
14-4-4. RUN	NWAY EDGE LIGHTS ASSOCIATED WITH MEDIUM APPROACH LIGHT	
SY	STEM/RUNWAY ALIGNMENT INDICATOR LIGHTS	14-4-1
14-4-5. LOC	CAL AIRPORT ADVISORY (LAA)/REMOTE AIRPORT ADVISORY	
(RA	AA)/REMOTE AIRPORT INFORMATION SERVICE (RAIS)	14-4-1
14-4-6. AU	FOMATIC FLIGHT INFORMATION SERVICE (AFIS) – ALASKA FSSs	
ON	LY	14-4-2
14–4–7. TRA	ANSMISSION OF MESSAGES FROM AIRPORT INSPECTORS	14-4-3

Chapter 15. Aviation Meteorological Services and Equipment

Section 1. General

15 1 1 EAA NIVE ACDEEMENT	15 1 1
15–1–1. FAA–NWS AGREEMENT	15-1-1
15–1–2. CERTIFICATES OF AUTHORITY	15-1-1
15–1–3. LIAISON WITH AVIATION INTERESTS	15-1-1
15–1–4. TELEPHONE LISTINGS	15-1-1
15–1–5. MINIMUM WEATHER EQUIPMENT	15-1-1
15–1–6. SUPPLY–SUPPORT	15-1-2
15–1–7. NWS OPERATIONS MANUAL	15-1-2

Section 2. Pilot Weather Briefing

15-2-1. BRIEFING RESPONSIBILITY	 15-2-1
	 10 - 1

Paragraph	Page
15–2–2. WEATHER CHART DISPLAY	15-2-1
15–2–3. TELEVISION EQUIPMENT	15-2-1
15–2–4. FSS–WSO/WFO ADJOINING	15-2-1
15–2–5. FSS–WSO/WFO NOT ADJOINING	15-2-1
15–2–6. FLIGHT PLANNING DISPLAY	15-2-1
15–2–7. FLIGHT PLANNING FORMS	15-2-1
15–2–8. MILITARY TRAINING ACTIVITY	15-2-1
15–2–9. TRANSFER OF BRIEFERS	15-2-2

Section 3. Broadcasts

15–3–1. STATION BROADCASTS	15-3-1
15–3–2. COORDINATE WITH WEATHER FORECAST OFFICE (WFO) (ALASKA	
ONLY)	15-3-1
15–3–3. COMMERCIAL BROADCAST STATIONS	15-3-1
15–3–4. REDUCING RECORDED WEATHER INFORMATION SERVICES (ALASKA	
ONLY)	15-3-1

Chapter 16. Equipment

Section 1. General

16–1–1. RESPONSIBILITY	16-1-1
16–1–2. AIRCRAFT ORIENTATION PLOTTING BOARD	16-1-1
16–1–3. ADDITIONAL TELEPHONE SERVICE	16-1-1
16–1–4. ORDERING OVERLAYS	16-1-1
16–1–5. LEASED EQUIPMENT SUPPLIES	16-1-1

Section 2. Frequencies

16-2-1. V	OR AND VORTAC VOICE CHANNELS	16-2-1
16-2-2. U	JHF EN ROUTE CHANNEL	16-2-1

Chapter 17. Facility Statistical Data, Reports, and Forms

Section 1. General Information

17–1–1. FORM USAGE	17-1-1
17–1–2. TOTAL FLIGHT SERVICES FORMULA	17-1-1

Section 2. Aircraft Contacted

17–2–1. AIRCRAFT CONTACTED	17-2-1
17-2-2. LOCAL AIRPORT ADVISORY (LAA)/REMOTE AIRPORT ADVISORY	
(RAA)/REMOTE AIRPORT INFORMATION SERVICE (RAIS)	17-2-1
17–2–3. RADIO CONTACTS	17-2-1

Section 3. Flight Plan Count

17–3–1. FLIGHT PLAN COUNT	17-3-1
17–3–2. ADDITIONAL ITEMS	17-3-1
17–3–3. FLIGHT PLAN CHANGE EN ROUTE	17-3-1
17–3–4. FLIGHT PLAN FORMS	17-3-1

Section 4. Pilot Briefing Count

17-4-1.	PILOT BRIEFING COUNT	 17-4-1
1/ 1 1.		 1, 1, 1

Paragraph	Page
17–4–2. RETENTION OF FORMS CONTAINING PILOT BRIEFING ("PB") DATA	17–4–1

Section 5. Other Reports and Information

17–5–1. COMPLETION OF MONTHLY ACTIVITY RECORD	17-5-1
17–5–2. DISTRIBUTION AND AMENDMENT	17-5-1
17–5–3. MESSAGE TRAFFIC NUMBER RECORD	17-5-2
17–5–4. UNANNOUNCED MILITARY AIRCRAFT ARRIVALS	17-5-2

Section 6. FSS Lists, Logs, and Tallies (OASIS)

17–6–1. RECORDING OF FLIGHT INFORMATION	17-6-1
17–6–2. MANAGEMENT OF LISTS AND LOGS	17-6-1
17–6–3. TALLIES PRINTING	17-6-1

Part 5. TRAFFIC MANAGEMENT SYSTEM

Chapter 18. Traffic Management National, Center, and Terminal

Section 1. Organizational Missions

18-1-1.	TRAFFIC MANAGEMENT SYSTEM MISSION	18-1-1
18-1-2.	DAVID J. HURLEY AIR TRAFFIC CONTROL SYSTEM COMMAND CENTER	
	(ATCSCC)	18-1-1
18-1-3.	TRAFFIC MANAGEMENT UNIT (TMU) MISSION	18-1-1

Section 2. Organizational Responsibilities

18–2–1. AIR TRAFFIC TACTICAL OPERATIONS PROGRAM	18-2-1
18–2–2. SERVICE CENTER OPERATIONS SUPPORT GROUP	18-2-1
18–2–3. ATCSCC	18-2-1
18–2–4. FIELD FACILITIES	18-2-2

Section 3. Line of Authority

18–3–1. ATCSCC	18-3-1
18–3–2. ARTCC	18-3-1
18–3–3. TERMINAL	18-3-1

Section 4. Supplemental Duties

18–4–1. TELEPHONE CONFERENCES	18-4-1
18–4–2. SPECIAL INTEREST FLIGHTS	18-4-1
18–4–3. ANALYSIS	18-4-1
18–4–4. OPERATIONS MANAGER (OM) SUPPORT	18-4-2
18–4–5. DIVERSION RECOVERY	18-4-2
18–4–6. VOLCANIC ASH	18-4-3

Section 5. Coordination

18-5-1. COORDINATION	18-5-1
18–5–2. COMMUNICATION	18-5-1
18–5–3. DOCUMENTATION	18-5-1

Paragraph	Page
18–5–4. RESPONSIBILITIES	18-5-1
18–5–5. STATIC COORDINATION	18-5-3
18–5–6. EN ROUTE INTRAFACILITY COORDINATION	18-5-4
18–5–7. TERMINAL INTERFACILITY COORDINATION	18-5-4
18–5–8. NATIONAL TRAFFIC MANAGEMENT LOG (NTML)	18-5-4
18–5–9. NTML FACILITY CONFIGURATION REQUIREMENTS	18-5-4
18–5–10. NTML PROCEDURES	18-5-5
 18–5–11. PROCESSING REQUESTS FOR REROUTES AND RESTRICTIONS FOR FACILITIES WITH NTML 10. 5–12. DELAW REPORTING 	18-5-5
18-5-12. DELAY REPORTING	18-5-6
18–5–13. ELECTRONIC SYSTEM IMPACT REPORTS	18-5-6
18–5–14. TARMAC DELAY OPERATIONS	18-5-7

Section 6. Traffic Management Initiatives

18.6.1 CENEDAL	19 6 1
10-0-1. UENERAL	10-0-1
18–6–2. BACKGROUND	18-6-1
18-6-3. POLICY	18-6-1
18–6–4. TYPES OF TMIs	18-6-1
18–6–5. EXCEPTION	18-6-2
18–6–6. TMI DATA	18-6-2
18–6–7. TMI APPROVAL AUTHORITY	18-6-2
18–6–8. PROCESSING TMI	18-6-2
18–6–9. FIELD FACILITY RESPONSIBILITIES FOR TMIs	18-6-2
18–6–10. ATCSCC RESPONSIBILITIES FOR TMI	18-6-3
18–6–11. TMIs WITHIN ARTCC AREA OF JURISDICTION	18-6-3
18–6–12. TMIs OF 10 MIT OR LESS	18-6-3
18–6–13. EN ROUTE SEQUENCING PROGRAM (ESP) IMPLEMENTATION	18-6-3
18–6–14. TMIs OF 25 MIT OR GREATER	18-6-4
18–6–15. CAPPING AND TUNNELING	18-6-4

Section 7. Flow Evaluation Area (FEA), Flow Constrained Area (FCA), and Integrated Collaborative Rerouting (ICR)

18–7–1. GENERAL	18-7-1
18–7–2. DEFINITIONS	18-7-1
18–7–3. FEA/FCA RESPONSIBILITIES	18-7-1
18–7–4. FEA/FCA PROCEDURES	18-7-1
18–7–5. ARTCC TO ARTCC FEA/FCA COORDINATION	18-7-2
18–7–6. RESPONSIBILITIES	18-7-2
18–7–7. PROCEDURES	18-7-2
18-7-8. INTEGRATED COLLABORATIVE REROUTING (ICR)	18-7-3

Section 8. Monitor Alert Parameter

18–8–1. PURPOSE	18-8-1
18–8–2. IMPLEMENTATION PROCEDURES	18-8-1
18–8–3. RESPONSIBILITIES	18-8-1
18–8–4. ANALYSIS REQUIREMENTS	18-8-2
18–8–5. RESOLVING RECURRING SECTOR LOADING ISSUES	18-8-2

Section 9. Ground Delay Programs

18_0_1 POI	ICV		18_0_1
10-9-1. PUL		 	 10-9-1

Paragraph	Page
18–9–2. GENERAL	18-9-1
18–9–3. BACKGROUND	18-9-1
18–9–4. DEFINITIONS	18-9-1
18–9–5. VARIABLES IN GDPs	18-9-1
18–9–6. ATCSCC PROCEDURES	18-9-1
18–9–7. ARTCC PROCEDURES	18-9-2
18–9–8. TERMINAL PROCEDURES	18-9-3
18–9–9. AMENDING EDCTs	18-9-3
18–9–10. CANCELLATION PROCEDURES	18-9-3
18–9–11. DOCUMENTATION	18-9-4
18–9–12. USER OPTIONS	18-9-4
18–9–13. VFR FLIGHTS	18-9-4

Section 10. Airspace Flow Programs (AFP)

18-10-1.	GENERAL	18-10-1
18-10-2.	POLICY	18-10-1
18-10-3.	RESPONSIBILITIES	18-10-1
18–10–4.	PROCEDURES	18-10-1

Section 11. Collaborative Trajectory Options Program (CTOP)

18–11–1. GENERAL	18-11-1
18–11–2. POLICY	18-11-1
18–11–3. DEFINITIONS	18-11-1
18–11–4. ATCSCC PROCEDURES	18-11-1
18–11–5. ARTCC PROCEDURES	18-11-1
18–11–6. TERMINAL PROCEDURES	18-11-2
18–11–7. AMENDING EDCTs	18-11-2
18–11–8. CANCELLATION PROCEDURES	18-11-2
18–11–9. DOCUMENTATION	18-11-2

Section 12. Ground Stop(s)

18–12–1. POLICY	18-12-1
18–12–2. GENERAL	18-12-1
18–12–3. LOCAL GROUND STOP(S)	18-12-1
18–12–4. NATIONAL GROUND STOP(S)	18-12-1
18–12–5. CANCELLATION PROCEDURES	18-12-2
18–12–6. DOCUMENTATION	18-12-2

Section 13. Special Traffic Management Programs

18–13–1. SPECIAL EVENT PROGRAMS	18-13-1
18–13–2. COORDINATION	18-13-1
18–13–3. IMPLEMENTATION	18-13-1
18–13–4. AIRPORT RESERVATION OFFICE	18-13-1

Section 14. Severe Weather Management

Section 15. Severe Weather Avoidance Plan (SWAP)	
18–14–2. DUTIES AND RESPONSIBILITIES	18-14-1
18–14–1. GENERAL	18-14-1

18–15–1. GENERAL	15-1
------------------	------

Paragraph	Page
18-15-2. RESPONSIBILITIES .	 18-15-1

Section 16. Preferred IFR Routes Program

18–16–1. GENERAL	18-16-1
18–16–2. RESPONSIBILITIES	18-16-1
18–16–3. DEVELOPMENT PROCEDURES	18-16-1
18–16–4. COORDINATION PROCEDURES	18-16-2
18–16–5. PROCESSING AND PUBLICATION	18-16-2

Section 17. North American Route Program

18–17–1. PURPOSE	18-17-1
18–17–2. RESPONSIBILITIES	18-17-1
18–17–3. PROCEDURES	18-17-1
18–17–4. REPORTING REQUIREMENTS	18-17-1
18–17–5. USER REQUIREMENTS	18-17-1

Section 18. Coded Departure Routes

18-18-1.	PURPOSE	18-18-1
18-18-2.	DEFINITION	18-18-1
18-18-3.	POLICY	18-18-1
18-18-4.	RESPONSIBILITIES	18-18-1
18-18-5.	CDR DATA FORMAT	18-18-1

Section 19. Route Advisories

18–19–1.	PURPOSE	18-19-1
18-19-2.	POLICY	18-19-1
18-19-3.	EXPLANATION OF TERMS	18-19-1
18–19–4.	ROUTE ADVISORY MESSAGES	18-19-1
18-19-5.	RESPONSIBILITIES	18-19-2
18–19–6.	PROCEDURES	18-19-3

Section 20. Operations Plan

18-20-1.	PURPOSE	18-20-1
18-20-2.	DEFINITION	18-20-1
18-20-3.	RESPONSIBILITIES	18-20-1
18-20-4.	PROCEDURES	18-20-2

Section 21. National Playbook

18–21–1. PURPOSE	18-21-1
18–21–2. POLICY	18-21-1
18–21–3. DEFINITION	18-21-1
18–21–4. RESPONSIBILITIES	18-21-1
18–21–5. NATIONAL PLAYBOOK DATA FORMAT	18-21-1
18–21–6. IMPLEMENTATION PROCEDURES	18-21-2

Section 22. Traffic Management (TM) Support of Non–Reduced Vertical Separation Minima (RVSM) Aircraft

18–22–1 PURPOSE	18-22-1
	10 22 1

Paragraph	Page
18-22-2. POLICY	18-22-1
18–22–3. DEFINITIONS	18-22-1
18–22–4. EXCEPTED FLIGHTS	18-22-1
18–22–5. OPERATOR ACCESS OPTIONS	18-22-1
18–22–6. DUTIES AND RESPONSIBILITIES	18-22-1

Section 23. Contingency Plan Support System (CPSS)

18-23-1.	PURPOSE	18-23-1
18-23-2.	DEFINITION	18-23-1
18-23-3.	RESPONSIBILITIES	18-23-1
18-23-4.	PROCEDURES	18-23-1

Section 24. Route Test

18-24-1.	PURPOSE	18-24-1
18-24-2.	DEFINITION	18-24-1
18-24-3.	POLICY	18-24-1
18-24-4.	RESPONSIBILITIES	18-24-1

Section 25. Time-Based Flow Management (TBFM)

18–25–1. GENERAL	18-25-1
18–25–2. PURPOSE	18-25-1
18–25–3. POLICY	18-25-1
18–25–4. DEFINITIONS	18-25-1
18–25–5. RESPONSIBILITIES	18-25-2

Section 26. Weather Management

18-26-1.	GENERAL	18-26-1
18-26-2.	BACKGROUND	18-26-1
18-26-3.	POLICY	18-26-1
18-26-4.	RESPONSIBILITIES	18-26-1

Part 6. REGULATORY INFORMATION

Chapter 19. Waivers, Authorizations, and Exemptions

Section 1. Waivers and Authorizations

19–1–1. PURPOSE	19-1-1
19–1–2. POLICY	19-1-1
19–1–3. RESPONSIBILITIES	19-1-1
19–1–4. PROCESSING CERTIFICATE OF WAIVER OR AUTHORIZATION (FAA FORM 7711–2) REQUESTS	19-1-2
19–1–5. PROCESSING CERTIFICATE OF WAIVER OR AUTHORIZATION RENEWAL OR AMENDMENT REQUESTS	19-1-2
19–1–6. ISSUANCE OF CERTIFICATE OF WAIVER OR AUTHORIZATION (FAA FORM 7711–1)	19-1-2
19–1–7. RETENTION OF CERTIFICATES OF WAIVER OR AUTHORIZATION	19-1-2
19–1–8. WAIVER, AUTHORIZATION OR DENIAL PROCEDURE	19-1-3
19–1–9. CANCELLATION OF WAIVERS AND AUTHORIZATIONS	19-1-3

Operations	
Paragraph 19–2–1. PURPOSE 19–2–2. POLICY	Pa 19–1 19–1
19–2–3. RESPONSIBILITIES	19–2
Section 3. Current Authorizations and Exemptions from Title 14, Code of Federal Regulations	
 19–3–1. AUTHORIZATIONS AND EXEMPTIONS FROM TITLE 14, CODE OF FEDERAL REGULATIONS (14 CFR)	19–2 19–2
Section 4. Parachute Jump Operations	
19–4–1. NONEMERGENCY PARACHUTE JUMP OPERATIONS	19–
Section 5. Moored Balloons, Kites, Parasail, Unmanned Rockets, and Unmanned Free Balloons/Objects	
19–5–1. MOORED BALLOONS, KITES, PARASAIL, UNMANNED ROCKETS, AND UNMANNED FREE BALLOONS/OBJECTS	19-
19–5–2. DERELICT BALLOONS/OBJECTS	19-
Section 6. 14 CFR Part 107, sUAS Operations	
19–6–1. GENERAL	19–
19–6–2. LOW ALTITUDE AUTHORIZATION AND NOTIFICATION CAPABILITY (LAANC)	19–
19–6–3. MANUAL AIRSPACE AUTHORIZATION PROCEDURES (VIA DRONEZONE) 19–6–4. HEADQUARTERS/SERVICE CENTER AIRSPACE WAIVER PROCESS	19– 19–
Chapter 20. Temporary Flight Restrictions	

Section 2. Elimination of Fixed-Wing Special Visual Flight Rules Operations

Section 1. General Information

20–1–1. PURPOSE	20-1-1
20–1–2. AUTHORITY	20-1-1
20–1–3. REASONS FOR ISSUING A TFR	20-1-1
20–1–4. TYPES OF TFRs	20-1-1
20–1–5. TFR NOTAM CONTENT	20-1-1
20–1–6. TFR INFORMATION	20-1-1
20–1–7. TFRs OUTSIDE OF THE UNITED STATES AND ITS TERRITORIES	20-1-1
20–1–8. TFR QUESTIONS	20-1-2

Section 2. Temporary Flight Restrictions in the Vicinity of Disaster/Hazard Areas (14 CFR Section 91.137)1

20-2-1. P	PURPOSE	20-2-1
20-2-2. F	RATIONALE	20-2-1
20-2-3. S	SITUATIONS FOR RESTRICTIONS	20-2-1
20-2-4. F	REQUESTING AUTHORITIES	20-2-1
20-2-5. I	SSUING TFRs	20-2-1
20-2-6. I	DEGREE OF RESTRICTIONS	20-2-2

Paragraph 20–2–7. RESPONSIBILITIES	Page 20–2–2 20–2–3
Section 3. Temporary Flight Restrictions in National Disaster Areas in the State of Hawaii (Section 91.138)	
20-3-1. PURPOSE20-3-2. REQUESTING AUTHORITIES20-3-3. DEGREE OF RESTRICTIONS20-3-4. DURATION OF RESTRICTIONS20-3-5. ISSUING TFRs	20-3-1 20-3-1 20-3-1 20-3-1 20-3-1
Section 4. Emergency Air Traffic Rules (14 CFR Section 91.139)	
20-4-1. PURPOSE20-4-2. REQUESTING AUTHORITIES20-4-3. ISSUING TFRs20-4-4. DEGREE OF RESTRICTIONS	20-4-1 20-4-1 20-4-1 20-4-1
Section 5. Flight Restrictions in the Proximity of the Presidential and Other Parties (14 CFR Section 91.141)	
20-5-1. PURPOSE20-5-2. REQUESTING AUTHORITIES20-5-3. ISSUING TFRs20-5-4. DEGREE OF RESTRICTIONS20-5-5. PROCEDURES	20-5-1 20-5-1 20-5-1 20-5-1 20-5-1
Section 6. Flight Limitation in the Proximity of Space Flight Operations (14 CFR Section 91.143)	
 20-6-1. PURPOSE 20-6-2. REQUESTING AUTHORITIES 20-6-3. DEGREE OF RESTRICTIONS 20-6-4. AIRPORTS WITHIN AIRCRAFT HAZARD AREAS AND TRANSITIONAL HAZARD AREAS 	20-6-1 20-6-1 20-6-1 20-6-1
Section 7. Management of Aircraft Operations in the Vicinity of Aerial Demonstrations and Major Sporting Events (14 CFR Section 91.145)	
20-7-1. PURPOSE20-7-2. POLICY20-7-3. RESPONSIBILITIES20-7-4. RELATED DOCUMENTS20-7-5. COORDINATION20-7-6. SPECIAL TRAFFIC MANAGEMENT PROGRAM GUIDELINES20-7-7. PROCESS FOR TFRs20-7-8. REVISIONS AND CANCELLATIONS	20-7-1 20-7-1 20-7-2 20-7-2 20-7-3 20-7-3 20-7-4

Part 7. SYSTEM OPERATIONS SECURITY

Chapter 21. Operations Security: Tactical, Special, and Strategic

Section 1. Organizational Missions

7/16/20

Paragraph	Page
21–1–2. TACTICAL OPERATIONS SECURITY MISSION	21-1-1
21–1–3. SPECIAL OPERATIONS SECURITY MISSION	21-1-1
21–1–4. STRATEGIC OPERATIONS SECURITY MISSION	21-1-1

Section 2. Responsibilities

21-2-1.	DESCRIPTION	21-2-1
21-2-2.	TACTICAL OPERATIONS SECURITY GROUP RESPONSIBILITIES	21-2-1
21-2-3.	SPECIAL OPERATIONS SECURITY GROUP RESPONSIBILITIES	21-2-1
21-2-4.	STRATEGIC OPERATIONS SECURITY GROUP RESPONSIBILITIES	21-2-2
21-2-5.	AIR TRAFFIC FACILITY RESPONSIBILITIES	21-2-3

Section 3. Line of Authority

21-3-1.	SYSTEM OPERATIONS SECURITY	21-3-1
21-3-2.	AIR TRAFFIC SECURITY COORDINATOR (ATSC)	21-3-1

Section 4. Supplemental Duties

21-4-1.	DOMESTIC EVENTS NETWORK (DEN)	21-4-1
21-4-2.	PRESIDENTIAL/UNITED STATES SECRET SERVICE (USSS) SUPPORTED VIP MOVEMENT	21-4-1
21-4-3.	SPECIAL INTEREST FLIGHTS (SIFs)	21-4-2
21-4-4.	CONTINUITY OF OPERATIONS AND CONTINUATION OF GOVERNMENT (COOP/COG)	21-4-2
21-4-5.	CLASSIFIED OPERATIONS	21-4-2
21-4-6.	INTELLIGENCE ANALYSIS AND COMMUNICATION	21-4-2
21-4-7.	UAS SPECIAL GOVERNMENTAL INTEREST (SGI) OPERATIONS	21-4-2

Section 5. Coordination

21-5-1.	COORDINATION	21-5-1
21-5-2.	COMMUNICATION AND DOCUMENTATION	21-5-1
21-5-3.	RESPONSIBILITIES	21-5-1
21-5-4.	UAS SGI ADDENDUM REQUEST PROCESS AND COORDINATION	21-5-1

Section 6. Special Security Instruction (SSI) (14 CFR Section 99.7)

21-6-1.	PURPOSE	21-6-1
21-6-2.	REQUESTING AUTHORITIES	21-6-1
21-6-3.	DEGREE OF RESTRICTIONS	21-6-1

Section 7. Security Notice (SECNOT)

21–7–1. POLICY	21-7-1
21–7–2. PURPOSE	21-7-1
21–7–3. RESPONSIBILITIES	21-7-1

Appendices

Appendix 1. Air Carrier Contact for the Distribution of Incident Reports	Appendix 1-1
Appendix 2. Air Carrier Points of Contact for Aircraft Identification Problems	Appendix 2-1
Appendix 3. Air Carrier Aircraft for Air Traffic Activity Operations Count	Appendix 3-1
Appendix 4. Glideslope Outage Authorization Request	Appendix 4-1

Paragraph	
Appendix 5. Checklist for Reported Headset Tone Incidents	Appendix 5–1
Appendix 6. Commercial Space LOA Templates	Appendix 6-1

Index

dex I	-1
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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
ACD0	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
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
ARAC	Army Radar Approach Control facility (US Army)
ARFF	Airport rescue and fire fighting
ARINC	Aeronautical Radio, Inc.
ARO	Airport Reservations Office
ARP	Airport reference point
ARSR	Air route surveillance radar

Abbreviation	Meaning
ART	ATO Resource Tool
ARTCC	Air route traffic control center
ASDE	Airport surface detection equipment
ASDE-X	Airport Surface Detection Equipment System - Model X
ASF	Airport stream filters
ASI	Altimeter setting indicator
ASOS	Automated Surface Observing System
ASP	Arrival sequencing program
ASPM	Aviation System Performance Metrics
ASR	Airport surveillance radar
ASSC	Airport Surface Surveillance Capability
AT	Air Traffic
АТА	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
АТО	Air Traffic Organization
АТОР	Advanced Technologies and Oceanic Procedures
АТРВ	Air Traffic Procedures Bulletin
ATREP	Air Traffic representative
AWC	Aviation Weather Center
AWIS	Automated weather information service
AWOS	Automated Weather Observing System
BAASS	Bigelow Aerospace Advanced Space Studies
СА	Conflict alert
САР	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
СОВ	Close of business

Abbreviation	Meaning
CONUS	Continental/Contiguous/Conterminous United States
СОО	Chief Operating Officer
СОТС	Computer operator terminal console
CPDLC	Controller Pilot Data Link Communications
CTRD	Certified Tower Radar Display
СТА	Controlled times of arrival
CWA	Center weather advisory
CWSU	ARTCC Weather Service Unit
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
EBUS	Enhanced Backup Surveillance System
EDCT	Expect departure clearance time
EDST	En Route Decision Support Tool
EI	Early Intent
ELT	Emergency locator transmitter
EOVM	Emergency obstruction video map
EOSH	Environmental and Occupational Safety and Health
EPIC	El Paso Intelligence Center
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
FICO	Flight Inspection Central Operations
FOIA	Freedom of Information Act
FOUO	For Official Use Only
FP	Flight plan
FPL	Full performance level
FRD	Fixed Radial Distance
FSA	Flight schedule analyzer
Abbreviation	Meaning
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FSDO	Flight Standards district office
FSL	Full service level
FSM	Flight Schedule Monitor
FSS	Flight service station
GA	General aviation
GC	Ground control
GDP	Ground delay program(s)
GENOT	General notice
GI	General information message
GS	Ground stop(s)
HIRL	High intensity runway lights
HRPM	Human Resource Policy Manual
IAFDOF	Inappropriate Altitude for Direction of Flight
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
LAANC	Low Altitude Authorization Notification Capability
LAAS	Low altitude alert system
LADP	Local Airport Deicing Plan
LAHSO	Land and hold short operations
LAWRS	Limited aviation weather reporting station
LC	Local control
LLWAS	Low level wind shear alert system
LLWAS NE	Low Level Wind Shear Alert System Network Expansion
LLWAS-RS	Low Level Wind Shear Alert System Relocation/Sustainment
LLWS	Low Level Wind Shear
LOA	Letter of agreement
LOGT	Log/tally print time
LSAS	Leased Service A System
MA	Monitor alert
MALS/RAIL	Medium approach light system and runway alignment indicator lights
MAPPS	Management Association for Private Photogrammetric Surveyors
MCI	Mode C intruder
MDM	Main display monitor
MEA	Minimum en route IFR altitude
MEARTS	Micro En Route Automated Radar Tracking System

Abbreviation	Meaning
METAR	Aviation Routine Weather Report
MIA	Minimum IFR altitude
MIAWS	Medium Intensity Airport Weather System
MIT	Miles-in-trail
MOA	Military operations area
MOCA	Minimum obstruction clearance altitude
MOR	Mandatory Occurrence Report
MOU	Memorandum of understanding
MSL	Mean sea level
MTI	Moving target indicator
MTR	Military training route
MVA	Minimum vectoring altitude
NAA	National aeronautical association
NADIN	National airspace data interchange network
NAR	National Automation Request
NAR	North American Routes
NAS	National Airspace System
NASA	National Aeronautics and Space Administration
NASE	National Airway Systems Engineering
NAVAID	Navigational aid
NCIC	National crime information center
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
ОМ	Operations Manager
OPR	Office of primary responsibility
OS	Operations Supervisor
OSIC	Operations Supervisor-in-Charge
P-ACP	Prearranged coordination procedures
PAR	Precision approach radar
PB	Pilot briefing

Abbreviation	Meaning
PCS	Power Conditioning System
PDC	Pre–Departure Clearance
PIC	Pilot-in-command
PIREPS	Pilot reports
POC	Point of Contact
PVD	Planned view display
RA	Radar Associate
RAA	Remote Airport Advisory
RADLO	Regional air defense liaison officer
RAIL	Runway alignment indicator lights
RAIS	Remote Airport Information Service
RAPCON	Radar Approach Control facility (USAF, USN and USMC)
RATCF	Radar Air Traffic Control Facility (USN and USMC)
RCAG	Remote 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
SAA	Special activity airspace
SAMS	Special Use Airspace Management System
SATCOM	Satellite Communication(s)
SAWS	Stand Alone Weather System
SDP	Surveillance Data Processing
SE	Systems engineer
SECM	Safety and Environmental Compliance Manager
SGI	Special Government Interest
SIA	Status information area
SID	Standard Instrument Departure
SIGMET	Significant meteorological information
SMGCS	Surface movement guidance and control system
SMIS	Safety Management Information System
SMO	System Management Office
SMR	Surface Movement Radar
SOP	Standard operating procedure
SP	Support Specialist(s)
SPECI	Nonroutine (Special) Aviation Weather Report
STARS	Standard terminal automation replacement system
STMC	Supervisor Traffic Management Coordinator
STMCIC	Supervisory Traffic Management Coordinator-in-Charge
STMP	Special traffic management program

Abbreviation	Meaning
SUA	Special use airspace
sUAS	Small Unmanned Aircraft System(s)
SVFR	Special visual flight rules
SWAP	Severe weather avoidance plan
SWS	Surface Weather System
Т&А	Time and attendance
ТАС	Terminal area chart
TACAN	Tactical air navigation aid
тса	Tactical Customer Advocate
TCAS	Traffic alert collision and avoidance system
TCDD	Tower cab digital display
TCF	Traffic Flow Management Convective Forecast Produce
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
ТМ	Traffic management
ТМС	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
UA	routine PIREPs
UAS	Unmanned Aircraft System(s)
UASFM	Unmanned Aircraft System(s) Facility Map
USS	Supplier
UFO	Unidentified flying object
UHF	Ultranign frequency
	User Preferred Trajectory
USAF	United States Air Force
USN	United States Navy
UTC	Coordinated universal time
UUA	urgent PIREPs
VAR	Volcanic activity report
VASI	Visual approach slope indicator
VCE	VSCS/Console Equipment
VEARS	VSCS Emergency Access Radio System
VFR	Visual flight rules

Abbreviation	Meaning
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
WC	Weather coordinator
WFO	Weather Forecast Office
WINGS	Weather Information and Navigational Graphics System
WMSCR	Weather Message Switching Center Replacement
WRA	Weather Reconnaissance Area
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 (SOP) 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.

a. Review SOPs at least annually and update as necessary. Examine current SOPs for practices and/or procedures that are no longer required. Review includes both content and relevance that achieve full operational efficiency and customer flexibility.

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

NOTE-

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

REFERENCE-

FAA Order JO 7210.3, Para 2–1–6, Checking Accuracy of Published Data FAA Order JO 7210.3, Para 4–1–1, Correspondence Standards FAA Order JO 7210.3, Para 4–3–3, Developing LOA

FAA Order JO 7210.3, Para 4–3–7, Annual Review/Revisions

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

NOTE-

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

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

NOTE-

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

2. Additional digital AeroNav Products are available via the following websites:

a. https://www.faa.gov/air_traffic/flight_info/aer onav/ procedures

b. http://aerochart.faa.gov

3. Information on aeronautical data changes, including weather reporting locations, is available at the National Flight Data Center (NFDC) web portal of which a subscription should be requested. Check NFDC 56–Day NASR Subscription and Transmittal Letters at https://nfdc.faa.gov.

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

REFERENCE-

FAA Order JO 7210.3, Para 2–1–2, Facility Standard Operating Procedures Directive FAA Order JO 7210.3, Para 2–1–3, Position/Sector Binders

FAA Order JO 7210.3, Para 2–1–3, Position/Sector Binders FAA Order JO 7210.3, Para 2–2–11, Personnel Briefings Regarding Orders, Published Aeronautical Data and Flight Procedures FAA Order JO 7210.3, Para 4–3–3, Developing LOA

FAA Order JO 7210.3, Para 4–3–7, Annual Review/Revisions FAA Order JO 7930.2, Notices to Airmen

FAA Order JO 8260.19, Flight Procedures and Airspace FAA Order JO 8260.3, United States Standard for Terminal Instrument Procedures (TERPS)

FAA Order JO 8260.43, Flight Procedures Management Program

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

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, OS 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. OPERATIONS DURING A STAFFING CONSTRAINT

The following steps must be followed when traffic management initiatives (TMI) are being considered for the purpose of minimizing the impact of a staffing constraint:

a. The Air Traffic Manager (ATM) must contact the General Manager (GM) or designated staff; District Manager of Operations or Traffic Management Officer, and provide the factors of the shortage, expected duration, facility mitigations implemented and any other related information. The GM, or GM designated staff must evaluate the information provided and determine what actions are appropriate.

b. If a determination is made that TMIs are required, the GM, or GM designated staff must notify the appropriate Deputy Director of Operations (DDO) for their concurrence.

c. If the DDO agrees that TMIs are required, the GM or designee will notify the requesting facility to submit a Staffing Constraint Report to the National Operations Manager (NOM) at the Air Traffic

Control System Command Center (ATCSCC). If, in the event the GM or GM staff cannot be reached, the facility should take whatever actions it deems necessary to ensure the safety of the operation.

REFERENCE-

FAA Order JO 7110.65, Para 11–1–2, Duties and Responsibilities FAA Order JO 7210.3, Chapter 18, Section 6, Traffic Management Initiatives FAA Form 7219–15, Staffing Constraint Report

2–1–9. HANDLING BOMB THREAT INCIDENTS

Air Traffic facilities must establish procedures to carry out their functions in accordance with FAA Order 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. FAA Order 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-

FAA Order JO 7210.3, Para 2-8-2, Medical Clearance Requirements.

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

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

k. Release information on bomb threat incidents in accordance with the procedures established in current directives. Where no applicable procedures

have been established, all information must be treated as "For Official Use Only."

2-1-10. HANDLING MANPADS INCIDENTS

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

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

REFERENCE-

FAA Order JO 7110.65, Para 2–9–3, Content. FAA Order JO 7110.65, Para 10–2–13, MANPADS Alert. FAA Order JO 7610.4, Para 15–1–3, Responsibilities.

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

- 1. Call sign (if known);
- 2. Type aircraft (if known);
- 3. Coordinated Universal time;
- **4.** Position/location of event;
- 5. Altitude (if known); and

6. Any other pertinent information (e.g., contrail sighting, additional pilot or ATC observation reports, law enforcement contact, etc.).

2-1-11. AIRPORT EMERGENCY PLANS

a. Operational instructions covering airport emergency service at airports served by an ATCT and/or FSS must be issued by the air traffic manager (the ATCT manager at airports with both facilities) in the form of a LOA. Procedures and/or LOAs for alerting airport emergency equipment at other public-use airports served by the ATCT and/or FSS must also be developed, if deemed appropriate.

NOTE-

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

REFERENCE-

FAA Advisory Circular AC 150/5210–7C, 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.

2–1–12. EXPLOSIVES DETECTION K–9 TEAMS

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

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

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

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

air traffic facility providing them with the secondary location. ATC will then relay this to the pilot concerned for appropriate action.

2-1-13. INTERSECTION TAKEOFFS

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

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

NOTE-

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

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

EXAMPLE-

/NO TKOFF/

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

2-1-14. AIRCRAFT IDENTIFICATION PROBLEMS

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

could result in a Code of Federal Regulations (CFR) violation or an accident which would have serious legal implications for the agency.

2–1–25. OUTDOOR LASER DEMONSTRATIONS

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

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

2–1–26. 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.

2–1–27. SUBMISSION OF AIR TRAFFIC CONTROL ASSIGNED AIRSPACE (ATCAA) DATA

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

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

2-1-28. 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.

2-1-29. REPORTING UNAUTHORIZED LASER ILLUMINATION OF AIRCRAFT

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

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

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

c. Record the incident via the Comprehensive Electronic Data Analysis and Reporting (CEDAR)

program or, if CEDAR is not available, via the appropriate means, in accordance with FAA Order JO 7210.632, Air Traffic Organization Occurrence Reporting;

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

1. UTC date and time of event.

- 2. Call Sign, or aircraft registration number.
- 3. Type of aircraft.
- 4. Nearest major city.
- 5. Altitude.

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

7. Brief description of the event.

8. Any other pertinent information.

9. Law enforcement contact information.

NOTE-

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

REFERENCE-

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

2-1-30. REPORTING SUSPICIOUS AIRCRAFT/PILOT ACTIVITIES

a. Facility air traffic managers must ensure that the operational supervisor/controller-in-charge promptly reports any suspicious aircraft/pilot activities to the Domestic Events Network (DEN) Air Traffic Security Coordinator (ATSC).

NOTE-

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

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

1. Radio communications are lost or not established. Consider any IFR aircraft that is NORDO for more than 5 minutes as suspicious. This includes all aircraft (for example, general aviation, law enforcement, military, medevac) regardless of transponder code. ATC actions taken to establish communications with the NORDO aircraft must be reported to the DEN ATSC.

2. An aircraft fails to turn on or changes from its assigned transponder beacon code (other than approved emergency/radio failure beacon code).

3. An aircraft deviates from its assigned route of flight/altitude and refuses to return to it when instructed.

4. Phantom or inappropriate transmissions such as unusual questions about military activities or sensitive/secure areas.

5. Inconsistent or abnormal repetitive aircraft activity such as; flights over/near sites of interest or prohibited/restricted airspace, inappropriate speed or rate of climb/descent, or missed crossing restrictions or reporting points.

6. Pilot reports flight difficulties with no eventual explanation or response to ATC.

7. Any air carrier, cargo, or scheduled air taxi that requests to divert from its original destination or route for any reason other than weather or routine route changes should be considered by ATC as suspicious activity.

8. Any general aviation arriving from an international departure point that requests to divert from the original U.S. destination airport.

9. Other general aviation and non-scheduled air taxi or charter services that request to divert from the original destination or route for any unusual reason (e.g., reasons other than weather, company request, passenger request, mechanical, etc.) should be considered by ATC as suspicious activity.

10. Any other situation that may indicate a suspicious aircraft, including any reported or observed unauthorized unmanned aircraft activity or remote controlled model aircraft that deviate from normal practice areas/flight activities would be considered suspicious or a safety hazard.

REFERENCE-

FAA Order JO 7110.65, Para 2–1–2, Duty Priority. Advisory Circular 91-57, Model Aircraft Operating Standards.

11. Any situation or pilot activity (for example, background noise, change in pilot's voice characteristics, etc.) that may indicate a hijacked aircraft. Due to air to ground communications capabilities (e.g., data links, cellular phones), ATC facilities may learn

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. General Managers must:

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

2. Establish an administrative process to ensure facility compliance.

3. Ensure Classified, Contractor 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/General managers are the approving authority for user account privileges for their facilities.

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

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

(c) Users will be notified of their approval by e-mail.

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

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.

FAA Order 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.

NOTE-

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

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

c. Personnel performing watch supervision duties must not condone or permit individuals to sleep during any period duties are assigned. Any such instance must be handled in accordance with applicable Agency policy and the applicable collective bargaining agreement.

REFERENCE-

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. If an employee is assigned more than two (2) consecutive ten (10) hour midnight shifts, all of the consecutive ten (10) hour midnight shifts require a 2100L (Non flex) start time.

7. Ten (10) hour midnight shifts are limited to no more than four (4) in any six (6) day period.

8. No day shift may immediately precede a ten (10) hour midnight shift.

9. Eight (8) hour midnight shifts may be extended by no more than one (1) hour per single shift.

10. A 0530L start time or later is required when working an eight (8) hour day shift prior to an eight (8) hour midnight shift. Employees may not flex to an earlier start time than 0530L.

11. Do not work more than six shifts without taking a regular day off.

12. Have at least 30 consecutive hours off-duty within each seven-day period.

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

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

2-6-8. 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

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 FAA.

REFERENCE-

FAA Order JO 7900.5, Appendix J, Aviation Weather Observer Certification Process.

2–9–2. RECEIPT AND DISSEMINATION OF WEATHER OBSERVATIONS

a. Facility air traffic managers must establish a means by which the receipt of weather observations are immediately known to facility personnel responsible for dissemination to other facility functions and that these functions are made aware of changes as they are posted. In addition, facility managers must establish procedures through the facility SOP that will ensure all positions of operation receive and acknowledge any change in reportable visibility value when the tower has the responsibility for visibility reporting. This may be accomplished by means of an alerting device, location of weather receiving equipment at positions so that any change of data is recognized, or any other means which may be best suited to the facility work environment.

b. To the extent possible, facility air traffic managers must establish procedures to acknowledge receipt of weather observations. Where possible, establish an agreement with the appropriate weather source to share the responsibility for ensuring the receipt of the observation. Automated Surface Observing System(s) (ASOS), Automated Weather Observing System(s) (AWOS), and Automatic

Weather Information System (AWIS) locations are not required to acknowledge receipt of observations.

c. The addition or deletion of a weather reporting location must be coordinated through the appropriate Service Area office, for forwarding to System Safety and Procedures. System Safety and Procedures must initiate the required actions for additions and/or deletions to the national data base. When adding new weather reporting locations, include a statement that:

1. An aviation requirement exists.

2. The observers are/have been certified by the FAA.

3. No other observation exists in the surface area, if applicable.

4. Identifies the hours that the data will be available if less than 24 hours, i.e., 0800Z-2300Z.

5. Identify what facility will be responsible for observation entry into the system.

d. AWOS towers with LAWRS certified controllers should disable the AWOS long-line communications capability during facility operating hours and use the AWOS data when representative of airport conditions to generate a manual METAR/ SPECI observation. If AWOS is able to provide METAR/SPECI observations (for example, FAA AWOS-C) and allows augmentation and backup entries, the AWOS may be used the same as ASOS.

NOTE-

Ensure AWOS long–line communication is enabled when the facility closes.

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

a. Facility air traffic mangers must submit to System Operations Airspace and Aeronautical Information Management office the hours of operation with the date that the facility commences participation in the LAWRS program and any changes thereafter in the hours of participation.

b. All part-time terminal facilities must include sign ON/OFF procedures for the automated weather observation system in the facility opening/closing procedures.

NOTE-

This includes LAWRS and tower visibility facilities.

c. All LAWRS facilities must ensure the automated weather observation system equipment is added to the facility watch checklist.

2-9-4. NONAVIATION WEATHER SERVICE

Facilities must not enter into agreements with any person or office, including fixed-base operators, to provide weather data for property protection purposes. The FAA must not be responsible for providing weather information unless it is directly related to the actual or intended operation of aircraft. Personnel must not encourage nor solicit 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

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

1. Prepare a chart(s) or list(s) for daytime and nighttime visibility markers. At local discretion, visibility markers may be depicted on separate daytime and nighttime charts or on a daytime/night-time combination chart. Panoramic photographs marked with distances and cardinal compass points may also be used.

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



3. Each marker used must be identified and its distance from the observation point noted. Include the height of the marker if it is for estimating heights of clouds and obscuring phenomena.

4. Mapping programs, aircraft/vehicles, GPS and/or surveying equipment are all valid methods to develop visibility charts.

b. The air traffic manager must conduct an annual review and approve the visibility charts, lists, or photos to ensure their accuracy.

2–9–7. SITING CRITERIA FOR VISUAL WEATHER OBSERVATIONS

To give a proper indication of weather conditions in the areas of aircraft approaches, landings, and takeoffs, the site from which visual weather observations are made should ideally be the Airport Reference Point (ARP). If this is not practical, the site must be as close to the ARP as practical. Except in unusual circumstances, it should be no more than 2 miles from that point. The site must also have an essentially unobstructed view of:

a. The most frequently used instrument runway and its final approach area; and

b. At least half of each quadrant of the natural horizon.

2–9–8. RUNWAY VISUAL RANGE (RVR) EQUIPMENT

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

1. All checks and adjustments to the RVR systems.

7/16/20

Section 6. Surveillance Source Use

3–6–1. COMMISSIONING RADAR FACILITIES

a. Electronic Commissioning:

1. Subsequent to the initial installation of an ARSR/ASR system, the provisions of 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 FAA Order JO 7110.65, Air Traffic Control. If services are initially implemented on a "part–time" basis, the daily hours (preferably 8 hours or longer) must be specified in the aeronautical information message and the advertised services maintained during those hours. The extent and types of service will be dependent upon operational requirements, personnel, and equipment capabilities. The schedule of radar service implementation must be jointly determined by the facility air traffic manager and the Service Area office. Service Area office approval is required prior to the implementation of each phase of radar service.

3. A review of the existing LOA must be accomplished to ensure that necessary changes are made or that new agreements are consummated and approved prior to implementing any phase of radar traffic control. Airspace areas for which radar terminal facilities have responsibility should include sufficient vector areas for:

(a) Positioning and spacing of arriving aircraft en route to the airport from outer fixes or radar handoff points.

NOTE-

Normally, no less than two nor more than four outer fixes are used to serve a single approach course. These fixes are normally located to permit simultaneous holding at the same altitude. When only one radar approach control position is used, two outer fixes are optimum. If two radar approach positions are available, four fixes are optimum.

(b) Spacing and control of departing aircraft and aircraft executing missed approaches.

(c) Positioning and spacing transitioning aircraft.

c. Notification Procedures:

1. Issue an aeronautical information message for each location at least 30 days prior to and again immediately following implementation of radar ATC procedures containing the following:

(a) Nature of service; e.g., departure, arrival, en route.

(b) Proposed or effective date.

(c) Specific airspace affected.

(d) Hours of service if less than 24 hours per day.

EXAMPLE-

BAKERSFIELD, CALIFORNIA, SURVEILLANCE RADAR EXPECTED TO BE COMMISSIONED ON OR ABOUT JUNE 15, 2004. RADAR AIR TRAFFIC CONTROL SERVICE USING RADAR SEPARATION STANDARDS WILL BE APPLIED AS APPROPRIATE. SERVICE WILL BE PROVIDED DAILY BETWEEN THE HOURS OF 1400–2300Z WITHIN 40–MILE RADIUS OF BAKERSFIELD.

2. When an additional service is to be implemented or a change in programmed areas of application is made, issue an aeronautical information message delineating that new service. Advance notice is desirable. However, it is not mandatory, and the aeronautical information message may be issued concurrently with the inauguration of the extended radar service.

3. When a change in ARSR/ASR equipment is made, issue an aeronautical information message if a modification to existing service will result and/or if a break in service of more than 30 minutes will occur.

4. A copy of each memorandum/aeronautical information message for inclusion in the Domestic Notices website must be sent to Mission Support Services, Policy, Publications and Administration (AJV-P12) via 9-ATOR-HQ-PubGrp@faa.gov, Manager, Flight Service Safety and Operations Policy Group (AJR-B100) via 9-AJR-FSSOG@faa.gov, Aeronautical Information Group (AJV-A30) via https://nfdc.faa.gov/nfdcApps/controllers/PublicSecurity/nfdcLogin, and the appropriate Service Area Directors.

3-6-2. ATC SURVEILLANCE SOURCE USE

a. Surveillance sources that are approved for ATC use are Primary Radar, Secondary Radar, ADS-B and WAM. Approved ATC Surveillance Sources may be used for:

1. Surveillance of aircraft to assure the effective use of airspace.

2. Vectoring aircraft to provide separation and radar navigation.

3. Vectoring aircraft to final approach.

4. Vectoring IFR aircraft to the airport of intended landing.

5. Monitoring instrument approaches.

6. Providing radar traffic, weather, chaff, and bird activity information.

7. Providing assistance to pilots of aircraft in distress.

b. Approved terminal ATC Surveillance Sources may also be used for:

1. Conducting precision or surveillance approaches.

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

NOTE-

In accordance with FAA Order JO 7110.65, Chapter 3, Airport Traffic Control – Terminal, Section 6, Airport Surface Detection Procedures.

c. Targets derived from WAM may not be used to provide 3 mile separation in the En Route Automation System (EAS).

NOTE-

3 NM targets are not derived from WAM within the EAS.

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, 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 FAA Order JO 7110.65, Air Traffic Control, Chapter 5, Section 2, Beacon Systems.

b. A facility directive must be issued establishing facility standards for displaying required transponder replies in all available operational modes.

c. Where desirable, beacon targets may be displaced at a slightly greater range than their respective primary returns. When beacon displacement is elected, issue a facility directive specifying the standard relationship between primary returns and the beacon control slash of secondary returns. The maximum allowable beacon target displacement which may be specified by the facility air traffic manager is 1/4 mile for STARS and 1/2 mile applied in 1/4 mile increments for all other facilities.

3-6-5. RADAR TARGET SIZING

a. Minimum target size for terminal radar systems using terminal digital radar or full digital target symbols, except for MEARTS, must not be less than the minimum target size shown in Technical Operations' orders concerning the maintenance of terminal digital radar. The target symbol must be centered on the terminal digital radar/full digital system type target presentation.

NOTE-

Target size is fixed in MEARTS regardless of range or data block character size.

b. When operating in FUSION, the minimum target size for Precision Approach Monitor (PAM) operations and for the normal use of tower radar displays is 1,200 feet. The target symbol must be centered on the terminal digital radar/full digital system type target presentation.

NOTE-

Increased separation required (ISR) will be required for aircraft outside the range for PAM or other normal use of certified tower radar displays.

3–6–6. 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. Position Adjustable Range Reference Orientation Transponders (PARROTs) used for map alignment location. Not applicable to a Digital Terminal Automation System (DTAS).

b. The following display settings must be established in a facility directive, except for MEARTS:

1. Weather/Radar Gate normal setting.

2. Position startup weather level settings.

c. Facilities that utilize a digital system that does not concurrently display all levels of precipitation (ASR-8/TDX2000) must establish a procedure via facility directive that ensures periodic monitoring of all precipitation level ranges during precipitation events.

d. The air traffic manager and Technical Operations System Support Center (SSC) manager must prepare a local order defining the procedures needed to protect the antenna, shutdown the antenna, transfer power between high and low voltage, and transfer from one channel to another channel.

3-6-7. 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 approved separation without individual coordination for each aircraft. When reviewing existing P–ACPs, or contemplating the establishment of these procedures, consideration must be given to airspace realignment to preclude coordination/penetration of another operational position's airspace. Prior to implementing a P–ACP, negotiations should be accomplished locally and all affected personnel must be thoroughly trained in the application of the procedures.

b. When P-ACPs are established, a facility directive must be published. The directive must include, as a minimum:

1. Requirement that the following are fully operational.

(a) Terminal- STARS

(b) En Route- SDP, FDP, and safety alert (CA, MCI, E-MSAW) processing.

2. Procedures to be applied in the event that prearranged coordination procedures are not practicable.

3. The position(s) authorized to penetrate the protected airspace of an adjacent position.

4. Detailed responsibilities relating to P–ACP for each position.

5. The requirement that two positions of operation cannot be authorized to penetrate each other's airspace simultaneously.

6. Controllers who penetrate another controller's airspace using P–ACP must display data block information of that controller's aircraft which must contain, at a minimum, the position symbol and altitude information.

7. Controllers who penetrate another controller's airspace using P-ACP must determine whether the lead aircraft requires wake turbulence separation behind it.

REFERENCE-

FAA Order JO 7110.65, Para 5-5-4, Minima, subparagraph f.

8. Procedures to be applied for those modes of operation when the computer fails or is shut down, the beacon fails and only primary is available, and for

nonbeacon aircraft or at automated facilities aircraft without an associated full data block.

REFERENCE-

FAA Order JO 7110.65, Para 5-4-10, Prearranged Coordination.

3-6-8. OPERATIONAL GUIDANCE FOR FUSION

a. During normal operations, Fusion must be the selected mode to the extent that it is operationally feasible. The terminal Air Traffic Manager, or their designee, must decide if the fusion tracker is usable.

1. If a decision is made to discontinue use of the fusion tracker at specific sectors or facility-wide, the Air Traffic Manager, or their designee, must notify Operations - Headquarters, AJT-2, through the appropriate service area Director of Air Traffic Operations.

2. The intent of this notification is to ensure the service area Director of Air Traffic Operations, Operations-Headquarters, and the program office are aware of the operational status and are providing all capable resources to return to Fusion operations at the affected position/facility.

3. Fusion outages due to a planned radar shutdown of short duration need not be reported.

b. During radar outages, operational alternatives, or contingency plans, must be developed and included in a facility directive that address requirements when there is degradation in the Fusion environment due to sensor availability. The steps must be pre-determined and may be implemented facility-wide or sector specific.

1. Facilities should switch to single sensor mode if there are impacts to the efficiency of facility operations due to degradation in the sensor environment while operating in Fusion mode.

2. Facilities should use single sensor mode in airspace that is restricted to the use of one long-range radar which can cause anomalies (for example, stitching or target jumping). Facilities should continue to operate in single sensor mode until adequate ADS-B equipage levels are reached, an additional sensor is available, or it is determined by management that an operational advantage is gained by remaining in Fusion.

6. Operations under an exemption from Part 91, Appendix D, Section 3, the surface area of Class B, Class C, Class D, or Class E airspace within which Special VFR weather minimums are not authorized.

REFERENCE-

Advisory Circular AC 150/5210–7C, Airport Rescue and Fire Fighting Communications.

I. 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 an LOA: (See FIG 4–3–1 and FIG 4–3–2. For commercial space example LOAs, see Appendix 6.)

a. Determine, through coordination, which FAA facility is principally responsible for processing the LOA.

b. Confine the material in each agreement to a single subject or purpose.

c. Describe the responsibilities and procedures applicable to each facility and organization involved. Review pertinent national procedures or local instrument flight procedures and incorporate into the new LOA(s) as necessary.

NOTE-

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

REFERENCE-

FAA Order JO 7210.3, Para 2–1–2, Facility Standard Operating Procedures Directive

FAA Order JO 7210.3, Para 2–1–6, Checking Accuracy of Published Data

FAA Order JO 7210.3, Para 4-3-7, Annual Review/Revisions

d. Delegate responsibility for control of IFR aircraft, where necessary, by taking the following action:

1. Describe the area within which responsibility is delegated. The area may be depicted in chart form.

2. Define the conditions governing use of the area. These include altitudes, routing configuration, and limitations or exceptions to the use of the applicable airspace.

3. Specify the details of control procedures to be used. These include clearance limits, reporting points, handoff points, and release points.

4. Identify clearance limits designated as Instrument Approach Fixes when they are to be used for holding aircraft.

5. Specify communications and coordination procedures.

e. Coordinate with other FAA facilities and military or civil organizations as appropriate.

f. Attach charts or other visual presentations, when appropriate, to depict the conditions of the LOA.

g. Coordinate with the Regional Flight Standards Division, All Weather Operations Program Manager if aircraft operations or pilot procedures will be affected.

h. Prepare a single supplement, if necessary, to augment the letter at a facility and attach it to the basic LOA. Do not repeat material from the basic LOA.

i. After coordination, send two copies of the proposed LOA, including supplements, to the service area office for approval if required.

4–3–4. REVIEW BY SERVICE AREA OFFICE

a. The Service Area office must review the proposed LOA, ensure coordination with other interested offices and affected user groups, as necessary, and approve the LOA if satisfactory.

b. The Service Area office may, in writing, delegate to air traffic managers, air traffic managers designees, ATREPs, or Region Air Defense Liaison Officer (RADLOs) the authority to develop, coordinate, approve, and implement LOAs except for:

1. Those which prescribe procedures or minima contrary to those contained in FAA Order JO 7110.65, Air Traffic Control, unless appropriate military authority has authorized application of reduced separation between military aircraft; or

REFERENCE-

FAA Order JO 7110.65, Para 1–1–9, Procedural Letters of Agreement.

2. Those between an IFR facility and a tower to authorize the separation services prescribed in Paragraph 2–1–16, Authorization for Separation

Services by Towers, and Paragraph 10–5–3, Functional Use of Certified Tower Radar Displays.

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-

FAA Order JO 7210.3, Para 2–2–14, Facility Directives Repository (FDR).

4-3-6. COMMERCIAL SPACE LOAs

LOAs exist between ATC facilities and commercial space launch/reentry site, launch, and/or reentry operations proponents. FAA Order JO 7400.2, Procedures for Handling Airspace Matters contains responsibilities and procedures for Commercial Space operations. The following lists the roles and responsibilities of organizations and individuals involved in the commercial space LOA process:

a. The respective ATO Service Center OSG will serve as facilitator of the LOA development.

b. ATO Service Center OSG will coordinate with the appropriate Service Area, ATCSCC, the Office of

Commercial Space Transportation (AST), the Office of Airports, and other offices having responsibilities in accordance with the operation.

c. Each LOA must include, but is not limited to:

1. Names and contact information for all parties involved.

2. For launch/reentry operation LOAs: Description of operation to include vehicle type and characteristics; anticipated frequency of operations; and requested airspace, altitude, vehicle positioning data transmittal, and Aircraft Hazard Area (AHA) information.

3. For launch/reentry site LOAs: Brief description of the launch/reentry site, types of anticipated operations, and anticipated frequency of proposed operations.

4. Operating procedures to include communications, real-time coordination, NOTAM content issuance, contingency, and emergency.

4-3-7. ANNUAL REVIEW/REVISIONS

a. Review LOAs at least annually and update as necessary. Examine current LOAs for practices and/or procedures that are no longer required. Reviewing includes both content and relevance that achieve full operational efficiency and customer flexibility. Review and, if necessary, update LOAs when new/revised instrument flight procedures are published or national procedures are implemented or changed.

NOTE-

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

REFERENCE-

FAA Order JO 7210.3, Para 2–1–2, Facility Standard Operating Procedures Directive

FAA Order JO 7210.3, Para 2–1–6, Checking Accuracy of Published Data

FAA Order JO 7210.3, Para 4–3–3, Developing LOA

b. Process revisions to LOAs and attachments or supplements thereto as page replacements. Mark the revisions as follows:

1. Place an asterisk or vertical line to the left of each new or revised paragraph or section to signify new material.

2. Identify page revisions by the "REV" number, e.g., "REV 1," and the effective date in the lower right hand corner of each revised page.

c. Coordinate revisions to a LOA in the same manner and degree as for the original LOA.

4-3-8. 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:

(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: Interfacility Coordination for the Control of Aerospace Defense Command Interceptor Aircraft		
1. PURPOSE: (List responsibility and describe necessary coordination.)		
2. CANCELLATION: (As required.)		
3. SCOPE: (Specify area, names, and types of facilities involved.)		
4. RESPONSIBILITIES: (Specify.)		
5. PROCEDURES:		
a. ATC Assigned Airspace. (List procedures to be followed for requesting and authorizing airspace, handling aircraft to and from the airspace, and notifying when no longer required.)		
b. Transfer of Control. (Specify transfer procedures.)		
c. Departure. (Specify required advanced time for filing flight plans. Outline additional items required in the flight plan; e.g., type of departure, CONAD control facility, and IND position number.)		
d. En Route. (including information that ATC is responsible for effecting separation in assigned airspace whenever nonparticipating aircraft are cleared to operate within such airspace.)		
e. Arrivals. (Outline handoff procedures and special instructions.)		
f. General. (Self-explanatory.)		
6. ATTACHMENTS (List, as required, items such as chart of ATC-assigned airspace areas, common reference/handoff points, etc.)		
Air Traffic Manager, (Name) ARTCC		
Commander, (Name) Air Division		

(Title of other appropriate authority)

4–3–9. AUTOMATED INFORMATION TRANSFER (AIT)

a. Radar identification, altitude, and en route fourth line control information approval may be transferred via full data blocks without using point–out procedures or verbal coordination. Air traffic managers wishing to authorize the use of the AIT process must establish AIT procedures adapted to local traffic situations and use the process only within the context of those specific procedures. These precoordinated procedures and the controller responsibilities must be specifically defined in facility directives.

REFERENCE-

FAA Order JO 7110.65, Para 5–4–11, 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 FAA Order JO 7110.65, Air Traffic Control, Paragraph 2–1–14, Coordinate Use of Airspace, Paragraph 2–1–15, Control Transfer, Paragraph 5–4–5, Transferring Controller Handoff, Paragraph 5–4–6, Receiving Controller Handoff, or Paragraph 5–4–7, Point Out. The following are general examples of the AIT process.

1. Transfer of radar identification only:

EXAMPLE-

Controller A initiates a transfer of radar identification to controller B before the aircraft enters controller B's airspace. Controller B accepts the transfer of radar identification before the aircraft enters his/her airspace. Controller B, traffic permitting, then initiates a transfer of radar identification to controller C before the aircraft enters controller C's airspace. Controller A transfers aircraft communications to controller C before the aircraft enters controller C's airspace and after observing that controller C has accepted the transfer of radar identification.

2. Transfer of radar identification and altitude control:

EXAMPLE-

1. Controller A initiates a transfer of radar identification to controller B; controller B accepts the transfer. Controller B amends either the interim or assigned altitude in the data block to an altitude within his/her altitude stratum as prescribed in a facility directive. Controller B initiates a transfer of radar identification to controller C before the aircraft enters controller C's airspace. Controller A, after observing controller B initiate a transfer of radar identification to controller C, clears the aircraft to the altitude displayed in the data block by controller B. Controller A, after observing that controller C has accepted the transfer of radar identification, transfers aircraft communication to controller C before the aircraft enters controller C's airspace.

2. Controller C may clear the aircraft to the altitude displayed by controller B if so established in a facility AIT directive.

3. The following is an example of a precoordinated AIT procedure which might be written in a facility directive:

EXAMPLE-

The following procedure is established for implementation under the (AIT) process and is agreed to by the South and East areas. Aircraft departing ELP via J26 to ROW requesting FL 280 or above must be handled as follows:

(a) Sector 20 must clear the aircraft to FL 270 within its airspace and then initiate a transfer of radar identification to sector 63.

(b) Sector 63 must accept the transfer of radar identification then display either an assigned or interim altitude in the data block.

(c) Sector 63 must then initiate a transfer of radar identification to sector 23 before the aircraft enters sector 23's airspace.

(d) Sector 20, after observing the assigned/interim altitude displayed in the data block and that a transfer of radar identification has been initiated to sector 23, must then clear the aircraft to the appropriate altitude.

(e) Sector 20 must transfer communications of the aircraft to sector 23 before the aircraft enters sector 23's airspace and after observing sector 23's acceptance of the transfer or radar identification.

c. Due to system design, the transfer of data stored in the fourth line of the ERAM FDB will not be displayed to the controller when operating on the backup system in EBUS only mode.

1. When switching from the primary system to either mode of the backup system, ensure that the interfacility ERAM 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 ERAM 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 ERAM 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 President for Terminal Services, or the Administrator).

4-4-2. USE OF AIRCRAFT CALL SIGNS

Local call sign/telephony designators are authorized for use only for local flight operations as specified in a letter of agreement (LOA) between the local air traffic control (ATC) facility(ies) and the requesting aircraft operator. LOAs concerning the use of aircraft call signs by local flight operators must conform with the following standards: **a.** Local call signs must not be assigned a three–letter designator to ensure they do not conflict with ICAO three–letter designators (ICAO 3LDs). Local call signs may be assigned 2, 4, 5, and 6 letter call sign designators.

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

NOTE-

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

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

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

NOTE-

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

REFERENCE-

FAA Order JO 7610.12, Assignment and Authorization of Call Sign Designators and Associated Telephonies. AC 120–26, Assignment of Aircraft Call Signs and Associated Telephonies.

4–4–3. RUNWAY SUPERVISORY UNITS (RSU)

Facility air traffic managers must ensure that the following items are included in a LOA with the local military authority when the operation of a military RSU has been directed by the military commander.

a. Qualification requirements of personnel operating the RSU.

b. A continuous monitor of the appropriate tower frequency is maintained.

c. Coordination with the tower is accomplished prior to changing to an alternate frequency.

JO 7210.3BB CHG 2

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 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. AERIAL SAMPLING/SURVEYING FOR NUCLEAR CONTAMINATION

a. The USAF, Department of Energy (DOE), or other U.S. Government agencies perform aerial sampling/surveying of suspected foreign or domestic

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

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

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

REFERENCE-

FAA Order JO 7110.65, Para 9–2–18, SAMP Flights. FAA Order JO 7610.4, Para 12–4–3, Aerial Sampling/Surveying 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 U.S. Air Force Reserve (AFRES) 53rd Weather Reconnaissance Squadron (53WRS) and the National Oceanic & Atmospheric Administration (NOAA) Aircraft Operations Center (AOC) are responsible for flying weather reconnaissance/research missions. 53WRS aircraft conducting these missions will utilize the call–sign "TEAL," and aircraft from NOAA AOC will utilize the call–sign "NOAA." Due to the unique nature of these missions it is necessary to provide a degree of special handling to ensure that sufficient meteorological data is collected. The routes flown are dictated by storm movement, not traffic flows. The nature of these weather phenomena may result in very little time between the filing of a flight plan and the actual departure.

a. WINTER SEASON MISSIONS.

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

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

NOTE-

The WSPOD describes the mission and includes, for

example, type aircraft call sign, departure airfield, and route of flight.

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

NOTE-

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

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

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

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

NOTE-

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

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

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

NOTE-

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

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

b. HURRICANE AND TROPICAL CYCLONE MISSIONS.

1. These reconnaissance/research missions are flown in support of the National Hurricane Operations Plan (NHOP) and in accordance with:

(a) The Memorandum of Agreement between the National Oceanic and Atmospheric Administration (NOAA) Aircraft Operations Center (AOC), U.S. Air Force Reserve Command 53rd Weather Reconnaissance Squadron (WRS), and the Federal Aviation Administration (FAA) Air Traffic Organization (ATO) in Support of the National Hurricane Operations Plan; and

7/16/20

(b) Associated letters of agreement.

2. Prior to an NHOP reconnaissance/ research mission, the 53rd WRS or NOAA AOC will:

(a) Provide the Mission Coordination Sheet to the appropriate ARTCC and the ATCSCC at least one hour prior to the mission.

NOTE-

The Mission Coordination Sheet describes the reconnaissance/research mission and includes, for example, the aircraft call sign, departure airfield, and route of flight.

(b) Submit a request to the appropriate ARTCC for a Weather Reconnaissance Area (WRA) NOTAM at least one hour prior to the mission.

(c) File a flight plan as soon as practicable before departure time.

NOTE-

Providing the Mission Coordination Sheet does not pre-empt the mission commander's responsibility to file a flight plan, nor does it constitute an ATC clearance.

3. The ATCSCC must:

(a) Review the Tropical Cyclone Plan of the Day (TCPOD) by 1830 UTC.

(b) Activate the Hurricane Desk, if required.

(c) Review the Mission Coordination Sheet and prepare a public Flow Evaluation Area (FEA) based on the latitude/longitude points specified in the Mission Coordination Sheet when a mission is scheduled to be flown. The FEA naming convention is the aircraft call sign. Modify the FEA when requested by the affected facilities.

(d) Coordinate with the impacted ARTCCs as required, and designate a primary ARTCC when the reconnaissance/research flights are expected to operate through airspace managed by multiple ATC facilities.

(e) Assist ATC facilities with traffic flow priorities if the hurricane reconnaissance/ research flight will impact terminal traffic.

4. The ARTCC(s) must:

(a) Review the Mission Coordination Sheet.

(b) Coordinate with all impacted ATC facilities within their area(s) of responsibility;

(c) Coordinate with SUA Using Agencies in accordance with WRA Letters of Agreement (LOA),

unless other coordination procedures are established by an agreement.

NOTE-

An example of an agreement containing other coordination procedures for SUA is the LOA between Washington Center, New York Center, Boston Center, Jacksonville Center, Air Traffic Control System Command Center and Fleet Area Control and Surveillance Facility, Virginia Capes that defines coordination and control procedures governing the use of SUA operated by FACSFAC VACAPES.

(d) Issue the WRA NOTAM, as applicable.

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

(f) When designated by ATCSCC as the Primary ATC Facility, ARTCC responsibilities include:

(1) When necessary, coordinate with the Chief, Aerial Reconnaissance Coordinator, All Hurricanes (CARCAH) and aircrew(s) on flight plan specifics.

(2) If the mission profile changes, coordinate with the ATCSCC for FEA modifications, ensure other affected ATC facilities are aware of the change.

(3) Advise the ATCSCC and other affected ATC facilities of any mission cancellation or delay information received from the flying unit.

(g) Should it become necessary for ATC to contact a TEAL or NOAA flight and all other methods of communication are not possible (e.g., direct radio, ARINC, aircraft relay), CARCAH may be requested to relay messages to/from the aircraft. CARCAH may phone the appropriate ATC facility to authenticate the request.

5. Requests to change any portion of the NHOP or MOA must be coordinated with ATO System Operations Security.

5–3–7. 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 9-2-23.

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 approved separation services at all times.

NOTE-

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

REFERENCE-

FAA Order JO 7110.65, Para 9-2-23.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-

FAA Order JO 7110.65, Subpara 2–1–4n, Operational Priority. FAA Order JO 7110.65, Para 9–2–23, 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.

5–3–8. FOREIGN STATE DIPLOMATIC FLIGHTS

Diplomatic clearances that authorize foreign state aircraft (military or non-military) to operate in U.S. territorial airspace for a specific time and purpose are approved by the U.S. State Department. Except for Open Skies Treaty priority flights, foreign state diplomatic flights are non-priority. Contact the FAA System Operations Support Center (SOSC) (202-267-8276 or email 9-ATOR-HQ-RT-REQ@faa.gov) with questions or issues concerning foreign state diplomatic flights.

Section 5. 14 CFR Part 91, UAS Operations

5-5-1. TYPES AND AUTHORITY

a. Public aircraft operating under Part 91.

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

2. For UAS operating (including tethered/ moored UAS) as public aircraft, the authority is the Certificates of Waiver or Authorization (COA) or as specified in a Memorandum of Agreement (MOA), or Memorandum of Understanding (MOU) between the using agency and FAA Headquarters. These types include:

(a) Standard COA.

(b) Blanket COA.

b. UAS (including tethered/ moored UAS) operating as civil aircraft operating under Part 91.

1. Any operation that does not meet the statutory criteria for a public aircraft operation is considered a civil aircraft operation and must be conducted in accordance with all FAA regulations applicable to the operation.

2. For UAS operating as civil aircraft the authority is a special airworthiness certificate, restricted category aircraft (21.25), Type Certificate, or a Section 44807 exemption with COAs.

3. When the Section 44807 exemption is granted, the petitioner will be issued a Blanket COA. If the operation cannot be conducted under the provisions of the Blanket COA, the proponent must apply for a Standard COA. A waiver request to a Blanket COA will not be approved.

5-5-2. OPERATIONS

a. UAS operating under Part 91 COA can be VFR or IFR.

b. The UAS Pilot-in-Command (PIC) is to give way to all manned aircraft, except when operating under IFR.

c. UAS operations should not impede, delay, or divert manned aircraft operations, except as directed by ATC for operational necessity.

d. If a Part 91 operation is conducted entirely at or below 400 ft. AGL then any ATC services will be contained in a Letter of Agreement or ATC Memorandum.

e. Flights below Flight Level (FL) 180 must have a dedicated observer or a waiver to 14 CFR 91.113. These duties will be performed by a ground-based observer or chase plane. UAS pilots and observers must be responsible for only one UA at a time unless authorized in the COA.

1. Daisy chaining of observers or observers on a moving platform may be approved on a case-by-case basis and as authorized in the COA.

2. When a ground-based/chase plane observer is required, a pilot may not perform concurrent duties as the pilot and an observer.

f. Procedures for non-joint-use Department of Defense (DOD) airfield operations will be specified by the DOD.

5-5-3. RESPONSIBILITIES

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

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

c. The following operations are not authorized for UAS:

1. Instructions to visually follow another aircraft.

2. Opposite Direction Operations (ODO).

3. Special VFR operations.

4. Operations requiring UAS to maintain visual separation.

d. The use of sequencing as indicated in FAA Order JO 7110.65, Chapter 3, Section 8, is authorized with the exception of issuing instruction to follow another aircraft or to maintain visual separation.

e. In the event of a UAS emergency, procedures outlined in FAA Order JO 7110.65, Air Traffic Control, Chapter 10, will be followed.

f. Air traffic facility management at facilities where UAS operations are being conducted are required to ensure air traffic controllers are familiar with the contents of each COA and any applicable LOAs impacting their area of specialization.

g. Operational communication with any UAS PIC must be on a recorded line, when available.

5–5–4. OPERATIONS IN CLASS A AIRSPACE

a. UAS must operate on an IFR flight plan and a standard COA.

b. UAS must comply with the provision of § 91.135.

c. ATC must provide separation and ATC services per FAA Order JO 7110.65 with consideration given to UAS performance characteristics and potential latency issues.

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

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

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

5-5-6. OPERATIONS IN CLASS B AIRSPACE

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

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

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

5-5-7. OPERATIONS IN CLASS C AIRSPACE

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

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

5–5–8. OPERATIONS IN CLASS D AIRSPACE

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

5-5-9. OPERATIONS IN CLASS E AIRSPACE

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

5-5-10. OPERATIONS IN CLASS G AIRSPACE

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

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

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

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

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

1. Lost Link, to include flight termination points.

2. Flyaway.
3. Lost Sight of UAS by the visual observer.

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

5. Weather requirements for operations.

6. ATC facilities responsibilities.

7. UAS proponent responsibilities.

NOTE-

LOAs may be used in conjunction with COAs when the ATM deems it necessary; they cannot be used in lieu of COAs.

Section 2. Procedures

8-2-1. THREE MILE OPERATIONS

Facilities may adapt airspace to permit the use of 3 NM separation as defined in FAA Order JO 7110.65, Air Traffic Control, subpara 5-5-4c, subpara 5-5-4d, or subpara 5-5-4e, provided all of the following are met:

a. An operational advantage will be obtained. Consideration must be given to such aspects as terminal interface, radar reliability, etc.

b. Facility directives are issued to:

1. Define the 3 NM separation area.

2. Permit 3 NM separation in the defined area.

3. Accommodate local procedural changes.

c. ERAM:

1. The 3 NM separation area is displayable on the video map.

2. The aircraft alert volume is adapted for 3 NM separation.

3. Within 40 NM of the preferred radar; or

4. Within 60 NM of the preferred radar when using ASR–9 with Mode S or ASR–11 MSSR Beacon; or

5. When the facility is operating in track–based display mode.

NOTE-

1. ADS–B allows the expanded use of 3 NM separation in approved areas. It is not required for and does not affect the use of radar for 3 NM separation.

2. The Surveillance Services Directorate provides maps to facilities depicting the geographic areas and altitudes where ADS-B has been validated for 3 NM separation.

d. MEARTS: All sort boxes within 40 NM of the sensor or within 60 NM of the sensor when using ASR–9 with Mode S or ASR–11 MSSR Beacon and with the single site indicator set to permit the use of 3 NM radar separation.

8-2-2. ADAPTED ALTIMETER SETTINGS

Ensure a current altimeter setting from the adapted reporting station for each radar sort box/surveillance sort cell or geographic area is input into the center's computer. When an altimeter setting for an adapted reporting station cannot be obtained, enter the altimeter setting from the appropriate alternate reporting station.

8–2–3. ADAPTATION OF EXTERNAL ALTIMETER SETTINGS

Adaptation of altimeter settings for reporting stations outside a facility's area is optional up to the maximum number listed in the NAS adaptation specifications.

8–2–4. CONFLICT ALERT FUNCTION PARAMETERS

a. Use the approved CA preset values as defined in the ERAM Site Adaptation Manual (SAM) unless otherwise approved by the En Route and Oceanic Safety and Operation Support Office.

b. Facility air traffic managers are authorized to inhibit the display of CA at specified sectors and within ERAM Aircraft Alert Volumes (AAVs).

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

a. Use the approved MCI CA preset values as defined in the ERAM Site Adaptation Manual (SAM) unless otherwise approved by the En Route and Oceanic Safety and Operations Support Office.

b. MCI Alert base altitude must be set at any value between ground level and 5,000 feet MSL at the discretion of the facility air traffic manager. When a facility's or sector's ground level is above 5,000 feet MSL, base altitudes may be set to 1,500 AGL. Any instance of base altitudes above 5,000 feet MSL must be documented and forwarded to the En Route and Oceanic Safety and Operations Support Office through the respective Service Area Operations Directorate.

c. Facility air traffic managers are authorized to temporarily adjust the Mode C Intruder Alert base altitude at a sector(s) when excessive MCI alerts derogate the separation of IFR traffic. For the purpose of this section, temporary is considered to be of less than 4 hours duration, not necessarily continuous, during any calendar day. The following is required when MCI base altitude is adjusted:

1. Log each occurrence when this procedure is used on FAA Form 7230–4, including the sector and temporary altitude.

2. Documentation must be forwarded according to 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 internal altitude information adapted in the polygons agrees with the MIA sector charts and is in accordance with the ERAM Site Adaptation Manual.

8–2–7. WAIVER TO INTERIM ALTITUDE REQUIREMENTS

Where sector conditions; e.g., heavy traffic or sector complexity, preclude meeting the requirements of FAA Order JO 7110.65, Air Traffic Control, subpara 5–14–3a3(a)(b), Computer Entry of Flight Plan Information, 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.

8-2-8. REQUIREMENTS FOR ERAM DATA BLOCK CHANGES WITHOUT COORDINATION

Where sector conditions offer a significant operational advantage, air traffic managers may authorize exceptions to data block change coordination required by FAA Order JO 7110.65, Air Traffic Control, para 5-4-5, Transferring Controller Handoff, and FAA Order JO 7110.65, Air Traffic Control, para 5-4-6, Receiving Controller Handoff. The facility directive or LOA must contain, at a minimum:

a. Sectors where the directive or LOA applies.

b. Specific situations where omission of coordination is permitted.

EXAMPLE-

LOA specifies the aircraft will be descending to FL290 and changes in interim altitude are authorized after handoff to get to FL 290.

NOTE-

Consideration needs to be given to the ability of all sector team members to readily discriminate the indicator in the B4 field under varied conditions, such as font size and brightness, situation display orientation, and lighting. There is a significant operational difference between accepting a handoff with:

a. An "up arrow" in which aircraft will not climb beyond displayed assigned altitude, and

b. A "T" (interim) altitude where the aircraft may climb beyond the currently displayed interim altitude.

8-2-9. ERAM HOLD INFORMATION FACILITY DIRECTIVE REQUIREMENTS

Where sector conditions offer a significant operational advantage, air traffic managers may authorize exceptions to FAA Order JO 7110.65, Air Traffic Control, para 5-14-9, ERAM Computer Entry Hold Information. The facility directive must contain, at a minimum:

- a. Sectors where the directive applies.
- **b.** Required coordination procedures.
- c. Specific instructions for reporting delays.

8-2-10. ERAM SPECIAL ACTIVITY AIRSPACE (SAA) ADAPTATION

Facilities must ensure that every SAA within their Aircraft Problem Detection (APD) Area is adapted for SAA scheduling and alert processing.

8–2–11. ERAM HOLDING PATTERN ADAPTATION

Ensure published holding patterns on Standard Terminal Arrival Routes (STARs) are adapted to automatically populate the Hold Data Menu.

NOTE-

Adapting holding patterns will reduce controller workload by automatically populating the Hold Data Menu. Therefore, facilities should consider adapting all frequently used holding patterns.

8-2-12. ERAM MASTER TOOLBAR MAP BUTTON LABEL

Ensure the adapted label of the GEOMAP button matches the name of the GEOMAP selected at the sector. The map button label may be displayed on two lines and may include spaces to improve label readability.

NOTE-

Since the GEOMAP is saved with the preference set, displaying the map name on the GEOMAP button label provides a visual indication to the controller when a GEOMAP changes as a result of invoking a preference set.

8-2-13. LOCAL INTERIM ALTITUDE

Ensure that the ERAM Local Interim Altitude function is turned on.

Handled Count. Count such military aircraft movements as follows:

a. Consider flights of more than one aircraft operating in a formation and handled as a single aircraft as a single unit, however, if the formation breaks up into smaller formations, take another count for each individual formation or individual flight.

b. Consider as a military mission any operation involving two or more military aircraft flying over routes which require coordination to reserve an altitude or a block of altitudes and count the entire mission as one flight.

NOTE-

"Military Mission" refers to an "altitude reservation" that is approved by CARF or by the ARTCC when the operation is not covered in a letter of agreement.

c. Take a separate operations count for each aircraft in a military mission when:

1. Radar service is provided to individual aircraft (or flights).

2. Aircraft operating outside areas of radar coverage have at least 15 minutes separation.

9-1-5. USE OF AUTOMATED COUNTS

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

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

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

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

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

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

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

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

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

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

3. Special Use: Routinely these columns are not used, but are provided for the occasional special project which may be directed by Washington 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.

- 7/16/20
- **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.

- **1.** Runway status (CLOSED/INACTIVE)
- 2. Runway crossing

3. Vehicle, personnel or equipment on active runway/s

- 4. Land and Hold Short Operations (LAHSO)
- 5. Line Up and Wait (LUAW)
- **6.** Landing clearance

c. Approved memory aids will be maintained in the Runway Safety Memory Aid Toolbox. The use of memory aids that are not maintained in the toolbox must be approved by Operations – Headquarters AJT-2 through the appropriate Service Area Director of Air Traffic Operations.

NOTE-

Director approved memory aids must be coordinated with Runway Safety for inclusion in the memory aid toolbox.

d. 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-

FAA Order JO 7110.65, Para 3–1–4, Coordination Between Local and Ground Controllers.

FAA Order JO 7110.65, Para 3–1–7, Position Determination.

e. FAA Order JO 7110.65, Air Traffic Control, contains procedures for the control of aircraft/vehicle movements on active runways. Exceptions may be authorized, upon approval by the 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 FAA Order 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.

f. 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.

g. 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) Intrafacility.
 - (c) Interfacility.
 - (d) Technical operations.
 - (e) Traffic management.
- 2. Memory aids.
- 3. Safety Logic System.
- 4. Status information area.
- 5. Airfield lighting.
- 6. NAVAIDs.
- **7.** ATIS.
- 8. Entry on the daily log.

c. May increase the number of items and/or the level of detail of the opening and closing checklist as they deem necessary.

d. Must ensure that a facility directive includes procedures for the mandatory use of an approved memory aid that indicates the status of the runway (CLOSED/INACTIVE).

e. Must implement approved memory aids and develop procedures outlining their use.

NOTE-

When implementing these procedures, one should consider short-term versus long-term closures as well as planned versus unplanned processes.

REFERENCE-

FAA Order JO 7110.65, Para 3-3-1, Landing Area Condition FAA Order JO 7110.65, Para 3-3-2, Closed/Unsafe Runway Information FAA Order JO 7110.65, Para 4-7-12, Airport Conditions FAA Order JO 7210.3, Para 4-7-3, System Impact Reports FAA Order JO 7210.3, Para 10-1-7, Use of Active Runways FAA Order JO 7210.3, Para 18-5-13, Electronic System Impact Reports

10–1–9. FLIGHT PROGRESS STRIP USAGE

Air traffic managers at automated terminal radar facilities may waive the requirement to use flight progress strips provided:

a. Back-up systems such as multiple radar sites/systems 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.

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 49 CFR Part 1540/1542 and 14 CFR Part 139 subject to icing weather conditions with control towers, should

develop LADPs in order to involve all interested parties in the deicing/anti-icing process. Aircraft departing from airports without a LADP are not exempt from any traffic management initiative.

b. The operators of these airports have been requested to host meetings involving airport users and air traffic in a partnership effort to achieve common solutions to local aircraft ground deicing/anti-icing problems. The emphasis is on developing local strategies that minimize the amount of time an aircraft spends on the ground after being deiced/anti-iced.

NOTE-

Deicing is the process of removing existing frozen precipitation, frost, or ice from aircraft surfaces. Anti-icing is the process of preventing accumulation of frozen contaminants on aircraft surfaces. Both processes may involve the application of various fluids to the aircraft.

c. Air traffic managers who receive requests from airport operators to participate in these meetings will use the following guidance:

1. When requested by the airport operator, the air traffic manager must participate in the development of a LADP. Since a LADP can affect an airport 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 FAA Order JO 7210.3.

NOTE-

The pilot-in-command remains the final authority as to aircraft operation. Air traffic is not responsible for tracking or adherence to aircraft holdover times.

4. Coordinate the expected start time, actual start time and stop time of the LADP with the appropriate ARTCC TMU. The ARTCC TMU will forward these times to the ATCSCC.

5. Balance the airport flow to accommodate demand. Adjust the arrival rate with the departure rate. These rates should reflect the number of operations expected to occur during deicing/anti-icing conditions and facilitate minimizing the amount of time an aircraft spends on the ground after being deiced/anti-iced.

6. Aircraft operators at LADP airports are responsible for complying with issued Expect Departure Clearance Time (EDCT) times and will not be exempted from compliance with these times. However, once an aircraft has been deiced/anti-iced, it must be released unless a ground stop applicable to that aircraft is in effect. If a facility believes aircraft operators are not performing deicing/anti-icing in a manner consistent to meet the EDCT time, the facility must notify the ATCSCC through the appropriate TMU.

7. Allocate the available departure slot capacity, when departure rates are reduced because of deicing, consistent with available resources. Facilities should consider the following un-prioritized 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 5. Terminal Radar

10-5-1. SHUTDOWN OF PAR ANTENNAS

When PAR equipment is not required for ATC controller training, maintenance, or other use, shut down the antenna. Keep the main power supply and the high voltage system energized to permit immediate restoration of PAR equipment for operational use.

10-5-2. RADAR DISPLAY INDICATORS

a. Radar approach and departure control functions will normally be conducted from a TRACON. Either direct view or a CTRD may be used. These functions may be performed from the tower cab:

1. If not more than two radar operating positions are required and CTRDs are used on a permanent basis.

2. If more than two operating positions are required and CTRDs are installed on an interim basis pending the establishment of a TRACON.

3. On a temporary basis if other than CTRDs are installed.

b. Consider the following if scan conversion type bright display equipment is used:

1. A standard bright display installation consists of one operational and one standby scan conversion unit. The range and centering selected for the master bright display will be the same on all slaved bright display indicators.

2. If the particular radar operating positions concerned require a capability for individual beacon decoding, each bright display position will require a separate scan conversion unit.

3. That a determination must be made if surveillance approach capability would be lost using only scan conversion bright display indicators. If the determination is that it would be lost, at least one direct view indicator must be retained.

c. VFR Radar Advisory Service functions will normally be conducted from the TRACON.

d. A CTRD installed in the tower cab for LC use must be positioned where it can be conveniently

viewed from the local controller's normal sitting or standing position.

e. PAR functions will normally be conducted in a TRACON.

f. ASDE indicators must be placed in the tower cab so as to serve the LC and GC positions.

g. The CTRD may be used for any terminal radar function.

h. The 12–inch or larger display monitor may be used in lieu of a CTRD when authorized by the region and the display is certified by Technical Operations (Tech Ops). Any display monitor less than 12 inches must not be used for ATC separation purposes. It is primarily to provide alphanumeric readout capability to the CD/FD position at locations where that position has keyboard access to STARS.

10-5-3. FUNCTIONAL USE OF CERTIFIED TOWER RADAR DISPLAYS

a. At towers combined with full radar approach control facilities where controllers rotate between the approach control and the tower, CTRDs may be used by local controllers for any terminal radar function provided their ability to satisfy FAA's air traffic responsibilities regarding the aircraft operating on the runways or within the surface area for which the tower has responsibility is not impaired. The conditions and/or limitations for the radar usage must be specified by a facility directive.

b. At towers combined with full radar approach control facilities where controllers do not rotate between the approach control and the tower, or at towers not combined with full radar approach control facilities, CTRDs may be used by local controllers for the following functions:

1. To determine an aircraft's identification, exact location, or spatial relationship to other aircraft.

NOTE-

This authorization does not alter visual separation procedures. When employing visual separation, the provisions of FAA Order JO 7110.65, Air Traffic Control, 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 FAA Order JO 7110.65, Air Traffic Control, Chapter 5, Radar, must not be utilized. Uncertified displays must be used only as an aid to assist controllers in visually locating aircraft or in determining their spatial relationship to known geographical points.

d. Operational applications of tower radar displays other than those outlined in subparas a and b, and/or the delegation of airspace to a tower require a staff study as prescribed in Para 2-1-16, Authorization for Separation Services by Towers.

10-5-4. ASR PERFORMANCE CHECKS

Each radar controller is responsible for determining on a day-to-day basis if the quality of their radar display and video display accuracy is satisfactory for ATC purposes.

a. At locations using digital terminal automation systems (DTAS), such as STARS, 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-FAA Order JO 7110.65, Para 5-1-2, Alignment Check.

10-5-5. DEFICIENCIES IN SYSTEM

Note deficiencies in the radar system on FAA 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.

Section 2. Data Recording and Retention

12-2-1. DATA RECORDING

a. Type or write the date on the console printout at the start of each operational day or as specified in a facility directive. The facility directive must require the time that the date must be entered daily.

NOTE-

The operational day for a 24-hour facility begins at 0000 local time. The operational day at a part time facility begins with the first operational shift in each calendar day.

b. As a minimum, record on the console failure/error messages regarding Data Acquisition Subsystem (DAS), Data Entry and Display Subsystem (DEDS), and Interfacility (IF).

NOTE-

When a failure is known to exist, that particular failure printout may be inhibited to minimize its impact on the system.

c. Facilities having continuous data recording capabilities must extract and record on tape or disc:

1. Tracking messages, target reports, and sector time.

2. Automatic functions and keyboard input data.

3. Interfacility messages.

4. MSAW and CA warning message data. Other data available in the extraction routine may be extracted.

d. Air traffic facilities using a teletype emulator (TTYE) in lieu of a console printout (TTY) must store and retain data in accordance with Paragraphs 12–2–1, Data Recording, and 12–2–2, Data Retention. However, the data may be retained on a disc or hard drive as specified in a facility directive.

12-2-2. DATA RETENTION

a. Write on each data extraction tape/disc:

- 1. The tape/disc drive number.
- 2. The date.

3. The times (UTC) the extraction started and ended.

4. The items listed in subpara 12–2–1c not extracted.

5. The data extracted in addition to that required by subpara 12-2-1c.

6. The initials of the person changing the recording.

b. Retain data extraction recordings for 45 days except:

1. Accidents: Retain data extraction recordings in accordance with FAA JO 8020.16, Air Traffic Organization Aircraft Accident and Incident Notification, Investigation, and Reporting.

2. Incidents: Retain data extraction recordings in accordance with FAA JO 8020.16.

3. Tarmac Delay: When a facility is notified that an aircraft has or may have exceeded the "Three/Four-Hour Tarmac Rule," retain data recordings relevant to the event for 1 year.

c. If a request is received to retain data information following an accident or incident, the printout of the relative data will suffice. The tape/disc may then be returned to service through the normal established rotational program. The printout data are considered a permanent record and must be retained in accordance with aircraft accident/incident retention requirements. Reduction of the extracted data to hard–copy format will be made at the earliest time convenient to the facility involved without derogation of the ATC function and without prematurely taking the computer out of service. Do not make these data and printouts a part of the accident/incident package.

d. If a request is received to retain a specific data recording and the data are available and contained on tape, the tape must be retained in its entirety. If the data are contained on disc, the facility may transfer all pertinent data to magnetic tape and label the tape a *Duplicate Original*. After successful transfer, the disc pack may be returned to service through the normal rotational cycle. However, if a specific request is received to retain the disc, the disc pack must be retained in its entirety.

e. Treat data extraction recordings pertaining to hijack aircraft the same as voice recorder tapes.

REFERENCE-

FAA Order JO 7210.3, Para 3–4–4, Handling Recorder Tapes DATs, or DALR Storage.

12-2-3. FAULT LOG

a. Whenever the computer fails during normal operations, all pertinent data must be recorded on the Fault Log. However, if the computer failure is the first of a particular nature and an operational requirement exists to resume normal computer

operation as soon as possible, a Fault Log need not be recorded.

b. When you anticipate the need for assistance from the National Field Support Group (NFSG), record the entire contents of memory before restarting the operational program.

c. Retain the Fault Log and the memory dump until the cause of the fault has been determined or NFSG requests them.

Section 3. Charted VFR Flyway Planning Chart Program

12-3-1. 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.

12-3-2. 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.

12-3-3. 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.

Charted VFR Flyway Planning Chart Program

Section 4. Helicopter Route Chart Program

12-4-1. 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 associated with them will normally be voluntary. However, controllers may assign charted routes and altitudes and expect or request pilot compliance with them, provided such procedures are called for in specific FAA–operator Letters of Agreement, or are necessitated by traffic density and/or safety considerations; controllers also may restrict operations within designated operating zones when requested by local law enforcement officials and the restriction would not adversely affect other aircraft operations.

c. 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.

12-4-2. 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.

12-4-3. 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.

12-4-4. 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 Operations 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.

12-5-1. POLICY

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.

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.

12–5–2. 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.

12–5–3. 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.

12-5-4. 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

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 6. Standard Terminal Automation Replacement System (STARS)

12-6-1. OPERATIONAL USE

a. Do not use STARS data when the system is released to Technical Operations Services.

b. Verify the operational status of all STARS components daily.

c. Advise affected facilities when STARS equipment will not be operational at normal startup time, when it fails, is shut down, resumes operation, or when interfacility mode is lost/regained.

12-6-2. DATA ENTRIES

Facility directives must prescribe the use of the scratch pad and the specific responsibility for entering the current ATIS alpha character, the current general system information (GSI), and the system altimeter setting. When 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.

12-6-3. DISPLAY DATA

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

b. Display Mode C on untracked (unassociated) targets within each controller's area of responsibility by setting the altitude filters to encompass all altitudes within the controller's jurisdiction. Set the upper limits no lower than 1,000 feet above the highest altitude for which the controller is responsible. In those stratified positions, set the upper and lower limit to encompass at least 1,000 feet above above and below the altitudes for which the controller is responsible. When the position's area of responsibility includes down to an airport field

elevation, the facility will normally set the lower altitude filter limit to encompass the field elevation, so that provisions of FAA Order JO 7110.65, Air Traffic Control, Para 2–1–6, Safety Alert, and subpara 5–2–17a2, Validation of Mode C Readout, may be applied. Air traffic managers may authorize the temporary suspension of this requirement when target clutter is excessive.

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

12–6–4. USE OF STARS QUICK LOOK FUNCTIONS

a. When operational benefits are gained by using the QUICK LOOK function, specify the following in a facility directive or an LOA:

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

2. Communications changeover points.

3. Transfer of control points.

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

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

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

12–6–5. AUTOMATION PROGRAM CHANGES

The air traffic manager of STARS facilities must:

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

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

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

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

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

EXAMPLE-

"National operating system suitability testing completed, acceptable."

12–6–6. AUTOMATIC ACQUISITION/TERMI-NATION AREAS

a. Facility air traffic managers must:

1. Establish automatic acquisition areas for arrivals and overflights at ranges permitting auto-acquisition of targets prior to the ARTCC/STARS-to-STARS automatic handoff area.

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

3. Establish automatic acquisition areas for departing aircraft 1 mile or less from the runway end.

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

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

NOTE-

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

b. The appropriate Service Area Director of Air Traffic Operations, may authorize a distance greater than specified in subparagraphs 3 and 4 above, where the operational conditions dictate.

12–6–7. MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA)

a. Facility air traffic managers may temporarily inhibit the MSAW, the Approach Path Monitor portion of MSAW, and/or the CA functions when their continued use would adversely impact operational priorities. Inform the appropriate Service Area Director of Air Traffic Operations when equipment or site adaptation problems preclude these functions from being used.

b. Facility air traffic managers are authorized to inhibit CA at specific operating positions if an operational advantage is gained.

c. MSAW General Terrain Maps (GTMs) must be kept current.

d. Facility air traffic managers must ensure that:

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

NOTE-

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

2. MSAW parameters are modified, as appropriate, to minimize the extent of inhibit areas as specified in the Standards and Guidelines for STARS.

3. An aural test of the MSAW speakers located in the operational quarters is included as part of the equipment checklist required during each watch. The purpose of this test is to ensure the aural alarm is functioning and audible to the appropriate operational personnel. **4.** Controllers are aware of the towers geographic locations where aural alarms sound. (MSAW aural alarm areas.)

5. Tower aural alarm areas are identified.

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

12–6–8. MAGNETIC VARIATION AT STARS FACILITIES

Air traffic managers must ensure that the magnetic variation of MSAW GTMs, and radar site settings coincide. The magnetic variation must be verified annually and a change of 3 degrees or more requires a recompiling of the affected map or maps.

NOTE-

The adapted radar site settings are the primary reference for maintaining radar antenna alignment.

REFERENCE-

FAA Order JO 7210.3, Para 12–6–7, Minimum Safe Altitude Warning (MSAW) and Conflict Alert (CA).

FAA Order JO 7210.3, Para 12–6–9, MSAW GTM Cartographic Certification, Updates, and Recompilation.

12–6–9. MSAW GTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION

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

b. The MSAW GTM must be recompiled by the AJV-A2 if:

1. The Point of Tangency on which the map is based is relocated more than 300 feet away from its original position and/or,

2. The magnetic variation of the site changes by 3 degrees or more.

NOTE-

Requests for new or recompiled MSAW GTMs are routed to AJV-A2. AJV-A2 can take up to eight weeks to build and_deliver a GTM, particularly for mountainous terrain areas.

12-6-10. 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 FICO for a flight inspection.

12–6–11. 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 subparagraphs b or c below. These parameters are set by the Operational Support Facility (OSF).

b. MCI Alert base altitude must be set at any value between ground level and 500 feet AGL at the discretion of the facility air traffic manager. Any instance of base altitudes above 500 feet AGL must be documented by the OSF.

c. Facility air traffic managers are authorized to temporarily adjust the MCI Alert base altitude at a sector(s)/position(s) when excessive MCI Alerts derogate the separation of IFR traffic. For the purpose of this section, temporary is considered to be of less than 4 hours duration, not necessarily continuous, during any calendar day. Log each occurrence on FAA Form 7230–4, when this procedure is being used, including the sector/position and temporary altitude.

d. Facility air traffic managers are authorized to inhibit the display of MCI Alert at specified sectors/position.

12–6–12. 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.

12–6–13. 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.

12–6–14. 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.

Section 7. Safety Logic Systems Operations Supervisor/CIC Procedures

12-7-1. ASDE SYSTEM OPERATION

a. Safety logic systems are software enhancements to the ASDE systems (ASDE–3, ASDE–X and ASSC) that predict the path of aircraft landing and/or departing, and/or vehicular movements on runways. Visual and aural alerts are activated when the safety logic projects a potential collision.

b. The safety logic system must be operated in a full core alert runway configuration. (In ASDE-X/ASSC, when rain configuration is selected, it includes full core alerting capabilities.)

c. In the event of a Multilateration (MLAT) failure, ASDE-X/ASSC will stay operational. In this case, ASDE-X/ASSC 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/ASSC 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 OS/CIC must validate, upon resuming normal AMASS operations, that runway configurations and other user settings are adequate for operational use.

NOTE-

Action to change AMASS online/offline status is a technical operations function. ASDE –X/ASSC safety logic will automatically be disabled when the system is in maintenance mode.

e. When a runway becomes unavailable for aircraft operations for an extended period of time, the runway should be entered as "closed" in the safety logic system. Facility procedures should be developed to address using the safety logic system in this capacity.

f. Construction projects in the vicinity of runways may cause nuisance or false alerts. It is the responsibility of air traffic facility management to mitigate alerts.

1. Air traffic facilities must use the ASDE-X/ASSC "Inhibit Area" map feature to manage construction related alerts when possible.

2. National Airway Systems Engineering (NAS Engineering) is able to assist facilities that do not have access to the ASDE-X/ASSC "Inhibit Area" map feature to manage construction related alerts. Facilities must contact NAS Engineering for assistance 30 to 45 days before construction via email at 9–AMC–ATOW–ASDES@faa.gov/.

g. Changes to the airport movement areas which require updated ASDE-X/ASSC Maps can be provided by NAS Engineering. Facilities must contact NAS Engineering for assistance 30 to 45 days before construction via email at 9–AMC–ATOW–ASDES@faa.gov/.

h. ASDE–X/ASSC false targets may be temporarily track dropped after positive verification has been done by pilot/vehicle operator position report or controller visual observation. When a false target is temporarily dropped, it must be noted on FAA Form 7230–4, Daily Record of Facility Operation.

REFERENCE-

FAAO JO 7110.65, Para 3-6-2, Identification.

i. The air traffic manager may authorize a real target to be inhibited from safety logic processing when the target will likely generate a nuisance alert.

12-7-2. ENSURE STATUS

a. The OS/CIC is responsible for ensuring that the Safety Logic System is set for the correct runway configuration.

b. The OS/CIC must ensure that the operational status of the Safety Logic System is known to all operational personnel.

c. When a status change is made to the Safety Logic System all personnel assigned an operational position must be notified verbally.

d. When any status change is made to the Safety Logic System it must be noted on FAA Form 7230–4, Daily Record of Facility Operation. Such status must be shown in the facility Status Information Area (SIA). The OS/CIC must ensure that all outages are carried over on applicable logs.

12–7–3. MONITOR ALERTS AND ENSURE CORRECTIVE ACTION

a. The OS/CIC must ensure that the Safety Logic System is monitored and all alerts are complied with.

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

REFERENCE-

Pilot/Controller Glossary Term– Safety Logic System Alerts. FAA Order JO 7210.632, Chapter 2, Reporting Requirements. FAA Order JO 7210.632, Appendix A, Mandatory Occurrence Report Criteria.

12-7-4. RAIN CONFIGURATION

a. Due to the required sensitivity of surface movement radars, numerous false targets may be generated by moderate to extreme precipitation. During these periods the ASDE Safety Logic Systems should be operated in rain configuration. Should precipitation of this magnitude occur or be imminent, rain configuration may be applied to avoid the likelihood of false alerts.

b. When the event that led to placing the system into rain configuration is no longer a factor, the Safety Logic System must be reset to a normal configuration.

NOTE-

When AMASS is in rain configuration all safety logic alerts with the exception of arrivals to a closed runway are inhibited and AMASS is not in full core alert status.

12-7-5. LIMITED CONFIGURATION

a. Under certain circumstances, there may be a need to operate the Safety Logic System in limited configuration. The limited configuration must only be used to temporarily inhibit persistent false alerts. The term "persistent false alert" refers to frequent false alerts caused by continuous or repetitive circumstances. False alerts caused by random events or circumstances of short duration are not considered "persistent false alerts." The determination of "persistent false alerts" is at the discretion of each OS/CIC.

b. Due to the required sensitivity of surface movement radars, numerous false targets may be caused by precipitation of moderate or greater intensity. Should precipitation of this magnitude occur or be imminent at locations where ASDE does not have rain configuration availability, limited configuration may be applied to avoid the likelihood of false alerts.

c. When it is necessary to operate the ASDE-X/ASSC Safety Logic System in limited configuration due to "persistent false alerts," notify Technical Operations so that corrective action can be taken.

d. When an AMASS false alert is received, limited configuration must only be used until Technical Operations verifies that the system is functioning properly and that the data necessary to analyze the alert has been obtained. Analysis and resolution of the circumstances surrounding the false alert will be determined by Technical Operations at a later date.

e. When limited configuration is applied, it must be noted on FAA Form 7230–4, Daily Record of Facility Operation, including the reason for the configuration change. Ensure that all limited configurations are carried over on applicable logs.

NOTE-

1. For AMASS, the limited configuration disables all alerts except arrivals to a closed runway and is not considered full-core alert status.

2. For ASDE - X/ASSC the limited configuration disables all alerts except arrivals to and departures on a closed runway and is not considered full-core alert status.

12-7-6. WATCH CHECKLIST

The Safety Logic System status must be included in the facility watch checklist. At a minimum, the following items must be reviewed:

a. Operational status.

b. Runway configuration.

c. Presentation of the Safety Logic System data on all ASDE system displays.

d. When test button is activated, the aural alert is heard, and the speaker volume is adequate.

Section 8. VFR Waypoint Chart Program

12-8-1. POLICY

a. The VFR Waypoint Chart Program was established to provide VFR pilots with a supplemental tool to assist with position awareness while navigating visually in aircraft equipped with area navigation (RNAV) receivers. The program's purpose is to enhance safety, reduce pilot deviations, and provide navigation aids for pilots unfamiliar with an area in or around Class B, Class C, 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.

12-8-2. 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.

12-8-3. CRITERIA

Use the following criteria for establishing VFR waypoints on VFR navigation charts. Establishment of VFR waypoints should be minimized to reduce chart clutter and complexity. RNAV and Global Positioning System aircraft will more accurately fly over a specific point and this should be considered when developing VFR waypoints. Avoid placement of VFR waypoints directly over heavily populated or sensitive structures or areas; e.g., hospitals, government buildings, schools, power plants, etc.

a. Applications.

1. Avoidance of specific airspace; e.g., Class B, SUA, etc. VFR waypoints must not be used to define airspace boundaries.

2. Support VFR flyway routes with entry and exit points, and, when necessary, intermediate waypoints.

NOTE-

For VFR routes, refer to Section 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 request to Aeronautical Information Services, through the Service Area Operations Support Group (OSG) describing the checkpoint and providing the latitude/longitude location.

6. VFR waypoints must not be used for those navigational aids, airports, etc., which currently exist in the 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 FAA Order JO 7350.9, Location

Identifiers, and on one of the panels of the appropriate chart.

12-8-4. RESPONSIBILITIES

a. Proponent. Any interested party may recommend the addition of VFR waypoints to VFR navigation charts or helicopter charts via the appropriate air traffic facility.

b. Air traffic facilities must:

1. Prepare VFR waypoint recommendations. The most important task in preparing the recommendation is coordination with local aviation interests; i.e., Aircraft Owners and Pilots Association, 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 Service Area OSG containing:

(a) A new or revised VFR navigation chart depicting the location and five-letter name of each waypoint/checkpoint.

(b) A completed Appendix D, FAA Form 8260–2, Data Worksheet, in accordance with FAAO 8260.19, Flight Procedures and Airspace. A list of available VFR waypoint five–letter names can be obtained from the Service Area OSG or from Aeronautical Information Services, National Flight Data Center. Flight checks are not required.

(c) A textual description of each waypoint including the name and latitude/longitude.

(d) A graphic or satellite image with the precise point of the VFR waypoint depicted. It is critical that the depictions be easily readable by the Aeronautical Charting Group, Enroute and Visual Charting Team in order to verify the position for accurate charting.

(e) Justification/supporting rationale.

c. The Service Area OSG must:

1. Provide assistance to the air traffic facility, if requested, to prepare the textual description of each waypoint including the name and latitude/longitude and/or to depict the VFR waypoints on a satellite image.

2. Approve the VFR waypoint charting and ensure compliance with the prescribed criteria. If approval is granted, the Service Area OSG must forward the package to Aeronautical Information Services, National Flight Data Center at least 12 weeks prior to the planned implementation date. The planned implementation date must coincide with a publication date of the respective VFR navigation chart.

3. Coordinate overall activity when multiple facilities are affected by the planned use of VFR waypoints such as numerous VFR waypoints on a VFR chart.

4. Maintain the VFR waypoint forms (FAA Form 8260–2, Radio Fix and Holding Data Record) to include corrections, changes, or modifications, as necessary.

5. Conduct annual reviews.

d. Aeronautical Information Services, National Flight Data Center must:

1. Review the incoming VFR waypoint proposals for completeness.

2. Verify that the requested five-letter "VP" combinations are available for use.

3. Forward the package to Aeronautical Charting Group, Enroute and Visual Charting Team for verification of the geographic positions.

4. Upon verification, the Visual Charting Team must notify the National Flight Data Center prior to publication in the National Flight Data Digest (NFDD).

5. Maintain VFR waypoint forms (FAA Form 8260–2) to include corrections, changes, or modifications, as necessary.

6. After coordination, publish VFR waypoint geographic position in FAA Order JO 7350.9.

e. Visual Charting Team must:

1. Review the incoming VFR waypoint proposals for completeness.

2. Coordinate with the National Flight Data Center for the resolution of any geographic positions

that require FAA Form 8260–2 revisions; provide the National Flight Data Center with verification that geographic positions are ready for publication in the NFDD.

3. Coordinate with the National Flight Data Center to ensure that any new or revised VFR checkpoints are published in the NFDD.

4. Publish VFR waypoint geographic positions in the Chart Supplement U.S. and on appropriate VFR charts.
Section 9. Low Altitude Authorization Notification Capability

12–9–1. PROGRAM DESCRIPTION

a. LAANC is the term for the software used to automate small Unmanned Aircraft System(s) (sUAS) operator requests for access to controlled airspace at or below 400 feet AGL. LAANC handles authorization requests under 14 CFR § 107.41 (Part 107) and 49 U.S.C. § 44809 (Section 44809). LAANC's major elements include: FAA data sources (e.g., Unmanned Aircraft System Facility Maps (UASFM), airspace restrictions, and airspace boundaries) for use in determining authorizations; and the ability for FAA-approved LAANC UAS Service Suppliers (USSs) to process authorization information and interface with sUAS pilots.

b. LAANC functions at the operational planning stage, identifying intended sUAS operations and managing the associated authorizations. Part 107 and Section 44809 authorization requests within the UASFM can be approved automatically, in near real time. Part 107 authorization requests that fall above the UASFM and below 400 feet AGL require approval by the Air Traffic Manager (ATM) or designee. Part 107 operators may submit a request for access to airspace up to 90 days in advance. Section 44809, sUAS limited recreational operators' request for access above the UASFM will not be processed in LAANC.

12-9-2. UAS FACILITY MAPS (UASFM)

UASFMs have been developed by FAA facilities to establish the altitude at and below which sUAS may be granted automatic authorization. USSs will use current FAA approved UASFMs in conjunction with other required data sources and will operate within agreed LAANC USS operating rules.

12–9–3. SMALL UAS (sUAS) ATC AUTHORIZATIONS

Both Part 107 and Section 44809 require all sUAS operators to obtain airspace authorization from Air Traffic to fly in Class B, Class C, or Class D airspace or within the lateral boundaries of the surface area of Class E airspace designated for an airport. A request

for authorization will contain data from an sUAS operator to a USS providing flight information about the area of the proposed operation. If the area of operation falls within a UASFM, LAANC will provide an automatic authorization and deliver this authorization to the ATM or designee. The facility retains the ability to rescind any specific authorization(s) as needed, whether after automatic approval or approval by the ATM or designee through further coordination (see 12–9–4).

12-9-4. FURTHER COORDINATION

a. Further coordination is the term used when an authorization processed via LAANC cannot be automatically approved. For example, if a Part 107 authorization request is sent by an operator to a USS, and the planned operation is above a UASFM altitude, the request cannot be automatically approved. Further coordination is available only to Part 107 operators. A safety justification may be optionally submitted by the Part 107 operator for the ATM's consideration.

NOTE-

This Safety Justification is a one-way transmittal from the Part 107 operator that is for use with further coordination requests only. The Safety Justification is not pre-coordinated with the ATM or designee, and is optional information that the Part 107 operator may choose to include to assist the ATM or designee in determining whether to approve or deny the further coordination request.

b. Further coordination requests in LAANC are not automatic and require the approval of the ATM or designee. If a response is not provided, further coordination requests will expire 24 hours prior to the proposed operator's start time. Facilities are not authorized to engage directly with operators to process further coordination requests.

NOTE-

LAANC does not process Certificates of Authorization (COAs). COAs are processed exclusively in DroneZone in collaboration with the governing Regional Service Center. Any attempt by an operator to submit mitigations or COAs through LAANC will not be accepted.

12-9-5. FACILITY RESPONSIBILITIES

a. The ATM will request access to LAANC by providing their email address and that of any designee to 9–ajt–laancpoc@faa.gov.

b. Using Chrome web browser, LAANC can be accessed at https://laanc-atc.faa.gov. My Access is used to sign in to LAANC.

c. Review the "Facility Preferences" page to ensure the "Approval Facilities" information is correct.

d. The ATM or designee will periodically review LAANC to maintain situational awareness of sUAS activity in their airspace.

e. The ATM or designee, workload permitting, will review further coordination requests for approval consideration. The only actions available

for requests awaiting further coordination are to "APPROVE" or "DENY" the operation.

f. When receiving a Part 107 authorization or approving a Part 107 authorization above a UASFM altitude, the ATM or designee will use their best judgement to determine if the information needs to be disseminated to the controller. If it is determined that the controller should know, then it will be distributed to the appropriate position(s).

NOTE-

LAANC will allow an operator to request an altitude above a UASFM altitude as long as the requested altitude is not above 400 ft AGL as per 14 CFR Part 107.

g. Any previously issued authorization(s) may be rescinded via LAANC. The operator must acknowledge the action before the previously issued authorization is cancelled. If no acknowledgement is received and/or timeliness is a factor, the operator may be contacted via telephone.

12-10-1. POLICY

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

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

- 1. Airspace changes.
- 2. Runway or airport property changes.
- 3. Changes in procedures.
- 4. Changes in volume of traffic.

c. If changes need to be made to the UASFM, forward your request to uasfm@faa.gov.

12-10-2. RESPONSIBILITY

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

NOTE-

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

12-10-3. ASSUMPTIONS

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

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

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

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

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

NOTE-

Part 107 allows operators to fly 400 feet AGL and if within a 400-foot radius of a structure/obstacle, they can fly to the height of the structure plus 400 feet. However, the maps will only be evaluated to 400 feet AGL. For any request above 400 feet AGL, regardless of proximity to a structure/obstacle, headquarters will coordinate with the facility.

f. All UAS operations that are requested at or below the altitude listed for the segment for where the flight will occur will be approved without facility coordination. However, the facility will receive a copy of the authorization.

g. Zero (0) altitude means no UA flights authorized without facility coordination.

h. For UAS flights that take place in two or more segments, the lowest published altitude will be used.

i. When a UA operation has been approved, the affected facilities will receive an email that will include the responsible person's contact information, location, altitude, time and date of UA operation.

j. In the event two facilities overlap the same segment, the lowest altitude will be used for both facilities.

k. Items to consider:

1. Part 107 operators must comply with all parts of the Part 107 rule (i.e., Part 107 operators must maintain visual line of site with their UA, they must yield right-of-way to all aircraft, they are solely responsible for not operating in prohibited or restricted areas without prior permission, they are solely responsible for not operating in temporary flight restricted airspace, and they are solely responsible for not operating over nonparticipating people).

2. Diverse vectoring areas (DVA) and aircraft performing minimum departure climbs at 200 feet per mile.

3. Obstructions already present (i.e., a segment with 60–foot trees would allow UA to operate safely at 50 feet).

4. Low altitude operations (i.e., helipads).

5. The UA operator is solely responsible for avoiding ground hazards, sensitive areas (e.g.,

nuclear power plants, critical infrastructure and federal facilities), and areas where drone operations are prohibited.

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

a. Each facility must review the assumptions section.

b. Each facility will work collaboratively with their workforce to develop the UA map. Each segment must be evaluated to determine the highest altitude a UA could operate without any coordination to the facility.

c. Facilities must evaluate all segments for the maximum altitude they will allow without further coordination within their area of jurisdiction for flights between 0–400 feet in 50–foot increments.

d. For partial segments, facilities only need to evaluate the area they have jurisdiction over but will show the altitude for the entire segment.

e. For segments outside your area of jurisdiction, leave the segments on the spreadsheet blank.

f. In areas where the overriding rule/law specifies no UAS operations (e.g., the DC FRZ), we are still asking facilities to complete the map as though operations could be permitted without the overriding regulations. There may be situations where law enforcement, DOD, etc. could ask for authorization under Part 107 and have the ability to operate in the area.

g. Once you have finished the spreadsheets, email them to uasfm@faa.gov.

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

a. Each facility will need three files: a facility map (.pdf), a Google Earth (.kmz) file, and a spreadsheet (.xls). To receive the files, send an email to uasfm@faa.gov.

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

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

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

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

FIG 12-10-1 Background Satellite Image





FIG 12–10–2 Google Earth Graphical Overlay

f. UASFM Checklist.

1. Request files from uasfm@faa.gov.

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

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

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

5. Return completed spreadsheet to uasfm@faa.gov.

6. Include in the email:

(a) Use only your facility ID in the subject line.

(b) Attach the spreadsheet.

(c) List your Map POC(s) (Name, Email Address, Phone).

(d) List your Authorization POC(s) (Name, Email Address, Phone).

(e) Date UASFM completed.

12–10–6. PART 107 OPERATION APPROVALS

a. The ATM will appoint a primary and secondary Facility UAS Authorization POC who will receive notification of the final authorization from Headquarters. Forward any changes to the Facility UAS Authorization POC to uasfm@faa.gov.

NOTE-

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

b. If Part 107 operations cannot be authorized using the UASFM, facilities will be contacted by Headquarter/Service Center for coordination.

c. Facilities will evaluate the request for authorization for impact to the operation. Waivers that list any mitigations pending approval by Headquarters/ Service Centers will be included with the authorization request for the facility's consideration.

d. If the facility deems the impact of the operation to be acceptable as proposed, the operation will be authorized.

e. If the facility deems the impact to be unacceptable as proposed, they may prescribe

mitigations on the operation, which may include but are not limited to:

1. Limits on altitude.

2. Adjusting times and dates of operation.

3. Operator notification to the Facility (i.e., start, stop times).

4. Adjusting Location.

f. For operations on the airfield, procedures between the facility and the proponent are a prerequisite to obtaining an airspace authorization.

g. If mitigations cannot be agreed upon, the operation will be denied.

Section 6. 14 CFR Part 107, sUAS Operations

19-6-1. GENERAL

a. No person may operate a small unmanned aircraft in Class B, Class C, or Class D airspace, or within the lateral boundaries of the surface area of Class E airspace designated for an airport unless that person has prior authorization from Air Traffic Control (ATC). Proponents requesting to operate under 14 CFR Part 107.41 within these classes of airspace must request an authorization through either the Low Altitude Authorization and Notification Capability (LAANC) or DroneZone.

1. LAANC Operations: https://faa.gov/go/ laanc.

2. DroneZone: https://faadronezone.faa.gov/.

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

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

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

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

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

REFERENCE-

FAA Order JO 7210.3, Chapter 12, Section 10, UAS Facility Maps (UASFM).

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

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

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

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

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

b. If there is a facility approved UASFM for Class E airspace areas designated as a surface area for an airport, requests will be processed in accordance with the UASFM. If there is no facility approved UASFM, the Class E surface area designated for airport requests will be processed at Headquarters/Service Centers using the following criteria. Any requests outside of these parameters must be coordinated directly with the controlling facility prior to approval:

1. Operations conducted from 0 to 2 nautical miles (NM) from the Airport Reference Point (ARP) will not be authorized by Headquarters/Service Center without prior coordination with the facility.

2. Operations conducted from beyond 2 NM and up to 3 NM from the ARP will be authorized to operate at or below 100 feet above ground level (AGL).

3. Operations conducted from beyond 3 NM and up to 4 NM from the ARP will be authorized to operate at or below 200 feet AGL.

4. Operations conducted from beyond 4 nautical miles from the ARP will be authorized to operate at or below 400 feet AGL.

5. A weather minimum of a 1000–foot ceiling.

6. All authorization for Class C and D surface areas that revert to Class E surface area designated for an airport will be evaluated utilizing UASFM for the Class "C and D" surface area.

NOTE-

1. Headquarters/Service Centers are responsible for issuing waivers to the proponent. In instances where the authorization requires a waiver to 14 CFR Part 107.31 (Visual line of sight), 14 CFR Part 107.35 (Operations of

multiple sUAS), 14 CFR Part 107.41 (Operation in certain airspace), 14 CFR Part 107.37 (Operation near aircraft; right of way rules), or 14 CFR Part 107.51(b) (Operating limitations for sUAS – altitude), pending waivers must be included with the authorization request and coordination will take place with the facility.

2. The responsible person for the operation and their contact information will be listed in the authorization or waiver.

3. With regards to Class *E* airspace, only airspace within the lateral boundaries of the surface area designated for an airport (Class E2) requires a Part 107 authorization or waiver.

c. An automated message will be forwarded to the facility and the proponent of the approval, which will contain:

1. Waivers if applicable.

2. Description of the operational area.

3. Contact information for communication/re-call.

4. Times of operation.

d. If 14 CFR Part 107 operations cannot be authorized using the UASFM, ATC facilities will be contacted by Headquarters/Service Centers for coordination.

e. If after coordinating with the ATC facility, the operation cannot be authorized, an automated message will be forwarded notifying the facility and the proponent of the denial.

f. Special Governmental Interest (SGI), Part 107 authorizations/waivers will be managed by System Operations Security, AJR-2.

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

a. Applications for waivers are submitted to the Headquarters/Service Center through DroneZone.

b. Under Headquarters/Service Center waiver process, ATO approval is required for the following waivers and will coordinate with Flight Standards Service (AFS), if needed:

- 1. Yielding the right of way (§ 107.37a).
- 2. Operations in Certain Airspace (§ 107.41).
- 3. Maximum altitude (§ 107.51b).

c. Under Headquarters/Service Center waiver process, AFS may approve waivers requested for the following items and will coordinate with ATO, if needed:

1. Operations from a moving vehicle or aircraft (§ 107.25).

2. Daylight operation (§ 107.29).

3. Visual line of sight (§ 107.31).

4. Visual observer (§ 107.33).

- 5. Operations of multiple UASs (§ 107.35).
- **6.** Operation over people (§ 107.39).
- 7. Maximum ground speed (§ 107.51a).
- 8. Minimum flight visibility (§ 107.51c).

9. Cloud minimum (§ 107.51d).

d. Headquarters/Service Center will evaluate the waiver(s) for justification, including supporting data and documentation, as necessary, which establishes the proposed operation can be safely conducted under the terms of a certificate of waiver. Headquarters/Service Center will coordinate all waivers to 14 CFR Part 107.29, 14 CFR Part 107.31, 14 CFR Part 107.35, 14 CFR Part 107.37, 14 CFR Part 107.41, and 14 CFR Part 107.51(b) (except those covered below in paragraph e), with the affected facility to evaluate if the proposed operation can be safely conducted based on the proposed mitigation(s) and, if needed, apply any additional mitigations/limitations.

e. Waivers in Class E surface areas and Class G airspace (excluding those waivers that take the aircraft into all other classes of airspace that are not in compliance with UASFMs) will be approved by Headquarters/Service Center. This approval authority does not preclude the facility from being coordinated with if Headquarters believes additional input from the facility is beneficial to the safety of the operation.

basis for the disapproval. The regional ATO Service Area Director 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 Director 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 Director.

3. The regional ATO Service Area Director 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, Chart Supplement U.S, AOPA website, etc.)

5. If the TFR is not approved as requested, the Airspace and Rules Manager must inform the regional ATO Service Area Director, indicating the basis for the disapproval. The Regional ATO Service Area Director must inform the requestor of the disapproval and any available alternatives.

20-7-6. SPECIAL TRAFFIC MANAGEMENT PROGRAM GUIDELINES

Each regional ATO Service Area Director 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 Director, 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 18, 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 Domestic Notices found in the Federal NOTAM System (FNS) External Links or the Air Traffic Plans and Publications website. If this website is used, the required information must be sent to the ATO Policy Directorate for processing at 9-ATOR-HQ-PubGrp@faa.gov at least 28 days prior to the effective date.

2. The NOTAM will be forwarded to the U.S. NOTAM Office for publication no later than 5 days prior to the event.

20-7-7. 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.

20-7-8. REVISIONS AND CANCELLATIONS

a. When restrictions are necessary beyond the published termination date/time, the regional ATO Service Area Director 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 Director 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 Director, 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 Director at least 45 days in advance of the major sporting event. The ATO Service Area Director 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.

Appendix 6. Commercial Space LOA Templates

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

Letter of Agreement

Effective:

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

1. Purpose:

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

Sample text:

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

2. Cancellation:

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

Sample text:

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

3. Scope:

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

Sample Text:

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

4. Responsibilities:

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

a. Operator must fulfill requirements provided in the Sample Text for this section.

b. Lead ATC facility must fulfill requirements provided in the Sample Text for this section and

- 1. Fill out the Points of Contact Table (Attachment B).
- 2. Fill out the Actions Timetable (Attachment C)

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

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

Sample text:

a. [Operator] must:

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

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

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

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

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

b. [Lead ATC facility] must:

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

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

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

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

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

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

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

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

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

5. Procedures:

Specify timeline and details for activities to take place prior to, during, and upon completion of operation. Specify frequency of proposed operations and any limitations when considering dates and times of operations. Include any restrictions on days of week and/or times of day operations that may or may not occur. Restrictions may include times when military operations require use of certain airspace.

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

Sample text:

a. [Operator] must:

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

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

a) The launch/reentry window.

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

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

3. (As needed) Submit Altitude Reservation (ALTRV) request(s) to CARF (and email a copy of the request to the [lead ATC facility]) a minimum of [XX] days prior to the planned operation.

4. Verify the issuance of the appropriate NOTAMs.

5. No less than [XX] minutes in advance of a planned operation, notification will be given by [Operator] to [lead ATC facility] of intent for the [launch/hover-test] to take place.

6. During the operation, a [Operator] representative must participate on an FAA Hotline teleconference with [lead ATC facility] and ATCSCC Space Operations (see Actions Timetable, Attachment C, for phone number). Communication on the FAA Hotline teleconference must be established no less than [XX] minutes prior to planned operation.

a) The [Operator] representative must be able to provide real-time verbal indications of the status of the operation, its progress along the launch/reentry trajectory, and occurrence of significant events.

b) Participation by representative(s) from [other stakeholders and affected facilities] is advised.

7. Notify [lead ATC facility] upon completion of the operation.

8. (As needed) Contact CARF and request that the appropriate ALTRVs be cancelled.

9. In the event of an anomaly, a [Operator] representative must immediately notify [lead ATC facility], via FAA Hotline teleconference, of the occurrence of the anomaly. Information communicated should include, at a minimum:

a) The last known state of the vehicle.

b) The location of the off-nominal event (latitude and longitude, represented as degree-minute-second).

c) The predicted location(s) impacted (latitude and longitude, represented as degree-minute-second) (when known).

d) Projected time the hazard(s) will no longer be present (when known).

e) Other information that will provide estimated positions of hazards.

10. In the event of an emergency, [Operator] must immediately contact [lead ATC facility], via FAA Hotline teleconference and email all the parties listed in the Points of Contact Table (Attachment B). Information conveyed should include, at a minimum:

a) The last known state of the vehicle.

b) The location of the event (latitude and longitude, represented as degree-minute-second).

c) The predicted location(s) impacted (latitude and longitude, represented as degree-minute-second) (when known).

d) Projected time the hazard(s) will no longer be present (when known).

e) Other information that will provide estimated positions of hazards.

b. [Lead ATC facility]:

1. Upon notification of a completed operation, [lead ATC facility] must cancel appropriate airspace restrictions and/or NOTAMs.

2. In the event when [lead ATC facility] becomes aware of a condition that would make the launch/reentry unsafe, [lead ATC facility] must immediately contact, via FAA Hotline, [Operator] and all other parties listed in the Points of Contact Table (Attachment B).

6. Attachments

A. Signatures

B. Points of Contact Table

C. Actions Timetable

D. Graphics/Maps

• Launch/Reentry Site Description/Map

- Aircraft Hazard Area Description/Map
- Temporary Flight Restriction Description/Map
- Air Traffic Control Assigned Airspace Description/Map
- E. Commercial Launch/Reentry Site LOA

Attachment A: Signatures

[Lead ATC Facility]

[Operator]

[ATCSCC Space Operations]

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

Attachment B: Points of Contact Table

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

Office	Phone #	Email	Responsibility
[Operator]			
[Lead ATC Facility] Supervisor in Charge			
[Lead ATC Facility] Traffic Management Unit			
ATCSCC Space Operations			
Central Altitude Reservation Function (CARF)			
National Traffic Management Office (NTMO)			

Attachment C: Actions Timetable

The following table should be completed by [lead ATC facility]. In coordination with the [lead ATC facility], [Operator] must ensure that the following actions are completed at the defined intervals.

Time	Event	Remarks	Date Completed
T – [XX] months Suggestion: T – 6 months	Submit Launch/reentry Forecast Package	Operator should provide best estimate of all known launch/reentry dates for upcoming six months.	
T – [XX] calendar days Suggestion: T - 30 - 60 calendar days	Coordinate launch/reentry corridor/hazard area(s)	Operator should coordinate with ATCSCC Space Operations and as appropriate, other affected facilities.	
T – [XX] calendar days Suggestion: T – 10 calendar days	Submit Pre–Planning Package	Operator should provide a description of the Aircraft Hazard Area(s), along with date(s) and time(s) for launch/reentry.	

Time	Event	Remarks	Date Completed
T – [XX] calendar days Suggestion: T - 5 - 14 calendar days	File an Altitude Reservation (ALTRV) request with CARF (as needed)	Operator is responsible for coordinating all necessary ALTRV requests. Requests should be submitted via email to @FAA.gov A copy of the request should also be emailed to [lead ATC facility]. Contact:	
T – [XX] hours	Verify issuance of appropriate airspace notices (NOTAMs and TFRs)	Operator should contact [lead ATC facility] for issuance of TFR(s) and NOTAM(s) (as needed). Per 14 CFR § 91.143, TFRs need to be issued at least hours in advance of the scheduled operation.	
T – [XX] hours and repeat again at T – [XX] hours Suggestion: T – 24 hours and 3 hours	Provide operational status report	Operator contacts [lead ATC facility] via [telephone/email] and provides operational status report, which includes confirmation of intent and specifics of operation.	
T – [XX] minutes Suggestion: T - 60 - 30 minutes	Establish Hotline connection	 [FAA Hotline telephone #] The operation will be delayed or terminated if the Operator does not establish communications via FAA Hotline teleconference. Operator must have a representative on the FAA Hotline teleconference until the operation is complete. 	
T – [XX] minutes Suggestion: T – 30 minutes	Provide operational status report	Operator provides operational status report. This report includes confirmation that the operation will take place as scheduled. As necessary, Operator should continue to communicate any significant operational changes.	

Time	Event	Remarks	Date Completed
T – [XX] minutes and repeat at T – [XX] minutes Suggestion: T – 10 minutes and T – 5 minutes	Receive final clearance or confirmation of continued approved mission status	Operator must receive clearance or confirmation of continued approved mission status from [lead ATC facility] to proceed with operation.	
During operation	Maintain real-time communication via FAA Hotline teleconference	Operator must provide real-time verbal indications on the status of the vehicle.	
Post–operation or mission cancellation	Notify ATC and CARF (if applicable) of completion or cancellation of operation	ATC must be notified when operation is complete. TFR(s), ALTRV(s), and any other necessary notices should be cancelled as soon as practicable.	
	Schedule post–operation debrief	A debrief should occur ideally within hours, but no later than hours of the completion of the operation. A debrief should be conducted even if no off-nominal activity occurred.	

Index

[References are to page numbers]

Α

ACCIDENT/INCIDENT RECORDINGS, 4-8-1 ADAPTATION OF EXTERNAL ALTIMETER SETTINGS, 8–2–1 ADAPTED ALTIMETER SETTINGS, 8-2-1 Administration of Facilities ATS Continuity, 2–1–3 Authorization for Separation, 2–1–7 Checking Published Data, 2–1–3 Duty Familiarization, 2–2–1 Equipment Trouble, 2–2–6 Facility Directives Repository, 2-2-6 Handling MANPADS Incidents, 2-1-5 Interregional Requirements, 2–1–1 Position Responsibilities, 2–2–1 Position/Sector Binders, 2-1-1 Reference Files, 2–1–1 Release of Information, 2–1–2 Sign In/Out and On/Off Procedures, 2–2–3 Standard Operating Procedures, 2–1–1 VSCS Equipment, 2–2–6 ADS-B OUT OFF OPERATIONS, 5-4-5 ADVANCE APPROACH INFORMATION, 6-4-1, 10 - 3 - 2ADVISORY SERVICE TO ARRIVING VFR FLIGHTS, 10-4-2 AERONAUTICAL ADVISORY STATIONS (UNICOM/MULTICOM), 3-2-2 Air Traffic Control Assigned Airspace (ATCAA), 2 - 1 - 11AIR TRAFFIC FACILITY RESPONSIBILITIES, 21 - 2 - 3Air Traffic Security Coordinator (ATSC), 21-3-1 Air Traffic Tactical Operations Programs, 18-2-1 Aircraft DOE, 5-3-1 Accidents, Reported/Unreported, 5–3–1 Aerial Sampling/Surveying, 5–3–1 Due Regard Operations, 5–3–1 Special Flights, 5–3–1 Weather Reconnaissance Flights, 5–3–2 Flight Inspection, 5–2–1 High Altitude Inspections, 5–2–1

Identification Problems, 2–1–6 Identifying DOT/FAA, 5–2–1 Open Skies Treaty Aircraft Priority Flights (F and D), 5-3-3 R & D Flight, 5-2-1 Airport, Traffic Patterns, 2–1–10 Airport Arrival Rate (AAR), 10–7–1 Airport Construction, 10–3–5 Change in Runway Length, 10–3–6 Airport Emergency Plans, 2–1–5 Airport Lighting, 10–6–1 Altimeter Requirements, 2–10–1 Altimeter Setting to ARTCC, 2–10–2 Altitude Assignments, S/VFR and VFR, 3–8–4 ALTRV FLIGHT DATA PROCESSING, 8-1-1 AMPLITRON OR PARAMETRIC AMPLIFIER FAILURE, 7–2–1 Appearance, 2–7–1 Approach Control Airspace, 2–1–7 Approach Light Systems, 10–6–2 APPROACHES TO PARALLEL RUNWAYS, 10 - 3 - 6AREAS OF NONVISIBILITY, 10–1–2 ARFF, 2–1–5 ARTCC to ARTCC Coordination Procedures, 18–7–2 Responsibilities, 18–7–2 ARTCC to ARTCC FEA/FCA Coordination, 18 - 7 - 2ASDE PERFORMANCE CHECKS, 10–5–3 ASR PERFORMANCE CHECKS, 10–5–2 ATC SURVEILLANCE SOURCE USE, 3–6–2 ATIS, 10-4-1 ATOP, 6-8-1 ATOP Channel Changeovers, 6–8–2 ATSC. See Air Traffic Security Coordinator AUTHORIZED MESSAGES NOT DIRECTLY ASSOCIATED WITH AIR TRAFFIC

SERVICES, 3-2-1

Automated Position Sign On/Off, 4–6–5 AUTOMATED WEATHER DISPLAY STATUS, 8–3–1 AUTOMATIC ACQUISITION/TERMINATION AREAS, 12–6–2 AUTOMATION PROGRAM CHANGES, 12–6–1

В

BACKUP/AUGMENTATION OF WEATHER OBSERVATIONS, 2–9–1
Bird Hazards, 2–1–8
Blood Donors, 2–8–2
Bomb Threats, 2–1–4
Briefing, Air Traffic Bulletin, 2–2–5
Briefings, Order Changes, 2–2–6

С

CA. 12-6-2 CALCULATING AARs, 10-7-1 Capping and Tunneling, 18-6-4 CATEGORIES OF OPERATIONS, 9-1-1 CHANGES TO MTR AND MOA PUBLISHED ACTIVITY SCHEDULES, 6-3-3 Charts Disposition of Obsolete, 2-1-10 EOVM, 3-8-4 Minimum Vectoring Altitude, 3-8-1 CLASS B AIRSPACE, 12-1-3 CLASS C AIRSPACE, 12-1-2 Classified Operations, 21–4–2 CLEANING INSTRUMENT COVERS, 3-1-2 Color Displays-Terminal, Color Use on ATC Displays, 3–9–1 Combine/Recombine an ATCT/TRACON, 2-1-11 Communications Battery–powered Transceivers, 3–3–2 CIRNOT Handling, 2–2–4 Emergency Frequencies, 3–3–1 Facility Status Report, 3–3–2

GENOT Handling, 2-2-4 Monitoring Frequencies, 3–3–1 Service "F", 3–3–1 Telephone, 3–3–1 Testing ELT, 3-3-2 Use of Communications, 3-2-1 FBI Use, 3-2-1 VSCS Frequency Backup, 3–3–3 VSCS Reconfigurations, 3–3–3 VTABS, 3-3-3 Comparison Checks, 2–10–1 COMPUTER DATA RETENTION, 8-1-2 Conferences Coordination of Procedures, 4–2–2 Local, 4-2-1 Published Items, 4–2–2 CONFLICT ALERT FUNCTION PARAMETERS, 8 - 2 - 1Continuity of Operations and Continuation of Government (COOP/COG), 21-4-2 COOP/COG. See Continuity of Operations and Continuation of Government Coordination Communication and Documentation, 21–5–1, 21-6-1 Coordination, 21–5–1 Responsibilities, 21-5-1, 21-6-1 Correspondence Disposition of VAR, 4–5–2 Irregular Operation, 4–1–1 Letters of Procedures, 4-5-1 Letters to Airmen, 4–5–1 Policy/Procedures, 4–1–1 Preliminary Environmental Review, 4–1–1 Service Area Review, 4-1-1 Standards, 4–1–1

CRITERIA FOR IFR AIRCRAFT HANDLED COUNT, 9–1–1

CWAs, 6–3–1

D

DATA DISPLAY FOR BLOCK ALTITUDE FLIGHTS, 8–3–1 DATA RECORDING, 12–2–1

Index

DATA RETENTION, 12-2-1

DEFICIENCIES IN SYSTEM, 7-2-1, 10-5-2

DEN. See Domestic Events Network

Density Altitude Broadcast, 2-10-3

Derelict Balloons/Objects, 19-5-1

DIGITAL MAP VERIFICATION, 8-3-1, 12-6-3

DISSEMINATION OF WEATHER INFORMATION, 10–3–1

Domestic Events Network (DEN), 21-4-1

Ε

E-MSAW ADAPTATION, 8-2-2 ELECTRONIC ATTACK (EA), 7-2-1 ELT Incident, 9-3-1 En Route Areas of Operation, 6-1-1 Areas of Specialization, 6–1–1 Computer Interface, 6–6–1 Flight Progress Strip, Usage, 6–1–2 General, 6-1-1 Operating Position Designators, 6-1-1 Operations, 6–3–1 Sector Information Binders, 6-2-1 Sectors, 6-1-1 Configuration, 6–1–1 Services, 6-4-1 Stored Flight Plan, 6-5-1 Stored Flight Plan Program **Bulk Store File** Maintenance, 6-5-2 Preparation, 6-5-2Coordination, 6-5-2Criteria, 6-5-1 Implementation, 6-5-2Remarks Data, 6–5–2 EN ROUTE CONTROLLER TEAM CONCEPT, 6 - 2 - 1

En Route Data Deficiencies, 7–2–1 Performance, 7–1–1

En Route Decision Support Tool (EDST), 6-7-1

En Route Information Display System, 6–10–1

General, 6-10-1

EN ROUTE SECTOR INFORMATION BINDER, 6–2–1

Equipment Frequencies, 16–2–1 General, 16–1–1

EQUIVALENT LATERAL SPACING OPERATIONS (ELSO), 10–3–7

- ERAM HOLD INFORMATION FACILITY DIRECTIVE REQUIREMENTS, 8–2–2
- ERAM HOLDING PATTERN ADAPTATION , $8\mathchar`-2\mathchar`-2$

ERAM MASTER TOOLBAR MAP BUTTON LABEL, 8–2–3

ERAM SPECIAL ACTIVITY AIRSPACE (SAA) ADAPTATION , 8–2–2

ERIDS, 6-10-1

Establishing Diverse Vector Area, 3-8-7

Explosives Detection, 2-1-6

F

Facility Identification, 2–1–10 Visitors, 2-7-2 FACILITY COMPLEMENTS, 2-5-2 Facility Directives Repository (FDR), 2–2–6 Facility Equipment Basic, 3-1-1 Color Displays-Terminal, 3-9-1 Generator Transfer Procedures, 3–1–2 Maintenance, 3–1–1 FACILITY SECURITY, 2–7–1 Facility Statistical Data Aircraft Contacted, 17–2–1 Amending and Reviewing Data, 13–5–1 Flight Plan Count, 17-3-1 General, 13–1–1, 17–1–1 Instrument Approach, 9-2-1 Itinerant Operations, 13-2-1 Local Operations, 13-3-1 Operational Count, 9-1-1

Other Reports and Forms, 9–3–1

Overflight Operations, 13-4-1

Pilot Briefing Count, 17–4–1 Reports and Information, 17-5-1 Familiarization/Currency Requirements, 2–3–1 FAULT LOG, 12-2-2 FDR. See Facility Directives Repository FEA/FCA PROCEDURES, 18-7-1 FEA/FCA RESPONSIBILITIES, 18-7-1 FEES, 4-8-1 FLIGHT DATA UNIT, 6–3–2 FLIGHT PLAN DROP INTERVAL, 8-1-2 FLIGHT PROGRESS STRIP USAGE, 10-1-4 Flight Request Aerobatic Practice, 5–4–5 Certifying Record Attempts, 5-4-4 Crop Duster/Antique, 5–4–3 Deviation, 5-4-1 Flight Test, 5-4-4 Photogrammetric Flights, 5–4–4 Sanctioned Speed, 5-4-4 Flight Requests, Deviation from ADS–B Out Requirements, 5–4–2 Flight Service Operations General, 14–1–1 Operations, 14-3-1 Positions/Services, 14–2–1 Services, 14–4–1 Flight Plan, Prefiled, 14–4–1 Flight Service Station Operations Airport, Search Arrangements, 14–3–1 Landing Area, Status Check, 14–3–1 Liaison Visits, 14–3–1 Tie-In NOTAM Responsibility, 14-3-1 Position/Service Information Binders, Position/ Services, 14-2-1 FOREIGN STATE DIPLOMATIC FLIGHTS, 5-3-4 Forms 7210-8, 9-3-1, 9-3-3 7230-10, 4-6-3, 4-6-7 7230-12, 9-2-1, 9-2-2 7230-13, 17-5-1 7230-14, 9-1-3, 9-1-4 7230-16, 9-2-1 7230-4, 4-6-1, 4-6-6, 18-5-4

7233-1, 17-3-1, 17-4-1 7233-4, 17-3-1, 17-4-1 7233-5, 17-4-1 7233-6, 17-5-2 Preparation, 4-6-1

FUNCTIONAL USE OF CERTIFIED TOWER RADAR DISPLAYS, 10–5–1

G

Gate Hold Procedures, 10–4–2 GO–AROUND/MISSED APPROACH, 10–3–7

Η

HANDLING OF SIGMETs, CWAs, AND PIREPs, 6-3-1 HEADSET TONE INCIDENTS, 3-3-3 Hours of Duty, 2-4-1 Service Hours, 2-4-1 Status of Service, 2-4-1

IFR AIRCRAFT HANDLED, 9–1–1 ILS/MLS HEIGHT/DISTANCE LIMITATIONS, 10–3–2 INCOMPATIBLE LIGHT SYSTEM OPERATION, 10–6–1 Information, Law Enforcement, 2–2–5 Intelligence Analysis and Communication, 21–4–2

J

JOB REQUIREMENTS, 2-2-1

L

LADP, 10–1–5 LAND AND HOLD SHORT OPERATIONS (LAHSO), 10–3–2 Law Enforcement, Cooperation with, 2–7–1

LAWRS Hours of Operation, 2-9-1 Legal Liabilities of Personnel, 2-2-1 LETTERS OF AGREEMENT, 4-3-1 Aircraft Call Signs, 4–4–1 APPROPRIATE SUBJECTS, 4-3-2 APPROVAL, 4–3–4 AUTOMATED INFORMATION TRANSFER (AIT), 4-3-7 CANCELLATION, 4-3-5 COMMERCIAL SPACE, 4-3-4 Commercial Space LOA Templates, Appendix 6-1 DEVELOPING, 4–3–3 Operations Under Exemptions, 4-4-1 **REVIEW**, 4–3–3 REVISIONS, 4-3-4 RSU, 4-4-1

- Line of Authority Air Traffic Security Coordinator (ATSC), 21–3–1 System Operations Security, 21–3–1
- LINE UP AND WAIT (LUAW) OPERATIONS, 10–3–3
- LOA, 4-3-1
- LOCAL INTERIM ALTITUDE, 8-2-3

Low Altitude Authorization Notification Capability, 12–9–1 SMALL UAS (sUAS) ATC AUTHORIZA-TIONS, 12–9–1

LOW LEVEL WIND SHEAR/MICROBURST DETECTION SYSTEMS, 10–3–1

LOW VISIBILITY OPERATIONS, 10-1-5

LUAW, 10-3-3

Μ

MAGNETIC VARIATION AT STARS FACILITIES, 12–6–3
MANPADS, Handling MANPADS Incidents, 2–1–5
Maps, Video Common Reference Points, 3–7–2 Intensity, 3–7–2 Mapping Standards, 3–7–1 Tolerance for Fix Accuracy, 3–7–1 Video Map Data, 3–7–1 Medical, 2-8-1 Alcohol, 2-8-2 Clearance Requirements, 2–8–1 Drugs and Sedatives, 2-8-1 Special Evaluations, 2–8–1 Status, 2–8–2 Meteorological Services and Equipment Broadcasts, 15–3–1 General, 15–1–1 Weather Briefing, 15–2–1 MIA, 10–4–8 MILITARY AIRCRAFT MOVEMENTS, 9–1–2 MILITARY ATC BOARDS, 10–1–1 Military Headquarters, 1–1–2 MINIMUM IFR ALTITUDES (MIA), 6-4-1 MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA), 12 - 6 - 2MINIMUM VECTORING ALTITUDE CHARTS (MVAC) PREPARATION (TERMINAL/MEARTS), 3-8-1 MOBILE CONTROL TOWERS, 10-1-5 MODE C INTRUDER (MCI) ALERT PARAMETERS, 8-2-1, 12-6-3 MSAW, 12-6-2 MSAW GTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND **RECOMPILATION**, 12–6–3 MULTI-SENSOR RADAR OPERATIONS, 12 - 6 - 4MULTIPLE RUNWAY CROSSINGS, 10–3–5

Ν

NAS Changes, 3–1–2 NAS En Route Automation Displays, 8–3–1 General, 8–1–1 Procedures, 8–2–1 National Playbook, 18–21–1 National Programs Data Recording and Retention, 12–2–1 Helicopter Route Chart, 12–4–1 Standard Terminal Automation Replacement System (STARS), 12–6–1 Terminal Area VFR Route, 12–5–1 Terminal VFR Radar Services, 12–1–1 VFR Planning Chart, 12–3–1

National Traffic Management Log, 18-5-1

Navigational Aids Malfunctions, 3–5–2 Monitoring, 3–5–1 Originating NOTAMs, 3–5–2

NONAVIATION WEATHER SERVICE, 2-9-2

0

Ocean21 Controller Pilot Data Link Communications, 6-8-2 Error Repair Position Responsibilities, 6-8-1 Facility Manager Responsibilities, 6-8-1 General, 6-8-1 Operational Supervisor-In-Charge Responsibilities, 6-8-1 Outages, 6-8-2 Transfer of Position, 6-8-2

- **OPERATING INITIALS, 2-2-3**
- OPERATING POSITION DESIGNATORS, 10–1–1
- OPERATION OF LIGHTS WHEN TOWER IS CLOSED, 10–6–1
- **OPERATIONAL AARs**, 10-7-2
- OPERATIONAL GUIDANCE FOR FUSION, 3–6–4
- OPERATIONAL MODE TRANSITION PROCEDURES, 12–6–3
- Operations and Staffing, 11-2-1

Operations Security, Strategic and Tactical Coordination, 21–5–1 Line of Authority, 21–3–1 Organizational Missions, 21–1–1 Supplemental Duties, 21–4–1

Opposite Direction Operations, 2-1-14

Organizational Missions Special Operations Security Mission, 21–1–1 System Operations Security Mission, 21–1–1 Tactical Operations Security Mission, 21–1–1

Organizational Responsibilities, 11-1-1

Outdoor Laser Demonstrations, 2-1-11

Ρ

PARTICIPATION IN LOCAL AIRPORT DEICING PLAN (LADP), 10-1-5 Pilot/Controller Outreach Operation Rain Check, 4 - 2 - 1PIREPs. 6-3-1 POSITION DUTIES AND RESPONSIBILITIES, 10 - 2 - 1Practice Instrument Approaches, 6–4–1, 10–4–3 Precision Approach Path Indicator (PAPI) Systems, 10-6-3 Precision Obstacle Free Zone (POFZ), 10-1-7 Presidential Aircraft Communications Circuits, Use of, 5-1-2 Coordination, 5-1-1, 5-1-3 Monitoring, 5-1-2Movement, 5-1-3 Rescue Support, 5–1–3 Security of Information, 5–1–3 Presidential Movement, 21–4–1 Pretaxi Clearance Procedures, 10–4–2 PROCEDURES FOR OPENING AND CLOSING RUNWAYS, 10–1–4 PROCESSING GPS ANOMALY REPORTS, 3 - 5 - 2Prohibited/Restricted Areas, 2–1–8 PURPOSE, Coordination, 21-6-1

Q

Quality Assurance Review, 4-6-1

R

RADAR AND/OR COMPUTER DATA, 4–8–1 RADAR DISPLAY INDICATORS, 10–5–1 RADAR PERFORMANCE CHECKS, 7–1–1 RADAR SELECTION PROCEDURES, 12–6–4 RADAR TOLERANCES, 10–5–3

RAIN CONFIGURATION, 12–7–2

RECEIPT OF NOTAM DATA, 6-3-1

RECOMMENDED ALTITUDES FOR SURVEILLANCE APPROACHES, 10–5–3

Recorders, Tape Assignment of Channels, 3–4–1 Use of, 3–4–1 VSCS Data Retention, 3–4–3

Recording Equipment Checking and Changing, 3–4–2 Handling Tapes, DATs or DALR Storage, 3–4–2

Records Collection of Data, 4–6–1 Facility, 4–6–1

Reduced Separation on Final, 10-4-8

Reduced Vertical Separation Minimum, 6–9–1 Equipment Suffix and Display Management, 6–9–2 Eagility Manager Responsibilities 6, 0, 1

Facility Manager Responsibilities, 6–9–1 General, 6–9–1

Mountain Wave Activity, 6–9–3

Non-RVSM Operator Coordination Requirements, 6–9–2

Operations Manager–In–Charge Responsibilities, 6–9–2

Operations Supervisor-In-Charge/Controller-In-Charge Responsibilities, 6-9-2

Suspension of RVSM, 6–9–3

Wake Turbulence and Weather Related Turbulence, 6–9–3

Regulatory Information Authorizations and Exemptions, 19–3–1 Fixed-wing SVFR, 19–2–1 Moored Balloons, Kites, and Unmanned Rockets, 19–5–1 Parachute Jump, 19–4–1 Temporary Flight Restrictions, 20–1–1 Waivers and Authorizations, 19–1–1

RELAY OF RVR VALUES, 10-3-2

REPORTING DEATH, ILLNESS, OR OTHER PUBLIC HEALTH RISK ON BOARD AIRCRAFT, 2–1–13

REPORTING DIVERTED AIRCRAFT ARRIVING FROM INTERNATIONAL LOCATIONS, 2–1–13 **REPORTING UNAUTHORIZED, HAZARDOUS,** OR SUSPICIOUS UAS ACTIVITIES, 2-1-13 Reports Delay Reporting, 4–7–1 Monthly, 4-7-1 System Impact, 4-7-1 Unidentified Flying Object, 4-7-1 **REQUIREMENTS FOR ERAM DATA BLOCK** CHANGES WITHOUT COORDINATION, 8 - 2 - 2Responsibilities, 21–2–1 **RESTRICTED DRUGS**, 2–8–2 **REVIEW AIRSPACE STRUCTURE**, 6-3-1 Route Advisories, 18-19-1 Route Test, 18-24-1, 18-25-1 Runway Intersection Takeoffs, 2–1–6 Obstacle Identification, 2–1–10 RUNWAY AND TAXIWAY LIGHTS, 10-6-4 RUNWAY EDGE LIGHTS ASSOCIATED WITH MEDIUM APPROACH LIGHT SYSTEM/RUNWAY ALIGNMENT INDICATOR LIGHTS, 10-6-4 RUNWAY FLOODLIGHTS, 10-6-4 RUNWAY STATUS LIGHTS (RWSL), 10-6-4 **RUNWAY VISUAL RANGE (RVR)** EQUIPMENT, 2-9-2 **RVR EQUIPMENT**, 2–9–2 RWSL, 10-6-4

S

Safety Logic Systems Operations Supervisor/CIC Procedures, 12–7–1

Safety Logic Systems Supervisor/CIC Procedures ASDE, 12–7–1 Ensure Status, 12–7–2 Limited Configuration, 12–7–2 Monitor Alerts and Ensure Corrective Action, 12–7–2 Watch Checklist, 12–7–3 SAME, 2–9–3 SATR, 2–1–9

SECTIONAL AERONAUTICAL AND TERMINAL AREA CHARTS, 10-1-1 Security, 2–7–1 Security Notice (SECNOT), 21–7–1 SECURITY OF JOINT-USE RADAR DATA, 2 - 7 - 2SELECTED ALTITUDE LIMITS, 8-3-1 SELECTING ACTIVE RUNWAYS, 10-1-2 SFRA, 2-1-9 SHUTDOWN OF PAR ANTENNAS, 10-5-1 SIFs. See Special Interest Flights SIGMETs, 6-3-1 SIMULTANEOUS CONVERGING **INSTRUMENT APPROACHES, 10-4-5** SIMULTANEOUS INDEPENDENT APPROACHES, 10-4-3 Simultaneous Offset Instrument Approaches, 10-4-6 SIMULTANEOUS WIDELY- SPACED PARALLEL OPERATIONS, 10-4-4 SINGLE PERSON MIDNIGHT OPERATIONS, 2-6-5SINGLE SITE COVERAGE STAGE A **OPERATIONS**, 8-2-1 SPECIAL AIR TRAFFIC RULES, 2-1-9 SPECIAL FLIGHT RULES AREA, 2-1-9 Special Interest Flights (SIFs), 21–4–2 SPECIAL INTEREST SITES, 2–1–15 SPECIAL OPERATIONS SECURITY GROUP **RESPONSIBILITIES**, 21-2-1 Special Operations Security Mission, 21-1-1 SPECIAL RADAR ACCURACY CHECKS, 7 - 1 - 1Special Security Instructions (SSI) (14 CFR Section 99.7), 21-6-1 SPECIAL USE FREQUENCIES, 6-4-1 SPECIFIC AREA MESSAGE ENCODING (SAME) WEATHER RADIOS, 2–9–3 STRATEGIC OPERATIONS SECURITY GROUP **RESPONSIBILITIES**, 21–2–2

STRATEGIC OPERATIONS SECURITY MISSION, 21-1-1 SUA and PAJA Frequency Information, 2–1–11 sUAS Operations, 19–6–1 LOW ALTITUDE AUTHORIZATION AND NOTIFICATION CAPABILITY (LAANC), 19-6-1 14 CFR Part 107, 19-6-1 AIRSPACE WAIVER PROCESS, 19–6–2 MANUAL AIRSPACE AUTHORIZATION PROCEDURES (VIA DRONEZONE), 19-6-1 Supplemental Duties Classified Operations, 21–4–2 Continuity of Operations and Continuation of Government (COOP/COG), 21-4-2 Domestic Events Network (DEN), 21-4-1 Intelligence Analysis and Communication, 21 - 4 - 2Presidential Movement, 21-4-1 Special Interest Flights (SIFs), 21–4–2 Surveillance Source Use Beacon System, 3–6–2 Commissioning Facilities, 3-6-1 Monitoring Mode 3/A Codes, 3-6-3 Prearranged Coordination, 3–6–3 System and Display Setting, 3-6-3 Target Sizing, 3–6–3 SUSPENSION OR TERMINATION OF TRAINING, 2-6-5 Suspicious Activities, 2–7–1 Suspicious Aircraft/Pilot Activities, 2–1–12 System Operations Security, 21–3–1 Operations Security: Tactical, Special, and Strategic, 21–1–1 System Operations Security Mission, 21–1–1

Т

T & A Recording, 4–6–5 TACTICAL OPERATIONS SECURITY GROUP RESPONSIBILITIES , 21–2–1 Tactical Operations Security Mission, 21–1–1 Takeoff Clearance, 10–3–5 Temporary Flight Restrictions, 20–1–1

Terminal Operations, Services, and Equipment Airport Arrival Rate (AAR), 10-7-1 General, 10-1-1 Lighting, 10-6-1 Operations, 10-3-1 Position Binders, 10–2–1 Radar, 10-5-1 Services, 10-4-1 Time Checks, 2-4-1 Time Standards, 2–4–1 TOWER/RADAR TEAM CONCEPTS, 10-1-1 TOWER/RADAR TEAM POSITION BINDERS, 10 - 2 - 1Traffic Lights, Gates, and Signals, 3-1-2 Traffic Management ARTCC to ARTCC FEAFCA Coordination, 18 - 7 - 2Coded Departure Routes, 18–18–1 Coordination, 18–5–1 Flow Constrained Area (FCA), 18-7-1 Flow Evaluation Area (FEA), Flow Constrained Area (FCA), Ingetrated Collaborative Rerouting (ICR), 18–7–1 Ground Delay Programs, 18-9-1 Ground Stop(s), 18-10-1, 18-12-1 Initiatives, 18-6-1 Line of Authority, 18–3–1 Monitor Alert Parameter, 18-8-1 North American Route Program, 18–11–1, 18 - 17 - 1Organizational Missions, 18-1-1 Preferred IFR Routes Program, 18–16–1 Responsibilities, 18–2–1 Severe Weather Management, 18-14-1 Special Programs, 18–13–1 Supplemental Duties, 18-4-1 SWAP, 18-15-1 Traffic Management (TM) Support of Non-Reduced Vertical Separation Minima (RVSM) Aircraft, 18–22–1

TRANSITION PROCEDURES, 8–1–1

TRANSPORTATION SECURITY ADMINISTRATION AND FAA JOINT OPERATING PROCEDURES, 2–1–15

TRSA, 12–1–2

U

UAS Facility Maps (UASFM), 12-10-1 UAS Facilty Maps (UASFM) AUTHORIZATION MAP DESIGN PROCE-DURES CLASS B/C/D AIRSPACE, 12 - 10 - 2PART 107 OPERATION APPROVALS, 12 - 10 - 4UAS Operations, 5-5-1 14 CFR Part 91, 5-5-1 CLASS A AIRSPACE, 5-5-2 CLASS B AIRSPACE, 5-5-2 CLASS C AIRSPACE, 5–5–2 CLASS D AIRSPACE, 5–5–2 CLASS E AIRSPACE, 5-5-2 CLASS G AIRSPACE, 5-5-2 LETTERS OF AGREEMENT (LOA), 5-5-2 MEMORANDUMS, 5–5–2 **RESPONSIBILITIES**, 5–5–1 TERMINAL RADAR SERVICE AREA (TR-SA), 5-5-2 **TYPES AND AUTHORITY, 5–5–1** UAS SGI ADDENDUM REOUEST PROCESS AND COORDINATION, 21-5-1 UAS SPECIAL GOVERNMENTAL INTEREST (SGI) OPERATIONS, 21-4-2 UASFM, 12-10-1 Unauthorized Laser Illumination of Aircraft, 2 - 1 - 11URET. See User Request Evaluation Tool USE OF ACTIVE RUNWAYS, 10-1-2 USE OF OTHER THAN FAA COMMUNICATIONS CIRCUITS, 3-2-1 USE OF STARS QUICK LOOK FUNCTIONS, 12 - 6 - 1User Request Evaluation Tool Computer Data Retention, 6-7-3 Outages, 6-7-2 Responsibilities, Facility Manager, 6-7-1 Responsibilities, Operations Manager-in-Charge, 6-7-1 Responsibilities, Operations Supervisor-in-Charge, 6-7-1 Restrictions Inventory and Evaluation, 6-7-3 Standard Use of Automated Flight Data Management, 6–7–2

Traffic Counts and Delay Reporting, 6–7–3 Transfer of Position Responsibility, 6–7–4 URET Airspace Configuration Elements, 6–7–2 Waiver, Interim Altitude Requirements, 6–7–3

V

VFR Waypoint Chart Program, 12–8–1 Criteria, 12–8–1 Definition, 12–8–1 Policy, 12–8–1 Responsibilities, 12–8–2
Visual Approach Slope Indicator (VASI) Systems, 10–6–3
VISUAL SEPARATION, 10–3–4
Volcanic Ash, 18–4–3

W

WAIVER TO INTERIM ALTITUDE REQUIREMENTS, 8–2–2

Watch Coverage, 2–5–1 Area Supervision, 2–5–1 CIC, 2–5–2 Consolidating Positions, 2–5–2 Holiday Staffing, 2–5–2

Overtime Duty, 2–6–4 Relief Periods, 2–6–3 Supervisor, 2–6–1

Weather/Visibility, 2–9–1 Dissemination, 2–9–1 Record Center, 2–9–2 Visibility Charts, 2–9–2 Visual Observations, 2–9–2

Overtime Duty, 2-5-2 Relief Periods, 2–5–1 Schedules, 2–5–1 Supervision Coverage, 2–5–1 Supervisors Hours of Duty, 2-5-2 Watch Supervision Assignments, 2-6-1 Basic Watch Schedule, 2-6-4 CIC. 2-6-1 Consolidating Positions, 2–6–3 Controller-in-Charge Designation, 2-6-2 Controller-in-Charge Selection, 2-6-3 Holiday Staffing, 2-6-4 Manager, 2–6–1 Overtime Duty, 2–6–4 Relief Periods, 2–6–3 Supervisor, 2-6-1 Weather/Visibility, 2-9-1 Dissemination, 2-9-1 Record Center, 2–9–2 Visibility Charts, 2–9–2 Visual Observations, 2–9–2 Wind Indicator Cross Check, 2-10-1 Wind Instrument Sensors, 2-10-1 WIND INSTRUMENTS AT APPROACH CONTROL FACILITIES, 10-3-1 WORK ASSIGNMENTS AFTER SUSPENSION OR TERMINATION OF TRAINING, 2-6-5 [References are to page numbers]

Wind Indicator Cross Check, 2-10-1

Wind Instrument Sensors, 2-10-1

WIND INSTRUMENTS AT APPROACH CONTROL FACILITIES, 10–3–1

WORK ASSIGNMENTS AFTER SUSPENSION OR TERMINATION OF TRAINING, 2–6–5

BRIEFING GUIDE



U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

Table of Contents

Paragraph Number	Title	Page
2-6-7	BASIC WATCH SCHEDULE	BG-4
2-9-6	VISIBILITY CHARTS	BG-4
Chapter 3, Section 6	Radar Use	BG-6
3-6-1	COMMISSIONING RADAR FACILITIES	BG-5
3-6-2	ATC SURVEILLANCE SOURCE USE	BG-6
4-3-3	DEVELOPING LOA	BG-7
4-3-6	COMMERCIAL SPACE LOAs	BG-7
4-4-2	USE OF AIRCRAFT CALL SIGNS	BG-15
5-3-4	ATMOSPHERE SAMPLING FOR NUCLEAR CONTAMINATION	BG-16
5-3-6	WEATHER RECONNAISSANCE FLIGHTS	BG-17
Chapter 5, Section 5	14 CFR Part 91, UAS Operations	BG-20
5-5-1	TYPES AND AUTHORITY	BG-20
5-5-2	OPERATIONS	BG-20
5-5-3	RESPONSIBILITIES	BG-20
5-5-4	OPERATIONS IN CLASS A AIRSPACE	BG-20
5-5-5	OPERATIONS IN TERMINAL RADAR SERVICE AREA (TRSA)	BG-20
5-5-6	OPERATIONS IN CLASS B AIRSPACE	BG-20
5-5-7	OPERATIONS IN CLASS C AIRSPACE	BG-20
5-5-8	OPERATIONS IN CLASS D AIRSPACE	BG-20
5-5-9	OPERATIONS IN CLASS E AIRSPACE	BG-20
5-5-10	OPERATIONS IN CLASS G AIRSPACE	BG-20
5-5-11	LETTERS OF AGREEMENT (LOA)/MEMORANDUMS	BG-20
8-2-1	THREE MILE OPERATIONS	BG-6
9-1-5	USE OF AUTOMATED COUNTS	BG-25
9-1-6	FAA FORM 7230–14, ARTCC OEPRATIONS DAILY SUMMARY	BG-25
9-1-7	INSTRUCTIONS FOR COMPLETING FAA FORM 7230-14	BG-25
Chapter 12, Section 2	Automated Terminal Tracking Systems (ATTS)	BG-28
12-2-1	OPERATIONAL USE	BG-28
12-2-2	DATA ENTRIES	BG-28
12-2-3	DISPLAY DATA	BG-28
12-2-4	USE OF MODIFY AND QUICK LOOK FUNCTIONS	BG-28
12-2-5	AUTOMATION PROGRAM CHANGES	BG-28
12-2-6	AUTOMATIC ACQUISITION/TERMINATION AREAS	BG-28

12-2-7	MINIMUM SAFE ALTITUDE WARNING (MSAW), CONFLICT ALERT (CA), AND MODE C INTRUDER (MCI)	BG-28
12-2-8	MAGNETIC VARIATION OF VIDEO MAPS/GEO MAPS AT ARTS FACILITIES	BG-28
12-2-9	MSAW DTM CARTOGRAPHIC CERTIFICATION, UPDATES. AND RECOMPI- LATION	BG-28
12-2-10	DIGITAL MAP VERIFICATION	BG-28
12–7–7	MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA)	BG-28
12-7-9	MSAW GTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPI- LATION	BG-28
12-8-3	MONITOR ALERTS AND ENSURE CORRECTIVE ACTION	BG-36
Chapter 12, Section 10	UAS Facility Maps (UASFM)	BG-37
12-10-1	POLICY	BG-37
12-10-2	RESPONSIBILITY	BG-37
12-10-3	ASSUMPTIONS	BG-37
12-10-4	AUTHORIZATION MAP DESIGN PROCEDURES CLASS B/C/D AIRSPACE \dots	BG-37
12-10-5	UAS FACILITY MAP (UASFM) DESIGN	BG-37
12-10-6	PART 107 OPERATION APPROVALS	BG-37
Chapter 19, Section 6	14 CFR Part 107, sUAS Operations	BG-45
19-6-1	GENERAL	BG-45
19-6-2	LOW ALTITUDE AUTHORIZATION AND NOTIFICATION CAPABILITY (LAANC)	BG-45
19-6-3	MANUAL AIRSPACE AUTHORIZATION PROCEDURES (VIA DRONEZONE)	BG-45
19–6–4	HEADQUARTERS/SERVICE CENTER AIRSPACE WAIVER PROCESS	BG-45
20-7-6	SPECIAL TRAFFIC MANAGEMENT PROGRAM GUIDELINES	BG-5
Appendix 6	Commercial Space LOA Templates	BG-7

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

3. CHANGE:

<u>OLD</u>

2-6-7. BASIC WATCH SCHEDULE

Title through b11

Add

b<u>12</u> and **b<u>13</u>**

<u>NEW</u>

2-6-7. BASIC WATCH SCHEDULE

No Change

<u>12. Have at least 30 consecutive hours</u> <u>off-duty within each seven-day period.</u>

Renumber **b**<u>13</u> and **b**<u>14</u>

1. PARAGRAPH NUMBER AND TITLE: 2-9-6. VISIBILITY CHARTS

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

3. CHANGE:

<u>OLD</u>

2-9-6. VISIBILITY CHARTS

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

<u>NEW</u>

2–9–6. VISIBILITY CHARTS

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

1. PARAGRAPH NUMBER AND TITLE:

3–6–1. COMMISSIONING RADAR FACILITIES 20–7–6. SPECIAL TRAFFIC MANAGEMENT PROGRAM GUIDELINES

2. BACKGROUND: On February 1, 2017, a letter was sent from the Aircraft Owners and Pilots Association (AOPA) to the US NOTAM office requesting evaluation of discontinuing the Notices to Airmen Publication (NTAP). The letter was forwarded to AJV–P12, and AJV–P12 begins an internal audit. Priority was given to cleaning up the NTAP, ensuring content was current and valid, and moving the content to HTML in order to be more readily accessible and searchable. Immediately, multiple notices were identified and targeted for removal. The decision to discontinue the NTAP publication entirely and migrate any remaining notices to a new location was a result of the original AOPA letter and significant input from the ATO NOTAM Modernization Committee. The NTAP will be discontinued effective June 18, 2020, including its name, contraction, and definition. Remaining notices will be migrated to either Domestic Notices or International Notices, found on the Air Traffic Plans and Publications website or the Federal NOTAM System (FNS) website as external links.

3. CHANGE:

<u>OLD</u>

3–6–1. COMMISSIONING RADAR FACILITIES

Title through c3

4. А copy of of each 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 Chart Supplement U.S. must be addressed to Manager of Publications, Manager of System Safety and Procedures, Manager of Flight Services Administration, and the appropriate Service Area offices.

<u>NEW</u>

3–6–1. COMMISSIONING RADAR FACILITIES

No Change

4. A copy of each <u>memorandum</u>/aeronautical information message for inclusion in the Domestic Notices website must be sent to Mission Support Services, Policy, Publications and Administration (AJV-P12) via 9-ATOR-HO-PubGrp@faa.gov, Manager, Flight Service Safety and Operations Policy (AJR-B100) Group via 9-AJR-FSSOG@faa.gov, Aeronautical Information Group (AJV-A30) via https://nfdc.faa.gov/nfdcApps/controllers/Publi cSecurity/nfdcLogin, and the appropriate Service Area **Directors**.

<u>OLD</u>

20-7-6. SPECIAL TRAFFIC MANAGEMENT PROGRAM GUIDELINES

Title through c

1. The <u>Notices to Airmen publication. If this</u> <u>publication is used, the required information must</u> <u>be sent to ATO Publications for processing, at least</u> <u>60-days in advance of the event.</u>

<u>NEW</u>

20–7–6. SPECIAL TRAFFIC MANAGEMENT PROGRAM GUIDELINES

No Change

1. The <u>Domestic Notices found in the Federal</u> <u>NOTAM System (FNS) External Links or the</u> <u>Air Traffic Plans and Publications website. If</u> <u>this website is used, the required information</u> <u>must be sent to the ATO Policy Directorate for</u> <u>processing at 9-ATOR-HQ-PubGrp@faa.gov</u> <u>at least 28 days prior to the effective date.</u>

1. PARAGRAPH NUMBER AND TITLE:

Chapter 3, Section 6. Radar Use 3–6–2. ATC SURVEILLANCE SOURCE USE 8–2–1. THREE MILE OEPRATIONS

2. BACKGROUND: Automatic Dependent Surveillance–Broadcast (ADS–B) is a key NextGen technology in the effort to modernize the National Airspace System (NAS). In most en route airspace, aircraft must be separated by at least 5 NM, and this minima was supported by the original ADS–B safety risk management documents. Currently, en route facilities can use reduced separation minima of 3 NM at FL 230 and below using secondary surveillance radar, but only when the aircraft are in relatively close proximity to the radar antenna. The recent deployment of track–based display mode into ERAM and concurrent improvements in ADS–B data processing will allow en route facilities to expand the use of 3 NM separation beyond the limitations imposed by radar.

3. CHANGE:

Section 6. Radar Use

OLD

Section 6. <u>Surveillance Source</u> Use

<u>OLD</u>

3–6–2. ATC SURVEILLANCE SOURCE USE

Title through **b2** *NOTE*

c. Targets derived from <u>ADS–B or</u> WAM may not be used to provide 3 mile separation in the En Route Automation System (EAS).

Add

<u>OLD</u>

8-2-1. THREE MILE OPERATIONS

Facilities may adapt airspace to permit the use of 3 NM separation as defined in FAA Order JO 7110.65, Air Traffic Control, subpara 5–5–4c, subpara 5–5–4d or subpara 5–5–4e, provided all of the following are met:

a. <u>A significant</u> operational advantage will be obtained. Consideration must be given to such aspects as terminal interface, radar reliability, etc.

b through b3

c. ERAM:

1. Within 40 NM of the preferred sensor or within 60 NM of the preferred sensor when using ASR-9 with Mode S or ASR-11 MSSR Beacon.

c<u>2</u> and c<u>3</u>

Add

<u>NEW</u>

NEW

3–6–2. ATC SURVEILLANCE SOURCE USE

No Change

c. Targets derived from WAM may not be used to provide 3 mile separation in the En Route Automation System (EAS).

<u>NOTE-</u> <u>3 NM targets are not derived from WAM within the</u> <u>EAS.</u>

NEW

8-2-1. THREE MILE OPERATIONS

Facilities may adapt airspace to permit the use of 3 NM separation as defined in FAA Order JO 7110.65, Air Traffic Control, subpara 5-5-4c, subpara $5-5-4d_2$ or subpara 5-5-4e, provided all of the following are met:

a. <u>An</u> operational advantage will be obtained. Consideration must be given to such aspects as terminal interface, radar reliability, etc.

> No Change No Change Delete

Renumber **c**<u>1</u> and **c**<u>2</u>

3. Within 40 NM of the preferred radar; or
Add	<u>4. Within 60 NM of the preferred radar when</u> using ASR-9 with Mode S or ASR-11 MSSR Beacon; or
Add	5. When the facility is operating in track-based display mode.
Add	<u>NOTE-</u> <u>1. ADS-B allows the expanded use of 3 NM separation</u> <u>in approved areas. It is not required for and does not</u> <u>affect the use of radar for 3 NM separation.</u>
Add	2. The Surveillance Services Directorate provides maps to facilities depicting the geographic areas and altitudes where ADS-B has been validated for 3 NM separation.

PARAGRAPH NUMBER AND TITLE:
 4–3–3. DEVELOPING AN LOA
 4–3–6. COMMERCIAL SPACE LOAs
 Appendix 6. Commercial Space LOA Templates

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

3. CHANGE:

<u>OLD</u>

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

OLD

Add

Add

NEW

4-3-3. DEVELOPING LOA

Air traffic managers must take the following action when developing <u>an</u> LOA: (See examples FIG 4–3–1 and FIG 4–3–2. <u>For commercial space</u> <u>example LOAs, see Appendix 6</u>.)

<u>NEW</u>

4-3-6. COMMERCIAL SPACE LOAs

LOAs exist between ATC facilities and commercial space launch/reentry site, launch, and/or reentry operations proponents. FAA Order JO 7400.2, Procedures for Handling Airspace Matters contains responsibilities and procedures for Commercial Space operations. The following lists the roles and responsibilities of organizations and individuals involved in the commercial space LOA process:

<u>a. The respective ATO Service Center OSG will</u> serve as facilitator of the LOA development.

Add

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

Appendix 6. Commercial Space LOA Templates

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

Letter of Agreement

Effective:

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

1. Purpose:

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

Sample text:

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

2. Cancellation:

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

Sample text:

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

3. Scope:

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

Sample Text:

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

4. Responsibilities:

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

a. Operator must fulfill requirements provided in the Sample Text for this section.

b. Lead ATC facility must fulfill requirements provided in the Sample Text for this section and

1. Fill out the Points of Contact Table (Attachment B).

- 2. Fill out the Actions Timetable (Attachment C)
- c.(As needed) Other stakeholders and affected facilities must:

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

Sample text:

a. [Operator] must:

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

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

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

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

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

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

b. [Lead ATC facility] must:

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

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

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

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

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

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

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

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

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

5. Procedures:

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

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

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

Sample text:

a. [Operator] must:

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

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

a) The launch/reentry window.

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

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

3. (As needed) Submit Altitude Reservation (ALTRV) request(s) to CARF (and email a copy of the request to the [lead ATC facility]) a minimum of [XX] days prior to the planned operation.

4. Verify the issuance of the appropriate NOTAMs.

5. No less than [XX] minutes in advance of a planned operation, notification will be given by [Operator] to [lead ATC facility] of intent for the [launch/hover-test] to take place.

6. During the operation, a [Operator] representative must participate on an FAA Hotline teleconference with [lead ATC facility] and ATCSCC Space Operations (see Actions Timetable, Attachment C, for phone number). Communication on the FAA Hotline teleconference must be established no less than [XX] minutes prior to planned operation.

a) The [Operator] representative must be able to provide real-time verbal indications of the status of the operation, its progress along the launch/reentry trajectory, and occurrence of significant events.

b) Participation by representative(s) from [other stakeholders and affected facilities] is advised.

7. Notify [lead ATC facility] upon completion of the operation.

8. (As needed) Contact CARF and request that the appropriate ALTRVs be cancelled.

9. In the event of an anomaly, a [Operator] representative must immediately notify [lead ATC facility], via FAA Hotline teleconference, of the occurrence of the anomaly. Information communicated should include, at a minimum:

a) The last known state of the vehicle.

b) The location of the off-nominal event (latitude and longitude, represented as degree-minute-second).

c) The predicted location(s) impacted (latitude and longitude, represented as degree-minute-second) (when known).

d) Projected time the hazard(s) will no longer be present (when known).

e) Other information that will provide estimated positions of hazards.

10. In the event of an emergency, [Operator] must immediately contact [lead ATC facility], via FAA Hotline teleconference and email all the parties listed in the Points of Contact Table (Attachment B). Information conveyed should include, at a minimum:

a) The last known state of the vehicle.

b) The location of the event (latitude and longitude, represented as degree-minute-second).

c) The predicted location(s) impacted (latitude and longitude, represented as degree-minute-second) (when known).

d) Projected time the hazard(s) will no longer be present (when known).

e) Other information that will provide estimated positions of hazards.

b. [Lead ATC facility]:

1. Upon notification of a completed operation, [lead ATC facility] must cancel appropriate airspace restrictions and/or NOTAMs.

2. In the event when [lead ATC facility] becomes aware of a condition that would make the launch/reentry unsafe, [lead ATC facility] must immediately contact, via FAA Hotline, [Operator] and all other parties listed in the Points of Contact Table (Attachment B).

6. Attachments

A. Signatures

- B. Points of Contact Table
- C. Actions Timetable

D. Graphics/Maps

- Launch/Reentry Site Description/Map
- Aircraft Hazard Area Description/Map
- Temporary Flight Restriction Description/Map
- Air Traffic Control Assigned Airspace Description/Map

E. Commercial Launch/Reentry Site LOA

Attachment A: Signatures

[Lead ATC Facility]

[Operator]

[ATCSCC Space Operations]

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

Attachment B: Points of Contact Table

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

Office	Phone #	Email	Responsibility
[Operator]			
[Lead ATC Facility] Supervisor in Charge			
[Lead ATC Facility] Traffic Management Unit			
ATCSCC Space Operations			
Central Altitude Reservation Function (CARF)			
National Traffic Management Office (NTMO)			

Attachment C: Actions Timetable

The following table should be completed by [lead ATC facility]. In coordination with the [lead ATC facility], [Operator] must ensure that the following actions are completed at the defined intervals.

Time	Event	Remarks	Date Completed
T – [XX] months Suggestion: T – 6 months	Submit Launch/reentry Forecast Package	Operator should provide best estimate of all known launch/reentry dates for upcoming six months.	
T – [XX] calendar days Suggestion: T – $30 – 60$ calendar days	Coordinate launch/reentry corridor/hazard area(s)	Operator should coordinate with ATCSCC Space Operations and as appropriate, other affected facilities.	
T – [XX] calendar days Suggestion: T – 10 calendar days	Submit Pre–Planning Package	Operator should provide a description of the Aircraft Hazard Area(s), along with date(s) and time(s) for launch/reentry.	
T – [XX] calendar days Suggestion: T - 5 - 14 calendar days	File an Altitude Reservation (ALTRV) request with CARF (as needed)	Operator is responsible for coordinating all necessary ALTRV requests. Requests should be submitted via email to @FAA.gov A copy of the request should also be emailed to [lead ATC facility]. Contact:	
T – [XX] hours	Verify issuance of appropriate airspace notices (NOTAMs and TFRs)	Operator should contact [lead ATC facility] for issuance of TFR(s) and NOTAM(s) (as needed). Per 14 CFR § 91.143, TFRs need to be issued at least hours in advance of the scheduled operation.	
T – [XX] hours and repeat again at T – [XX] hours Suggestion: T – 24 hours and 3 hours	Provide operational status report	Operator contacts [lead ATC facility] via [telephone/email] and provides operational status report, which includes confirmation of intent and specifics of operation.	

Time	Event	Remarks	Date Completed
T – [XX] minutes Suggestion: T - 60 - 30 minutes	Establish Hotline connection	 [FAA Hotline telephone #] The operation will be delayed or terminated if the Operator does not establish communications via FAA Hotline teleconference. Operator must have a representative on the FAA Hotline teleconference until the operation is complete. 	
T – [XX] minutes Suggestion: T – 30 minutes	Provide operational status report	Operator provides operational status report. This report includes confirmation that the operation will take place as scheduled. As necessary, Operator should continue to communicate any significant operational changes.	
T – [XX] minutes and repeat at T – [XX] minutes Suggestion: T – 10 minutes and T – 5 minutes	Receive final clearance or confirmation of continued approved mission status	Operator must receive clearance or confirmation of continued approved mission status from [lead ATC facility] to proceed with operation.	
During operation	Maintain real-time communication via FAA Hotline teleconference	Operator must provide real–time verbal indications on the status of the vehicle.	
Post–operation or mission cancellation	Notify ATC and CARF (if applicable) of completion or cancellation of operation	ATC must be notified when operation is complete. TFR(s), ALTRV(s), and any other necessary notices should be cancelled as soon as practicable.	
	Schedule post–operation debrief	A debrief should occur ideally within hours, but no later than hours of the completion of the operation. A debrief should be conducted even if no off-nominal activity occurred.	

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

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

3. CHANGE:

<u>OLD</u>

4-4-2. USE OF AIRCRAFT CALL SIGNS

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

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

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

Add

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

<u>4</u>. Local call signs are not used in filing flight plans outside the local area designated in the LOA.

NOTE-

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

NEW

4-4-2. USE OF AIRCRAFT CALL SIGNS

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

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

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

NOTE-

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

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

<u>d.</u> Local call signs are not used in filing flight plans outside the local area designated in the LOA.

NOTE-

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

Designators and Associated Telephonies. AC 120-26, Assignment of Aircraft Call Signs and Associated Telephonies. **b.** Special call sign/telephony designators are Delete authorized and assigned by the FAA for governmental or other aircraft operations to enable special handling by ATC within the continental United States. Special designators can be used for filing flight plans and may be issued for a designated area of operation corresponding to the duration of an event or circumstances requiring special handling. Special designators are authorized for use by ATO System Operations Security (9-ATOR-HO-IFOS@faa.gov) and are published in FAA Order 7110.67 and FAA Order 7340.2. **REFERENCE**-Delete FAA Order JO 7110.67, Air Traffic Management Security Services for Special Activities FAA Order JO 7340.2, Contractions c. ICAO three-letter designators (3LD) are Delete published in FAA Order JO 7340.2, Contractions. 3LDs are authorized for use by the following ATO offices: **1.** Aeronautical Information Service (AIS) Delete (callsigns@faa.gov) for non-governmental aircraft operators; and Operations Security Delete System 2. (9-ATOR-HQ-IFOS@faa.gov) for governmental aircraft operators. REFERENCE-Delete AC 120-26, Assignment of Aircraft Call Signs and Associated Telephonies.

REFERENCE-

FAA Order JO 7610.12, Assignment and Authorization of Call Sign

1. PARAGRAPH NUMBER AND TITLE: 5–3–4. ATMOSPHERE SAMPLING FOR NUCLEAR CON-TAMINATION

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

3. CHANGE:

<u>OLD</u>

5–3–4. <u>ATMOSPHERE</u> SAMPLING FOR NUCLEAR CONTAMINATION

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

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

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

REFERENCE-

FAA Order JO 7110.65, Para 9–2–18, SAMP. FAA Order JO 7610.4, Para 12–4–3, <u>Atmospheric</u> Sampling for Nuclear Contamination.

<u>NEW</u>

5–3–4. <u>AERIAL</u> SAMPLING<u>/SURVEYING</u> FOR NUCLEAR CONTAMINATION

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

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

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

REFERENCE-

FAA Order JO 7110.65, Para 9–2–18, SAMP. FAA Order JO 7610.4, Para 12–4–3, <u>Aerial</u> Sampling/<u>Surveying</u> for Nuclear Contamination.

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

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

3. CHANGE:

OLD

5-3-6. WEATHER RECONNAISSANCE FLIGHTS

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

a. WINTER STORM MISSIONS.

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

Add

	<u>acces</u> (WSI	<u>s to the Winter Season Plan of the Day</u> POD) prior to the mission:
Add	<u>NOTE</u> The W examp and re	<u>2–</u> /SPOD describes the mission and includes, for ple, type aircraft call sign, departure airfield, pute of flight.
Add	ART	b) Coordinate the mission directly with the CC(s) upon receipt of the mission tasking:
Add	<u>NOTE</u> <u>The 5.</u> <u>ordina</u> sions	2- 3WRS and NOAA AOC are responsible for co- uting airspace access directly with DOD for mis- on the U.S. east coast.
Add	<u>(</u> prior	c) File a flight plan as soon as practicable to departure time:
Add	<u>(</u> with	<u>d) Request a NOTAM by filing directly</u> the U.S. NOTAM office:

NEW

5–3–6. WEATHER RECONNAISSANCE FLIGHTS

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

a. WINTER SEASON MISSIONS.

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

(a) Ensure the appropriate ARTCC(s) has Ŋ

Add	<u>(e) Coordinate dropsonde instrument</u>
	releases with ATC prior to release and broadcast
	on 121.5 and 243.0 to advise any traffic in the
	area of the pending drop:
Add	<u>NOTE-</u>
	1. A dropsonde is a cardboard cylinder weighing less
	than a pound, that has a parachute attached, and is
	used for collecting weather data.
Add	2. ATC responsibilities pertaining to dropsonde
	releases are described in FAA Order JO 7110.65,

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

Add

(a) Mission call-sign.
(b) Estimated time over start fix.
(c) Storm track to be flown.
(d) Location of dropsonde release points.
<u>(e) Requested altitude(s) if other than</u> FL290B310.
(f) Any requests to deviate from published routes.
<u>NOTE-</u>
1. The passing of this data does not pre-empt the
nission commander's responsibility to file a flight plan <u>,</u>
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
<u>aircraft commander will want to follow a specific</u>
pressure gradient (as opposed to altimeter setting of
<u>29.92) when flying these missions. The correct pressure</u>
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

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.

Paragraph 9–2–20, Weather Reconnaissance Flights.
2. <u>TEAL or NOAA flights may request the Chief, Aerial Reconnaissance Coordinator, All Hurricanes (CARCAH) to relay an en route</u>

clearance request to the ARTCC if the flight is unable to contact ATC.

<u>NOTE-</u>

<u>ATC respor</u>	<i>usibilities pertaining to clearance requests</i>
via CARCA	H are described in FAA Order JO
7110.65, Pa	ragraph 9–2–20, Weather Reconnaissance
Flights.	

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minute.

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

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

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

Delete

1. PARAGRAPH NUMBER AND TITLE:

Section 5. 14 CFR Part 91, UAS Operations 5–5–1. TYPES AND AUTHORITY 5–5–2. OPERATIONS 5–5–3. RESPONSIBILITIES 5–5–4. OPERATIONS IN CLASS A AIRSPACE 5–5–5. OPERATIONS IN TERMINAL RADAR SERVICE AREA (TRSA) 5–5–6. OPERATIONS IN CLASS B AIRSPACE 5–5–7. OPERATIONS IN CLASS C AIRSPACE 5–5–8. OPERATIONS IN CLASS C AIRSPACE 5–5–9. OPERATIONS IN CLASS E AIRSPACE 5–5–10. OPERATIONS IN CLASS G AIRSPACE 5–5–11. LETTERS OF AGREEMENT (LOA)/MEMORANDUMS

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

3. CHANGE:

BG-20

<u>OLD</u>	NEW
Add	Section 5. 14 CFR Part 91, UAS Operations
<u>OLD</u>	NEW
Add	5-5-1. TYPES AND AUTHORITY
Add	<u>a. Public aircraft operating under Part 91.</u>
Add	<u>1. Public aircraft operations are defined in 14</u>
	CFR, Part 1, Definitions & Abbreviations and 49
	U.S.C. 8 40102, 40125.

Add	2. For UAS operating (including tethered/moored UAS) as public aircraft, the authority is the Certificates of Waiver or Authorization (COA) or as specified in a Memorandum of Agreement (MOA), or Memorandum of Understanding (MOU) between the using agency and FAA Headquarters. These types include:
Add	(a) Standard COA.
Add	(b) Blanket COA.
Add	b. UAS (including tethered/ moored UAS) operating as civil aircraft operating under Part 91.
Add	1. Any operation that does not meet the statutory criteria for a public aircraft operation is considered a civil aircraft operation and must be conducted in accordance with all FAA regulations applicable to the operation.
Add	2. For UAS operating as civil aircraft the authority is a special airworthiness certificate, restricted category aircraft (21.25), Type Certificate, or a Section 44807 exemption with COAs.
Add	3. When the Section 44807 exemption is granted, the petitioner will be issued a Blanket COA. If the operation cannot be conducted under the provisions of the Blanket COA, the proponent must apply for a Standard COA. A waiver request to a Blanket COA will not be approved.
<u>OLD</u>	NEW
Add	5-5-2. OPERATIONS
Add	<u>a. UAS operating under Part 91 COA can be</u> <u>VFR or IFR.</u>
Add	<u>b. The UAS Pilot-in-Command (PIC) is to give</u> way to all manned aircraft, except when operating under IFR.
Add	<u>c. UAS operations should not impede, delay, or</u> <u>divert manned aircraft operations, except as</u> <u>directed by ATC for operational necessity.</u>
Add	<u>d. If a Part 91 operation is conducted entirely</u> <u>at or below 400 ft. AGL then any ATC services</u> <u>will be contained in a Letter of Agreement or</u> <u>ATC Memorandum.</u>

Add	e. Flights below Flight Level (FL) 180 must have a dedicated observer or a waiver to 14 CFR 91.113. These duties will be performed by a ground-based observer or chase plane. UAS pilots and observers must be responsible for only one UA at a time unless authorized in the COA.
Add	1. Daisy chaining of observers or observers on a moving platform may be approved on a case-by-case basis and as authorized in the <u>COA.</u>
Add	2. When a ground-based/chase plane observer is required, a pilot may not perform concurrent duties as the pilot and an observer.
Add	<u>f. Procedures for non-joint-use Department of</u> <u>Defense (DOD) airfield operations will be</u> <u>specified by the DOD.</u>
OLD	NEW
Add	5–5–3. RESPONSIBILITIES
Add	a. UAS flying under IFR should be handled in the same manner as manned IFR aircraft, however, consideration should be given to the possibility of unique UAS performance characteristics.
Add	b. Lost Link Procedures will vary based upon the type of UAS and must be included in the COA. ATC specialists must have access to all coordinated information available in its simplest form, to determine the actions a UAS will take in these scenarios. The Operations Supervisor/Controller-in-Charge (OS/CIC) should ensure that coordinated information is available, and if known, that the controller has a method of contacting the appropriate UAS PIC. In the event of a UAS lost link, procedures outlined in FAA Order JO 7110.65, Paragraph 5-2-9, Unmanned Aircraft Systems (UAS) Lost Link, will be followed.
Add	<u>c. The following operations are not authorized</u> <u>for UAS:</u>
Add	<u>1. Instructions to visually follow another</u> <u>aircraft.</u>
Add	2. Opposite Direction Operations (ODO).
Add	<u>3. Special VFR operations.</u>
Add	<u>4. Operations requiring UAS to maintain</u> <u>visual separation.</u>

Add	<u>d. The use of sequencing as indicated in FAA</u> Order JO 7110.65, Chapter 3, Section 8, is authorized with the exception of issuing instruction to follow another aircraft or to maintain visual separation.
Add	<u>e. In the event of a UAS emergency, procedures</u> <u>outlined in FAA Order JO 7110.65, Air Traffic</u> <u>Control, Chapter 10, will be followed.</u>
Add	<u>f. Air traffic facility management at facilities</u> where UAS operations are being conducted are required to ensure air traffic controllers are <u>familiar with the contents of each COA and any</u> <u>applicable LOAs impacting their area of</u> <u>specialization.</u>
Add	<u>g. Operational communication with any UAS</u> <u>PIC must be on a recorded line, when available.</u>
<u>OLD</u>	NEW
Add	<u>5–5–4. OPERATIONS IN CLASS A</u> <u>AIRSPACE</u>
Add	<u>a. UAS must operate on an IFR flight plan and</u> <u>a standard COA.</u>
Add	<u>b. UAS must comply with the provision of §</u> <u>91.135.</u>
Add	<u>c. ATC must provide separation and ATC</u> <u>services per FAA Order JO 7110.65 with</u> <u>consideration given to UAS performance</u> <u>characteristics and potential latency issues.</u>
<u>OLD</u>	<u>NEW</u>
Add	<u>5–5–5. OPERATIONS IN TERMINAL</u> <u>RADAR SERVICE AREA (TRSA)</u>
Add	<u>a. If TRSA services are provided, they will be</u> <u>in accordance with FAA Order JO 7110.65,</u> <u>Chapter 7.</u>
Add	b. If it is determined that ATC will provide services in the TRSA for UAS operating entirely at or below 400 ft. AGL, those services will be specified in an LOA or ATC Memorandum.
<u>OLD</u>	NEW
Add	<u>5–5–6. OPERATIONS IN CLASS B</u> <u>AIRSPACE</u>
Add	<u>a. If Class B services are provided, they will be</u> <u>in accordance with FAA Order JO 7110.65,</u> Chapter 7.

Add	b. If it is determined that ATC will provide services in the Class B for UAS operating entirely at or below 400 ft. AGL, those services will be specified in an LOA or ATC <u>Memorandum.</u>
Add	<u>c. UAS must operate on a standard COA or in</u> <u>accordance with using agency/FAA UAS</u> <u>MOA/MOU.</u>
<u>OLD</u>	NEW
Add	<u>5–5–7. OPERATIONS IN CLASS C</u> <u>AIRSPACE</u>
Add	<u>a. If Class C services are provided, they will be</u> in accordance with FAA Order JO 7110.65, <u>Chapter 7.</u>
Add	b. If it is determined that ATC will provide services in the Class C for UAS operating entirely at or below 400 ft. AGL, those services will be specified in an LOA or ATC <u>Memorandum.</u>
<u>OLD</u>	NEW
Add	<u>5–5–8. OPERATIONS IN CLASS D</u> <u>AIRSPACE</u>
Add	UAS must operate on a standard COA or in accordance with using agency/FAA DOD Class D notification per the using agency/FAA UAS MOA/MOU.
<u>OLD</u>	NEW
Add	<u>5–5–9. OPERATIONS IN CLASS E</u> <u>AIRSPACE</u>
Add	UAS must comply with provisions of § 91.127 unless otherwise authorized by the jurisdictional ATC facility.
<u>OLD</u>	NEW
Add	<u>5–5–10. OPERATIONS IN CLASS G</u> <u>AIRSPACE</u>
Add	<u>a. UAS must comply with provisions of § 91.126</u> <u>unless otherwise authorized by the jurisdictional</u> <u>ATC facility.</u>
Add	b. UAS must operate on a standard or blanket COA in accordance with using agency/FAA UAS MOA/MOU.

<u>OLD</u>	NEW
Add	<u>5–5–11. LETTERS OF AGREEMENT</u> (LOA)/MEMORANDUMS
Add	<u>a. LOAs should be developed in accordance</u> with FAA Order JO 7210.3, Facility Operation and Administration.
Add	b. LOAs should address contingency procedures, if not contained in the COA, including but not limited to:
Add	<u>1. Lost Link, to include flight termination</u> points.
Add	<u>2. Flyaway.</u>
Add	<u>3. Lost Sight of UAS by the visual observer.</u>
Add	4. Any specific altitude limitations, geographic boundary limitations, preferred route assignments, and periods of operation(s). This information must be provided to the ATC facility involved in the LOA via graphical depiction.
Add	5. Weather requirements for operations.
Add	6. ATC facilities responsibilities.
Add	7. UAS proponent responsibilities.
Add	<u>NOTE–</u> LOAs may be used in conjunction with COAs when the ATM deems it necessary; they cannot be used in lieu of COAs.

1. PARAGRAPH NUMBER AND TITLE:

9-1-5. USE OF AUTOMATED COUNTS

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

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

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

3. CHANGE:

<u>OLD</u>

9–1–5. USE OF AUTOMATED COUNTS

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

<u>OLD</u>

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.

<u>OLD</u>

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

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

<u>NEW</u>

9–1–5. USE OF AUTOMATED COUNTS

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

<u>NEW</u>

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

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

<u>NEW</u>

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

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

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

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

b. REVERSE SIDE: Facilities <u>which are required</u> to use the back <u>side for any reason</u> 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 <u>across</u> to get the "TOTAL" Oceanic operations column. At the bottom of the form, a row marked "TOTAL" is for the monthly total of each column.

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

No Change

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

b. REVERSE SIDE: Facilities **<u>that need</u>** to use the back <u>**of the form**</u> 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, <u>unless reported by</u> <u>other means</u>, 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 <u>horizontally</u> 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:* \underline{A} dd the Domestic total to the Oceanic total to get a grand total for the day. The form is designed to be folded so that the three columns are side by side. Folding instructions are printed on the form.

1. PARAGRAPH NUMBER AND TITLE:

Chapter 12, Section 2. Automated Terminal Tracking Systems (ATTS) 12–2–1. OPERATIONAL USE 12–2–2. DATA ENTRIES 12–2–3. DISPLAY DATA 12–2–4. USE OF MODIFY AND QUICK LOOK FUNCTIONS 12–2–5. AUTOMATION PROGRAM CHANGES 12–2–6. AUTOMATIC ACQUISITION/TERMINATION AREAS 12–2–6. AUTOMATIC ACQUISITION/TERMINATION AREAS 12–2–7. MINIMUM SAFE ALTITUDE WARNING (MSAW), CONFLICT ALERT (CA), AND MODE C INTRUDER (MCI) 12–2–8. MAGNETIC VARIATION OF VIDEO MAPS/GEO MAPS AT ARTS FACILITIES 12–2–9. MSAW DTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION 12–2–10. DIGITAL MAP VERIFICATION 12–7–7. MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA) 12–7–9. MSAW GTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION

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

3. CHANGE:

<u>OLD</u>	NEW
<u>Section 2. Automated Terminal Tracking</u> <u>Systems (ATTS)</u>	Delete
OLD	NEW
<u>12–2–1. OPERATIONAL USE</u>	Delete
a. Do not use ATTS data when the system, or that portion of the systems, is released to Technical Operations technicians.	Delete
b. Verify the operational status of all ATTS components daily prior to operational use.	Delete
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.	Delete

OLD 12-2-2. DATA ENTRIES

Facility directives must prescribe the use of the Scratch Pad and the specific responsibility for entering the current ATIS alpha character, the current General System Information (GSI), and the System Altimeter Setting. When an 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.

OLD

12-2-3. DISPLAY DATA

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

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

NEW

Delete Delete

Delete

NEW

Delete Delete

Delete

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

REFERENCI	7_
KEFEKENCI	1-

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

<u>OLD</u>

<u>12–2–4. USE OF MODIFY AND QUICK</u> 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:

<u>1. Procedures for data transfer between the</u> <u>TRACON and the tower cab.</u>

2. Communications changeover points.

3. Transfer of control points.

<u>4. Hours or conditions under which facility</u> policy prohibits use of these functions. Delete

Delete

Delete

NEW

Delete

Delete Delete Delete

Delete

Delete

Delete

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

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.

<u>OLD</u>	<u>NEW</u>
<u>12–2–5. AUTOMATION PROGRAM</u> <u>CHANGES</u>	Delete
The air traffic manager of automated facilities must:	Delete
a. Approve all requests for automation changes sent to the respective Operational Support Facility via the National Automation Request form, FAA Form 6000–14.	Delete
b. Review each SITE PROGRAM BULLETIN (TERMINAL) issued by the Terminal Automation Support for local program functionality and changes to the data base to determine any operational/procedural impact. When necessary:	Delete
1. Issue a facility directive describing the functional change/s and any resulting procedural change/s.	Delete
2. Coordinate any functional, procedural, and airspace change/s with the ARTCC providing	Delete

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:

<u>"M4.08R, operational suitability testing completed,</u> acceptable."

OLD	
<u>12–2–6. AUTOMATIC</u> 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 surveillance data processing (SDP) mode.	
2. Coordinate with the adjacent automated facilities to ensure that computer handoffs will be initiated only after the aircraft is within their	

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

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.

Delete

Delete

Delete Delete

NEW

Delete

Delete

Delete

Delete

Delete

<u>NOTE-</u> <u>This is intended for operations where automatic acqui-</u> <u>sition responsibility could be confused, e.g., uncon-</u> <u>trolled airports within a single sector, or between dif-</u> <u>ferent radar sectors that serve the same airport.</u>	Delete
b. Terminal Operations Service Area Directors may authorize a distance greater than specified in subparas a3 and 4 above, where the operational conditions dictate.	Delete
<u>OLD</u>	<u>NEW</u>
<u>12–2–7. MINIMUM SAFE ALTITUDE</u> <u>WARNING (MSAW), CONFLICT ALERT</u> <u>(CA), AND MODE C INTRUDER (MCI)</u>	Delete
a. MSAW, CA and MCI values must be set in accordance with the standards specified in the Standards and Guidelines for CARTS Appendix D, Standards and Guidelines for ARTS IIIA, and Standards and Guidelines for MEARTS. Any instances of requests for values outside the standards must require a waiver from Vice President, Terminal Services.	Delete
b. When their continued use would adversely impact operational priorities, air traffic managers may temporarily inhibit the MSAW, the Approach Path Monitor portion of MSAW, and/or the CA and/or MCI functions. Except when equipment or site adaptation problems preclude these functions being used, a brief written report must be sent to the appropriate Service Area Director of Air Traffic Operations whenever they are inhibited. A copy of the report must be sent to Director of Operations–Headquarters.	Delete
c. Facility air traffic managers are authorized to inhibit CA at specific operating positions if an operational advantage will occur.	Delete
d. Facility air traffic managers must ensure that:	Delete
1. MSAW and CA nuisance alarms are minimized by monitoring alarm frequency and location and forwarding suspected problem areas to the servicing Operational Support Facility along with any supporting documentation, via a National	Delete

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.	Delete
3. The operational support facility has adapted the software functionality to ensure the aural alarms operate in the ATCT.	Delete
4. Aural alarms are received in the ATCT upon transfer of communications.	Delete
5. Controllers are aware of the towers geographic locations where aural alarms sound. (MSAW aural alarm areas.)	Delete
6. Tower aural alarm areas are identified.	Delete
<u>OLD</u>	<u>NEW</u>
12–2–8. MAGNETIC VARIATION OF VIDEO MAPS/GEO MAPS AT ARTS FACILITIES	Delete
Air traffic managers must ensure that:	Delete
a. The magnetic variation of radar video maps/geo maps, MSAW, DTMs/GTMs and radar site settings coincide and is verified annually.	Delete
b. Affected map or maps are recompiled when the official magnetic variation of record is changed/implemented.	Delete
<u>NOTE-</u> <u>1. The video map is the primary reference for</u> <u>maintaining radar antenna alignment.</u>	Delete
2. The DTM is constructed to align with the radar antenna offset for magnetic north. Consequently, any change in antenna offset will result in a corresponding change in the relative positions of the terrain points and obstacles used to determine DTM bin altitude assignments. This will require generating and verifying a new DTM.	Delete
3. The GTM is constructed to align with true north offset by the site adaptable radar antenna magnetic variation. Consequently, any change in antenna offset will result in a corresponding change in the relative position of bin locations.	Delete
4. In both cases, DTM or GTM, any change in antenna offset will result in re-adaptation of the MSAW and CA databases; e.g., airport areas, inhibit volume areas, capture boxes, etc., to coincide with the changed declination.	Delete

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

<u>REFERENCE-</u>

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

<u>OLD</u>

<u>12–2–9. MSAW DTM CARTOGRAPHIC</u> <u>CERTIFICATION, UPDATES, AND</u> <u>RECOMPILATION</u>

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-

<u>Requests for new or recompiled DTMs are routed to</u> <u>System Operations Airspace and Aeronautical Infor-</u> <u>mation.</u>

<u>OLD</u>

12-2-10. 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 FICO for a flight inspection.

Section 3 through Section 10

Delete

Delete

<u>NEW</u>

Delete

Delete

Delete

Delete

Delete

Delete

<u>NEW</u>

Delete Delete

Renumber Section 2 through Section 9

<u>OLD</u>

12–<u>7</u>–7. MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA)

Title through **d**

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

NOTE-

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

REFERENCE-

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

<u>OLD</u>

12–<u>7</u>–9. MSAW GTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION

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

<u>NEW</u>

12–<u>6</u>–7. MINIMUM SAFE ALTITUDE WARNING (MSAW) AND CONFLICT ALERT (CA)

No Change

No Change

No Change

Delete

<u>NEW</u>

12–<u>6</u>–9. MSAW GTM CARTOGRAPHIC CERTIFICATION, UPDATES, AND RECOMPILATION

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

1. PARAGRAPH NUMBER AND TITLE:

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

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

3. CHANGE:

<u>OLD</u>

12–<u>8</u>–3. MONITOR ALERTS AND ENSURE CORRECTIVE ACTION

Title through a

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

REFERENCE-Pilot/Controller Glossary Term- Safety Logic System Alerts.

<u>NEW</u>

12-<u>7</u>-3. MONITOR ALERTS AND ENSURE CORRECTIVE ACTION

No Change

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

REFERENCE-

Pilot/Controller Glossary Term– Safety Logic System Alerts. FAA Order JO 7210.632, Chapter 2, Reporting Requirements. FAA Order JO 7210.632, Appendix A, Mandatory Occurrence Report Criteria.

1. PARAGRAPH NUMBER AND TITLE:

Section 10. UAS Facility Maps (UASFM) 12–10–1. POLICY 12–10–2. RESPONSIBILITY 12–10–3. ASSUMPTIONS 12–10–4. AUTHORIZATION MAP DESIGN PROCEDURES CLASS B/C/D AIRSPACE 12–10–5. UAS FACILITY MAP (UASFM) DESIGN 12–10–6. PART 107 OPERATION APPROVALS

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

3. CHANGE:

<u>OLD</u>

Add

<u>NEW</u> Section 10. UAS Facility Maps (UASFM)

<u>OLD</u>	NEW
Add	<u>12-10-1. POLICY</u>
Add	a. UASFM must be developed in accordance with FAA Order JO 7210.3, Chapter 12, Section 10.
Add	b. The ATM will review the maps annually, or <u>whenever modifications are necessary. Reasons</u> <u>for modifications include, but are not limited to:</u>
Add	<u>1. Airspace changes.</u>
Add	2. Runway or airport property changes.
Add	<u>3. Changes in procedures.</u>
Add	<u>4. Changes in volume of traffic.</u>
Add	c. If changes need to be made to the UASFM, forward your request to uasfm@faa.gov.
<u>OLD</u>	NEW
Add	12-10-2. RESPONSIBILITY
Add	<u>The ATM will designate a primary and</u> <u>secondary UASFM Point of Contact (POC).</u> <u>When there are changes to the POCs, notify</u> <u>Headquarters at uasfm@faa.gov.</u>
Add	NOTE- <u>Facilities may use the facility group email address as</u> <u>their POC.</u>
<u>OLD</u>	NEW
Add	<u>12–10–3. ASSUMPTIONS</u>
Add	a. There are portions of each facility's airspace at very low altitudes that a sUAS could operate without impacting IFR or VFR operations.
Add	b. Part 107 operations by rule are exempt from the Part 91 rules that define VFR and IFR operations. Therefore, Part 107 operations are not defined as VFR or IFR and require no separation or services by ATC.
Add	c. Evaluate each segment for the impact of the UAS flight to your operation (i.e., If a UAS flew in segment A1 at 400 feet, would that affect your operation? What about 300 feet or 200 feet?).
Add	<u>d. All runways are in use for arrival and</u> <u>departure.</u>
Add	<u>e. Altitudes will be listed in 50–foot increments, starting at 0 feet (0, 50, etc.) and ending at 400 feet. Altitudes are listed as AGL.</u>

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

Add	4. Low altitude operations (i.e., helipads).
Add	5. The UA operator is solely responsible for avoiding ground hazards, sensitive areas (e.g., nuclear power plants, critical infrastructure and federal facilities), and areas where drone operations are prohibited.
<u>OLD</u>	NEW
Add	<u>12–10–4. AUTHORIZATION MAP DESIGN</u> PROCEDURES CLASS B/C/D AIRSPACE
Add	<u>a. Each facility must review the assumptions</u> <u>section.</u>
Add	b. Each facility will work collaboratively with their workforce to develop the UA map. Each segment must be evaluated to determine the highest altitude a UA could operate without any coordination to the facility.
Add	<u>c. Facilities must evaluate all segments for the maximum altitude they will allow without further coordination within their area of jurisdiction for flights between 0–400 feet in 50-foot increments.</u>
Add	<u>d. For partial segments, facilities only need to</u> <u>evaluate the area they have jurisdiction over but</u> <u>will show the altitude for the entire segment.</u>
Add	<u>e. For segments outside your area of</u> jurisdiction, leave the segments on the spreadsheet blank.
Add	f. In areas where the overriding rule/law specifies no UAS operations (e.g., the DC FRZ), we are still asking facilities to complete the map as though operations could be permitted without the overriding regulations. There may be situations where law enforcement, DOD, etc. could ask for authorization under Part 107 and have the ability to operate in the area.
Add	g. Once you have finished the spreadsheets, email them to uasfm@faa.gov.
<u>OLD</u>	NEW
Add	<u>12–10–5. UAS FACILITY MAP (UASFM)</u> <u>DESIGN</u>
Add	a. Each facility will need three files: a facility map (.pdf), a Google Earth (.kmz) file, and a spreadsheet (.xls). To receive the files, send an email to uasfm@faa.gov.

Add	b. The map will display the facility's airspace as
	defined in FAA Order JO 7400.9, Airspace
	Designations and Reporting Points. A
	latitude/longitude grid will be placed over the
	maps creating rectangular divisions, referred to
	as "segments". The map will have a satellite
	image as its background. (See FIG 12–10–1.)
Add	<u>c. A .kmz file is a file that opens using Google</u>
	Earth Pro. It is not a requirement to use a .kmz
	file, but the .kmz file may be easier to work with
	because of the program's zoom and pan feature.
	The facility map is a .pdf file of the .kmz. If the
	facility does not have Google Earth Pro. contact
	the IT department for program installation. The
	FAA facilities IT support number is
	<u>1-844-322-6948.</u>
Add	d. Each segment will be identified by a letter
	and number. The latitude segments will be
	labeled with letters and will increase by one for
	each segment (A, B, etc.). The longitude
	segments will be labeled with 1 and increase by
	one for each segment (1, 2, etc.).
Add	<u>e. Assign each segment a value of 0–400 feet, in</u>
	50-foot increments. Only evaluate segments that
	<u>are within the surface area of your Class B/C/D</u>
	airspace. Leave the segments outside the surface
	area blank. In the event that a surrounding
	facility owns or abuts your surface area, you
	must work with that facility (i.e., TRACON
	owns 1 mile from the runway.) Only complete
	sheet 1 of the spreadsheet. Sheet 2 and sheet 3
	self-populate and the data must not be changed.
	They will be used to develop a Google Earth
	graphical overlay, (See FIG 12–10–2.)

Add

<u>FIG 12–10–1</u> Background Satellite Image


Add

<u>FIG 12-10-2</u> Google Earth Graphical Overlay



Add	<u>f. UASFM Checklist.</u>
Add	<u>1. Request files from uasfm@faa.gov.</u>
Add	2. Complete the spreadsheet, working collaboratively. Only input information onto sheet 1. Values must be 0-400 in 50-foot increments.
Add	3. Evaluate all segments that are fully or partially contained within the lateral boundary of your airspace.
Add	4. Save completed worksheet as XXX.xls, in which XXX is the facility ID.
Add	<u>5. Return completed spreadsheet to</u> <u>uasfm@faa.gov.</u>
Add	<u>6. Include in the email:</u>

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

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

1. PARAGRAPH NUMBER AND TITLE:

Section 6. 14 CFR Part 107, sUAS Operations 19–6–1. GENERAL 19–6–2. LOW ALTITUDE AUTHORIZATION AND NOTIFICATION CAPABILITY (LAANC) 19–6–3. MANUAL AIRSPACE AUTHORIZATION PROCEDURES (VIA DRONEZONE) 19–6–4. HEADQUARTERS/SERVICE CENTER AIRSPACE WAIVER PROCESS

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

3. CHANGE:

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

Add	b. Letters of Agreement (LOA) may be used in conjunction with Part 107 airspace authorizations/waivers when the Air Traffic Manager (ATM) deems it necessary; they cannot be used in lieu of airspace authorization/waivers.
Add	c. In the event a Part 107 operator contacts an ATC facility directly for authorization, the facility must not issue the authorization. The facility must direct the operator to the LAANC or DroneZone site.
Add	<u>d. 14 CFR Part 107.41 waiver applications can</u> only be submitted through DroneZone.
<u>OLD</u>	NEW
Add	<u>19–6–2. LOW ALTITUDE</u> <u>AUTHORIZATION AND NOTIFICATION</u> <u>CAPABILITY (LAANC)</u>
Add	a. Automates Part 107 sUAS operator requests for access to airspace and to receive authorizations from UAS Service Suppliers.
Add	<u>REFERENCE–</u> FAA Order JO 7210.3, Chapter 12, Section 11, UAS Facility Maps (UASFM).
Add	b. ATC authorization granted through LAANC may not satisfy all of the requirements for UAS operations. Proponents requesting to operate in airspace requiring authorization under 14 CFR 107.41, must also meet the requirements set by any governing Notice to Airman (NOTAM) or Temporary Flight Restrictions (TFR).
<u>OLD</u>	NEW
Add	<u>19–6–3. MANUAL AIRSPACE</u> <u>AUTHORIZATION PROCEDURES (VIA</u> <u>DRONEZONE)</u>
Add	<u>a. Headquarters/Service Centers will use the</u> <u>facility approved UASFM to evaluate Part 107</u> <u>requests.</u>
Add	<u>1. No facility coordination is required, if the</u> <u>requests can be authorized using the UASFM.</u>
Add	2. If the processor is unable to authorize the request using the UASFM, they must coordinate with the facility.

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

Add	3. With regards to Class E airspace, only airspace within the lateral boundaries of the surface area designated for an airport (Class E2) requires a Part 107 authorization or waiver.
Add	c. An automated message will be forwarded to the facility and the proponent of the approval, which will contain:
Add	<u>1. Waivers if applicable.</u>
Add	2. Description of the operational area.
Add	<u>3. Contact information for communication/</u> recall.
Add	<u>4. Times of operation.</u>
Add	d. If 14 CFR Part 107 operations cannot be authorized using the UASFM, ATC facilities will be contacted by Headquarters/Service Centers for coordination.
Add	e. If after coordinating with the ATC facility, the operation cannot be authorized, an automated message will be forwarded notifying the facility and the proponent of the denial.
Add	<u>f. Special Governmental Interest (SGI), Part</u> <u>107 authorizations/waivers will be managed by</u> <u>System Operations Security, AJR-2.</u>
<u>OLD</u>	NEW
Add	<u>19–6–4. HEADQUARTERS/SERVICE</u> CENTER AIRSPACE WAIVER PROCESS
Add	a. Applications for waivers are submitted to the Headquarters/Service Center through DroneZone.
Add	<u>b. Under Headquarters/Service Center waiver</u> process, ATO approval is required for the following waivers and will coordinate with Flight Standards Service (AFS), if needed:
Add	<u>1. Yielding the right of way (§ 107.37a).</u>
Add	2. Operations in Certain Airspace (§ 107.41).
Add	<u>3. Maximum altitude (§ 107.51b).</u>
Add	<u>c. Under Headquarters/Service Center waiver</u> <u>process, AFS may approve waivers requested for</u> <u>the following items and will coordinate with</u> <u>ATO, if needed:</u>
Add	<u>1. Operations from a moving vehicle or aircraft (§ 107.25).</u>
Add	2. Daylight operation (§ 107.29).

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