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

ORDER JO 7400.2N

Effective Date:
June 17, 2021

SUBJ: Procedures for Handling Airspace Matters

This order specifies procedures for use by all personnel in the joint administration of the airspace program. The guidance and procedures herein incorporate into one publication as many orders, notices, and directives of the affected services as possible. Although every effort has been made to prescribe complete procedures for the management of the different airspace programs, it is impossible to cover every circumstance. Therefore, when a situation arises for which there is no specific procedure covered in this order, personnel must exercise their best judgment.

The order consists of six parts:

a. Part 1 addresses general procedures applicable to airspace management.

b. Part 2 addresses policy and procedures unique to Objects Affecting Navigable Airspace.

c. Part 3 addresses policy and procedures unique to Airport Airspace Analysis.

d. Part 4 addresses policy and procedures unique to Terminal and En Route Airspace.

e. Part 5 addresses policy and procedures unique to Special Use Airspace.

f. Part 6 addresses policy and procedures regarding the integration of Outdoor Laser Operations, High Intensity Light Operations, and integration of Rocket and Launch-Vehicle Operations into the National Airspace System.

Natasha A. Durkins

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Date: 2021.05.13 07:33:04 -04'00'

Natasha A. Durkins
Director, Policy, AJV-P
Air Traffic Organization

RECORD OF CHANGES

DIRECTIVE NO. **JO 7400.2N**

CHANGE TO BASIC	SUPPLEMENTS			OPTIONAL	CHANGE TO BASIC	SUPPLEMENTS			OPTIONAL

Explanation of Changes
Basic

Direct questions through appropriate facility/service center office staff to the Office of Primary Interest (OPI).

a. 11–3–1 EFFECT ON SAFETY OF FLIGHT

Paragraph 11–3–1 is being revised to more accurately identify the role of the Flight Standards Office in evaluating non–rulemaking airport (NRA) aeronautical studies. In addition, modification of standards are no longer coordinated in Obstruction Evaluation/Airport Airspace Analysis (OE/AAA), therefore the related sentence has been removed from the paragraph. These changes have been coordinated and approved by Flight Standards.

b. APPENDIX 8 FAA SPECIAL USE AIRSPACE ENVIRONMENTAL PROCESSING PROCEDURES

This change updates the signatory level of authority from the Manager of the Airspace Regulations and Environmental Policy Group to the Director of Policy.

c. Editorial Changes

Editorial changes include a typo fixes for the measurement NM. Also outdated references to the National Flight Data Center (NFDC) were removed. The Office of International Affairs was updated as the correct international liaison in paragraph 4–5–9.

d. Entire Publication

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

CHANGE

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

JO 7400.2N
CHG 1

Effective Date:
December 2, 2021

SUBJ: Procedures for Handling Airspace Matters

1. Purpose of This Change. This change transmits revised pages to Federal Aviation Administration Order JO 7400.2N, Procedures for Handling Airspace Matters.

2. Audience. This change applies to all Air Traffic Organization (ATO) personnel and anyone using ATO directives. This order also applies to all regional, service area, and field organizational elements involved in rulemaking and nonrulemaking actions associated with airspace allocation and utilization, obstruction evaluation, obstruction marking and lighting, airport airspace analysis, and the management of air navigation aids.

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 that has editorial corrections and changes submitted through normal procedures.

5. Distribution. This change is available online and will be distributed electronically to all offices that subscribe to receive email notification/access to it through the FAA website at http://faa.gov/air_traffic/publications.

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

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

NATASHA A. DURKINS
Digitally signed by NATASHA A. DURKINS
Date: 2021.10.28 12:59:58 -04'00'

Natasha A. Durkins
Director, Policy, AJV-P
Air Traffic Organization

Distribution: Electronic

Initiated By: AJV-0
Vice President, Mission Support Services

Explanation of Changes
Change 1

Direct questions through appropriate facility/service center office staff to the Office of Primary Interest (OPI).

a. 1–1–2. AUDIENCE
4–5–6. CANCELLATION OF CONTROL AIRSPACE AND INSTRUMENT PROCEDURES
5–5–2. PROCESSING
6–2–3. DIVISION COORDINATION
6–3–3. DETERMINING ADVERSE EFFECT
6–3–6. RESPONSIBILITY
6–3–9. EVALUATING EFFECT ON IFR OPERATIONS

This change updates references throughout FAA Order JO 7400.2, and changes references from Flight Procedures Team (FPT) to Instrument Flight Procedure (IFP) Service Provider, which covers service providers, except when specifically referencing other duties of the Aeronautical Information Services' Obstacle Impact Team (OIT).

b. 1–2–6. ABBREVIATIONS
7–1–4. DETERMINATION CONTENT AND OPTIONS
14–1–6. EXAMPLES OF TERMINAL AIRSPACE LEGAL DESCRIPTIONS
16–2–4. TIME OF DESIGNATION
17–1–5. PART TIME SURFACE AREAS
17–2–11. LOSS OF COMMUNICATION OR WEATHER REPORTING CAPABILITY
29–4–1. ISSUANCE OF NOTICES TO AIRMEN (NOTAM)
31–3–2. NOTICE TO AIRMEN (NOTAM)

This editorial change complies with the Federal Women's Program (FWP) suggestions. The acronym NOTAM is updated from Notice to Airmen to the more applicable term Notice to Air Missions, which is inclusive of all aviators and missions.

c. 6–2–3. DIVISION COORDINATION
6–3–6. RESPONSIBILITY

This change deletes verbiage in paragraph 6–2–3 and 6–3–6b2 that references exclusion of obstruction evaluations (OE) beyond 3 NM, and adds verbiage that references exclusion of OE cases based on the Part 77 conical surface.

d. 21–1–1. PURPOSE
21–1–2. SCOPE
21–1–3. DEFINITION AND TYPES
21–1–4. CATEGORIES
21–1–5. SUA APPROVAL AUTHORITY
21–1–6. MINIMUM NUMBERS AND VOLUME
21–1–7. OPTIMUM USE OF AIRSPACE
21–1–8. JOINT–USE POLICY
21–1–9. ENVIRONMENTAL ANALYSIS
21–1–10. CONTROLLING AGENCY
21–1–11. USING AGENCY
21–1–13. PUBLIC NOTICE PROCEDURES
21–1–14. SUA NONRULMAKING CIRCULARS
21–1–15. CHARTING AND PUBLICATION REQUIREMENTS
21–1–16. CERTIFICATION OF SUA GEOGRAPHIC POSITIONAL DATA
21–1–17. LEAD REGION
21–2–1. GENERAL
21–2–2. LATERAL BOUNDARIES
21–2–3. VERTICAL LIMITS
21–2–4. TIMES OF USE
21–2–5. CONTROLLING AGENCY
21–2–6. USING AGENCY
21–2–7. SUA LEGAL DESCRIPTION AMENDMENTS
21–3–1. GENERAL
21–3–2. CLASSIFIED INFORMATION
21–3–3. PROPOSAL CONTENT
21–3–4. ABBREVIATED PROPOSALS
21–4–1. POLICY
21–4–2. PROPOSAL PRE–COORDINA-

TION

21–4–3. ATC FACILITY COORDINATION

21–4–4. SUBMISSION OF PROPOSALS

21–5–1. GENERAL

21–5–2. REGIONAL/SERVICE AREA OFFICE PROCESSING REQUIREMENTS

21–5–3. AERONAUTICAL IMPACT CONSIDERATION

21–5–4. ENVIRONMENTAL DOCUMENT REVIEW

21–5–5. REGIONAL/SERVICE AREA OFFICE DETERMINATION

21–5–6. DISAPPROVAL OF PROPOSALS

21–5–7. SUBMISSION OF APPROVAL RECOMMENDATIONS TO FAA HEADQUARTERS

21–5–8. HANDLING OF PROPOSALS TO REDUCE OR REVOKE SUA

21–5–9. FAA INITIATED SUA PROPOSALS

21–6–1. PURPOSE

21–6–2. POLICY

21–6–3. CONTENT OF STUDY

21–7–2. REPORTING REQUIREMENTS

21–7–3. SUPPLEMENTARY REPORTS

21–7–4. UTILIZATION REPORT TERMS

21–7–5. REVIEW REQUIREMENT

21–7–6. REVIEW SUMMARY

21–8–1. GENERAL

21–8–2. POLICY

21–8–3. SOURCES OF INFORMATION

21–8–4. UTILIZATION STANDARDS

21–8–5. SUA REVIEW GUIDE

21–8–6. SUA REVIEW FOLLOW UP ACTION

21–9–1. PURPOSE

21–9–2. TEAM COMPOSITION

21–9–3. RESPONSIBILITIES

21–9–4. TEAM REPORT

21–9–5. FOLLOW UP ACTION

The Airspace Rules and Regulations Team, AJV–P21, requested input from the DoD and the three Service Centers, and then convened a FAA workgroup to incorporate changes and policy memos. This change proposes to implement editorial changes to clarify and improve the readability of the text, and to replace obsolete office references. It provides more detailed content and flow for a requested special use airspace (SUA) action while providing explanations of responsibilities for the requesting proponent and the Service Centers. Additionally, it adds Warning Areas to the required annual utilization reports for the using agency of the SUA.

e. 22–1–1. DEFINITION

22–1–2. PURPOSE

22–1–3. IDENTIFICATION

22–1–5. WAIVERS/AUTHORIZATION

22–1–6. USING AGENCY

22–2–1. SUBMISSION OF PROPOSALS

22–2–2. REGIONAL/SERVICE AREA OFFICE ACTIONS

The Airspace Rules and Regulations Team, AJV–P21, requested input from the DoD and the three Service Centers, and then convened a FAA workgroup to incorporate changes and policy memos. This change proposes to implement editorial changes to clarify and improve the readability of the text, and to replace obsolete office references. It provides more detailed content and flow for a requested special use airspace (SUA) action while providing explanations of responsibilities for the requesting proponent and the Service Centers. Additionally, it adds Warning Areas to the required annual utilization reports for the using agency of the SUA.

f. 23–1–1. DEFINITION

23–1–2. PURPOSE

23–1–3. IDENTIFICATION

23–1–5. JOINT–USE

23–1–6. TEMPORARY RESTRICTED AREAS

23–2–1. SUBMISSION OF PROPOSALS

23–2–2. TEMPORARY RESTRICTED AREA PROPOSALS

The Airspace Rules and Regulations Team, AJV–P21, requested input from the DoD and the three Service Centers, and then convened a FAA workgroup to incorporate changes and policy memos. This change proposes to implement editorial changes to clarify and improve the readability of the text, and to replace obsolete office references. It provides more detailed content and flow for a requested SUA action while providing explanations of responsibilities for the requesting proponent and the Service Centers. Additionally, it adds Warning Areas to the required annual utilization reports for the using agency of the SUA.

Order JO 7400.2N
Procedures for Handling Airspace Matters

Table of Contents

Part 1. General Procedures for Airspace Management

Chapter 1. General

Section 1. Introduction

Section 2. Authority and Order Use

Section 3. Airspace Planning and Analysis

Chapter 2. Rulemaking/Nonrulemaking Airspace Cases

Section 1. Ex Parte Communications

Section 2. Charted Reporting Points

Section 3. Naming of NAVAIDs, Aeronautical Facilities, and Fixes

Chapter 4. NAVAIDs

Section 1. General

Section 2. FAA NAVAIDs

Section 3. Military NAVAIDs

Section 4. Non–Federal NAVAIDs

Section 5. Discontinuance of FAA NAVAIDs

Section 6. Discontinuance of Military and Non–Federal NAVAIDs

Part 2. Objects Affecting Navigable Airspace

Chapter 5. Basic

Section 1. General

Section 2. Notices

Chapter 6. Aeronautical Studies

Section 1. General

Chapter 7. Determinations

Section 1. Issuing Determinations

Section 2. Extension of Determinations

Section 3. Revision, Correction, and Termination of Determination

Chapter 8. Post Determination Action

Section 1. Action

Chapter 9. Discretionary Review Process

Section 1. General

Section 2. Petition Processing

Part 3. Airport Airspace Analysis

Chapter 10. Basic

Section 1. Policy

Section 2. Airport Study

Section 3. Airport Standards

Section 4. Airport Charting and Publication of Airport Data

Chapter 11. Evaluating Aeronautical Effect

Section 1. General

Section 2. Processing of Airport Proposals By Regional Airports Offices

Section 3. Processing of Airport Proposals By Regional Flight Standards Offices

Section 4. Processing of Airport Proposals By Operations Support Group Flight Procedures Teams

Section 5. Processing of Airport Proposals By Technical Operations Services Area Offices

Section 6. Processing of Airport Proposals By Service Area Offices

Chapter 12. Airport Determinations

Section 1. General

Chapter 13. Military, NASA, and Other Agency Airport Proposals

Section 1. General

Part 4. Terminal and En Route Airspace

Chapter 14. Designation of Airspace Classes

Section 1. General

Section 2. Ad Hoc Committee Procedures for Class B and Class C Airspace Actions

Chapter 15. Class B Airspace

Section 1. General

Section 2. Class B Airspace Planning

Section 3. Class B Airspace Processing

Chapter 16. Class C Airspace

Section 1. General

Section 2. Class C Airspace Planning

Section 3. Class C Airspace Processing

Chapter 17. Class D Airspace

Section 1. General

Section 2. Class D Airspace Standards

Chapter 18. Class E Airspace

Section 1. General

Section 2. Transitional Airspace

Section 3. Transitional Airspace Area Criteria

Chapter 19. Other Airspace Areas

Section 1. General

Chapter 20. Air Traffic Service Routes

Section 1. General

Section 2. Flight Inspection Requirements

Section 3. Federal Airways

Section 4. Jet Routes

Section 5. Area Navigation (RNAV) Routes

Part 5. Special Use Airspace

Chapter 21. General

Section 1. Policy

Section 2. SUA Legal Descriptions

Chapter 22. Prohibited Areas

Section 1. General

Section 2. Processing

Chapter 23. Restricted Areas

Section 1. General

Section 2. Processing

Chapter 24. Warning Areas

Section 1. General

Section 2. Processing

Chapter 25. Military Operations Areas

Section 1. General

Section 2. Processing

Chapter 26. Alert Areas

Section 1. General

Section 2. Criteria

Section 3. Processing

Chapter 27. Controlled Firing Areas

Section 1. General

Section 2. Processing

Section 3. Safety Precautions

Chapter 28. National Security Areas

Section 1. General

Section 2. Processing

Part 6. Miscellaneous Procedures

Chapter 29. Outdoor Laser Operations

Section 1. General

Section 2. Evaluating Aeronautical Effect

Section 3. Aeronautical Determinations

Section 4. Notices to Air Missions

Section 5. Aircraft Illumination Actions

Chapter 30. High Intensity Light Operations

Section 1. General

Section 2. Aeronautical Review/Determinations

Chapter 31. Amateur Rocket and Commercial Space Operations

Section 1. General

Section 2. Amateur Rockets

Section 3. Launch and Reentry Vehicle Operations

Chapter 32. Environmental Matters

Section 1. General Information

Section 2. Environmental Processing

Section 3. Environmental Impact Categories and Other Topics

Section 4. Air Traffic–Specific Environmental Guidance and Requirements

Chapter 33. Parasail Operations

Section 1. General

Section 2. Waivers

Appendices

Part 1. General Procedures for Airspace Management

Chapter 1. General

Section 1. Introduction

1–1–1. PURPOSE OF THIS ORDER

a. This order prescribes policy, criteria, guidelines, and procedures applicable to the System Operations Services; Mission Support Services; Aeronautical Information Services; Technical Operations Services; Technical Operations Air Traffic Control Spectrum Engineering Services; Technical Operations Technical Services; the Office of Airport Planning and Programming, (APP); the Office of Airport Safety and Standards, (AAS); Airports District Office (ADO); and the Flight Standards Service.

b. While this order provides procedures for handling airspace matters, additional procedures and criteria to supplement those contained herein may be set forth in other directives and should be consulted.

1–1–2. AUDIENCE

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

b. This order also applies to all regional, Service Centers, Instrument Flight Procedure (IFP) Service Providers, and field organizational elements involved in rulemaking and nonrulemaking actions associated with airspace allocation and utilization, obstruction evaluation, obstruction marking and lighting, airport airspace analysis, and the management of air navigation aids. States that participate in the State Block Grant Program (SBGP) assist the Office of Airport Safety and Standards in these actions, but the overall responsibility remains with the Office of Airports. Participating states include Georgia, Illinois, Michigan, Missouri, New Hampshire, North Carolina, Pennsylvania, Tennessee, Texas, and Wisconsin.

1–1–3. WHERE TO FIND THIS ORDER

This order is available on the FAA website at http://www.faa.gov/air_traffic/publications and http://employees.faa.gov/tools_resources/orders_notices.

1–1–4. WHAT THIS ORDER CANCELS

FAA Order JO 7400.2M, Procedures for Handling Airspace Matters, dated February 28, 2019, and all changes to it are canceled.

1–1–5. CHANGE AUTHORITY

The Director of Policy (AJV–P) will issue changes to this directive after obtaining concurrence from the affected Headquarters offices/services/service units on the cover of this order.

1–1–6. EXPLANATION OF CHANGES

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

b. If further information is desired, please direct questions through the appropriate facility/service area/regional office to the headquarters office of primary responsibility.

1–1–7. SUBMISSION CUTOFF AND EFFECTIVE DATES

This order and its changes are scheduled to be published to coincide with AIRAC dates. However, due to the infrequent nature of changes submitted for this order, publishing may be postponed.

Publication Schedule		
Basic or Change	**Cutoff Date for Submission**	**Effective Date of Publication**
JO 7400.2N	12/31/20	6/17/21
Change 1	6/17/21	12/2/21
Change 2	12/2/21	5/19/22
Change 3	5/19/22	11/3/22

JO 7400.2P	11/3/22	4/20/23
Change 1	4/20/23	10/5/23
Change 2	10/5/23	3/21/24
Change 3	3/21/24	9/5/24

1–1–8. DELIVERY DATES

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

All organizations are responsible for viewing, downloading, and subscribing to receive electronic mail notifications when changes occur to this order.

Subscriptions can be made at http://www.faa.gov/air_traffic/publications.

1–1–9. RECOMMENDATIONS FOR PROCEDURAL CHANGES

a. The responsibility for processing and coordinating revisions to this order is delegated to the Airspace Policy Group Manager.

b. Proposed changes or recommended revisions must be submitted, in writing, to the Airspace Policy Group. The proposal should include a description of the change or revision, the language to be inserted in the order, and the rationale for the change or revision.

c. The Airspace Policy Group will review and revise proposed changes as necessary and submit supported proposals to Policy (AJV–P). When appropriate, the Airspace Policy Group may convene a workgroup for this purpose. Composition of the workgroup will be determined by the subject matter and the expertise required. The Airspace Policy Group is responsible for the selection of the members of the workgroup, and for appointing the chairperson of the group.

d. The Policy directorate is responsible for ensuring all approved revisions are published.

e. When revised, reprinted, or additional pages are issued, they will be marked as follows:

1. Each revised or added page will show the change number and effective date of the change.

2. Bold vertical lines in the margin of the text will mark the location of substantive procedural, operational, or policy changes (for example, when material that affects the performance of duty is added, revised, or deleted).

1–1–10. DISTRIBUTION

This order is available online and will be distributed electronically to all offices that subscribe to receive email notification/access to it through the FAA web–site at http://www.faa.gov/air_traffic/publications.

1–1–11. SAFETY MANAGEMENT SYSTEM

Every employee is responsible for ensuring the safety of equipment and procedures used in the provision of services within the National Airspace System (NAS).

a. Risk assessment techniques and mitigations, as appropriate, are intended for implementation of any planned safety significant changes within the NAS, as directed by FAA Order 1100.161, Air Traffic Safety Oversight.

b. Direction regarding the Safety Management System and its application can be found in the Air Traffic Organization Safety Management System Manual; FAA Order JO 1000.37, Air Traffic Organization Safety Management System; and FAA Order 1100.161, Air Traffic Safety Oversight.

Section 2. Authority and Order Use

1–2–1. POLICY

The navigable airspace is a limited national resource that Congress has charged the Federal Aviation Administration (FAA) to administer in the public interest as necessary to ensure the safety of aircraft and its efficient use. Although the FAA must protect the public's right of freedom of transit through the airspace, full consideration must be given to all airspace users, to include national defense; commercial and general aviation; and space operations. Accordingly, while a sincere effort must be made to negotiate equitable solutions to conflicts over the use of the airspace for non–aviation purposes, preservation of the navigable airspace for aviation must be the primary emphasis.

1–2–2. AUTHORITY AND APPLICABILITY

The authority for the procedures and associated rules and regulations addressed in this order are provided in 49 U.S.C. Subtitle VII, Aviation Programs, Part A – Air Commerce and Safety, and Part B – Airport Development and Noise:

a. Section 40101, Policy.

b. Section 40102, Definitions.

c. Section 40103, Sovereignty and Use of Airspace, and the Public Right of Transit.

d. Section 40106(a), Deviations From Regulations.

e. Section 40109, Authority to Exempt.

f. Section 106(f), Authority of the Secretary and the Administrator.

g. Section 106(g), Duties and Powers of Authority.

h. Section 40113, Administrative.

i. Section 44501(a), Long Range Plans and Policy Requirements.

j. Section 44502, General Facilities and Personnel Authority.

k. Section 44502(c), Military Construction, Rockets, and Missiles.

l. Section 44718, Structures Interfering with Air Commerce.

m. Section 44719, Standards for Navigational Aids.

n. Section 44720, Meteorological Services.

o. Section 44721, Aeronautical Maps and Charts.

p. Section 46104(e), Designating Employees to Conduct Hearings.

q. Section 46301, Civil Penalties.

r. Section 46308, Interference with Air Navigation.

s. Chapter 471, Airport Development – All of Subchapters I and II.

t. Chapter 475, Noise – All of Subchapters I and II.

1–2–3. FUNCTIONAL RESPONSIBILITIES

Functional responsibilities of headquarters and regional/service area organizations referred to in this order are detailed in Order 1100.1, FAA Organization–Policies and Standards.

1–2–4. TITLE 14 CODE OF FEDERAL REGULATIONS (CFR) REFERENCES

a. Part 11, General Rulemaking Procedures.

b. Part 71, Designation of Class A, B, C, D, and E Airspace Areas; Air Traffic Service Routes; and Reporting Points.

c. Part 73, Special Use Airspace.

d. Part 77, Objects Affecting Navigable Airspace.

e. Part 91, General Operating and Flight Rules.

f. Part 93, Special Air Traffic Rules.

g. Part 95, IFR Altitudes.

h. Part 97, Standard Instrument Approach Procedures.

i. Part 101, Moored Balloons, Kites, Amateur Rockets, Unmanned Free Balloons, and Certain Model Aircraft.

j. Part 152, Airport Aid Program.

k. Part 157, Notice of Construction, Alteration, Activation, and Deactivation of Airports.

l. Chapter III, Commercial Space Transportation.

m. Chapter V, National Aeronautics and Space Administration.

1–2–5. WORD MEANING

As used in this Order:

a. "Must" means an action/procedure is mandatory.

b. "Must not" means an action/procedure is prohibited.

c. "Should" is used when application is recommended.

d. "May" and "need not" are used when application is optional.

e. "Will" is used only to indicate futurity, never to indicate any degree of requirement for application of a procedure.

f. "Navigable airspace" means airspace at or above the minimum flight altitudes prescribed by the Code of Federal Regulations, including airspace needed for safe takeoff and landing.

g. "Controlled airspace" is a generic term used to describe Class A, Class B, Class C, Class D, and Class E airspace.

h. "Uncontrolled Airspace" (Class G) is airspace that has not been designated by rule as Class A, B, C, D, or E.

1–2–6. ABBREVIATIONS

See TBL 1–2–1 for a list of abbreviations used in this Order.

TBL 1–2–1

FAA Order JO 7400.2 Abbreviations

Abbreviation	Meaning
AAS	Office of Airport Safety and Standards
ADO	Airport District Office
AE	Airport Elevation
AFS	Flight Standards Service
AGC	Office of the Chief Counsel
AGL	Above Ground Level
AIM	Aeronautical Information Manual
AIS	Aeronautical Information Services
ALP	Airport Layout Plan
APO	Office of Aviation Policy and Plans
APP	Office of Airport Planning and Programming
ARP	Airport Reference Point
ARSR	Air Route Surveillance Radar
ARTCC	Air Route Traffic Control Center
ARU	Airborne Radar Unit
ASR	Airport Surveillance Radar
AST	Office of Commercial Space Transportation
ATC	Air Traffic Control
ATCAA	Air Traffic Control Assigned Airspace
ATCRBS	Air Traffic Control Radar Beacon System
ATCSCC	David J. Hurley Air Traffic Control System Command Center
ATCT	Airport Traffic Control Tower
ATO	Air Traffic Organization
ATREP	Air Traffic Representative
CARF	Central Altitude Reservation Function
CDRH	Center for Devices and Radiological Health
CFA	Controlled Firing Area
CFZ	Critical Flight Zone
CFR	Code of Federal Regulations
CP	Construction Permit
DF	Direction Finder
DME	Distance Measuring Equipment
DMS	Docket Management System
DNE	Does Not Exceed
DNH	Determination of No Hazard
DOD	Department of Defense
DOH	Determination of Hazard
EBO	Exceeds But Okay
EMI	Electromagnetic Interference

Abbreviation	Meaning
ERP	Effective Radiated Power
FAAO	Federal Aviation Administration Order
FACSFAC	Fleet Area Control and Surveillance Facility
FCC	Federal Communications Commission
FDA	Food and Drug Administration
FL	Flight Level
FPT	Flight Procedures Team
FSDO	Flight Standards District Office
FSS	Flight Service Station
GAO	Government Accountability Office
HIL	High Intensity Light
IAP	Instrument Approach Procedure
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IR	IFR Military Training Route
IRAC	Interdepartmental Radio Advisory Committee
J	Joule
L/MF	Low/Medium Frequency
LFZ	Laser Free Zone
LLWG	Local Laser Working Group
LMM	Middle Compass Locator
LOA	Letter of Agreement
LOD	Letter of Determination
LOM	Outer Compass Locator
LSO	Laser Safety Officer
MAJCOM	Military Major Command
MCA	Minimum Crossing Altitude
MCP	Minimum Crossing Point
MEA	Minimum En Route Altitude
MHA	Minimum Holding Altitude
MIA	Minimum IFR Altitude
MOA	Military Operations Area
MOCA	Minimum Obstruction Clearance Altitude

Abbreviation	Meaning
MPE	Maximum Permissible Exposure
MRAD	Milliradian
MRU	Military Radar Unit
MSA	Minimum Safe Altitude
MSL	Mean Sea Level
MSWLF	Municipal Solid Waste Landfill
MTR	Military Training Route
MVA	Minimum Vectoring Altitude
NAD	North American Datum
NAS	National Airspace System
NASA	National Aeronautics and Space Administration
NAVAID	Navigational Aid
NDB	Nondirectional Radio Beacon
NEPA	National Environmental Policy Act
NFDD	National Flight Data Digest
NFZ	Normal Flight Zone
NM	Nautical Mile
NPH	Notice of Presumed Hazard
NOHD	Nominal Ocular Hazard Distance
NOTAM	Notice to Air Missions
NPIAS	National Plan of Integrated Airport Systems
NPRM	Notice of Proposed Rulemaking
NR	Nonrulemaking
NRA	Nonrulemaking Airport
NSA	National Security Area
NWS	National Weather Service
OE	Obstruction Evaluation
OE/AAA	Obstruction Evaluation/Airport Airspace Analysis
OFZ	Obstacle Free Zone
PAPI	Precision Approach Path Indicator
PFC	Passenger Facility Charge
PL	Public Law
PSR	Project Status Request
RBS	Radar Bomb Scoring
REIL	Runway End Identifier Lights

Abbreviation	Meaning
RNAV	Area Navigation
ROFA	Runway Object Free Area
RPZ	Runway Protection Zone
RVR	Runway Visual Range
RVV	Runway Visibility Value
SFZ	Sensitive Flight Zone
SIAP	Standard Instrument Approach Procedure
SMO	System Maintenance and Operations
SR	Scientific/Research Lasers
STAR	Standard Terminal Arrival Route
SUA	Special Use Airspace
TERABA	Termination/Abandoned Letter
TEREXP	Termination/Expired Letter

Abbreviation	Meaning
TERPS	United States Standard for Terminal Instrument Procedures
TERPSR	Termination Project Status Letter
TOFA	Taxiway Object Free Area
USC	United States Code
UTC	Coordinated Universal Time
VASI	Visual Approach Slope Indicator
VFR	Visual Flight Rules
VGSI	Visual Glide Scope Indicator
VOR	Very High Frequency Omnidirectional Range
VORTAC	Very High Frequency Omni–Directional Range/Tactical Air Navigation Aid
VR	VFR Military Training Route

Section 3. Airspace Planning and Analysis

1–3–1. BACKGROUND

a. Airspace management functions historically have been widely dispersed. Responsibility for airspace management has resided with the regional/service area offices, while airspace changes for operational considerations have been handled by field facilities. The focus on airspace change and redesign has been local in scope and centered, for the most part, on single areas. It is apparent that changes in airspace configuration, architecture, and/or structure have national implications for air traffic control, traffic flow management, and the user community. Therefore, changes in the use or allocation of the airspace need to be coordinated at the national level.

b. The details involved in airspace design must be centrally located. It is essential that efforts expended on airspace studies and proposed airspace changes be coordinated at the national level. This coordination will ensure that resources are effectively prioritized and optimized for the efficient use of the nation's airspace.

1–3–2. POLICY

The air traffic planning and analysis policy uses an interdisciplinary approach to ensure the effective management of national airspace changes. This policy requires national implementation strategies; especially for changes designed to enhance user operations, maintain the highest standards of safety, generate new efficiencies, and effectively use our resources. With this policy in mind, the Strategy and Prioritization Team (AJV–S31) is designated as the air traffic office that will provide national oversight for:

a. Formulating airspace efficiency policy.

b. Establishing guidelines for airspace architecture and structural changes.

c. Providing a high–level analysis of current and proposed operations for efficiency from a NAS–wide perspective.

Chapter 2. Rulemaking/Nonrulemaking Airspace Cases

Section 1. Ex Parte Communications

2–1–1. DEFINITION

Ex parte communication is any contact between the FAA and a party outside the government related to a specific rulemaking proceeding, before that particular proceeding is finalized. A rulemaking proceeding does not close until all received comments have been addressed, and a final rule is published. "Ex parte" is a Latin term that is interpreted to mean "one sided," and indicates that not all parties to an issue were present when it was discussed. Because some interested persons, including the general public, are excluded from an ex parte communication, such a contact may give, or appear to give, an unfair advantage to one party.

NOTE–
Written comments submitted to the docket are not considered ex parte contacts because they are available for inspection by all members of the public.

2–1–2. SCOPE

Whether ex parte contacts are initiated by the FAA or by a member of the public (including affected industry), they are improper if they affect the basic openness and fairness of the decision making process. Because of this possibility and because of the possible appearance of impropriety, the FAA's policy on ex parte contacts is very strict. This policy, however, does not significantly restrict the gathering of information needed to make an intelligent decision.

2–1–3. POLICY

The FAA encourages full public participation in rulemaking and nonrulemaking actions. This policy allows for appropriate ex parte contacts when necessary to ensure adequate public comment. Persons directly responsible for the rulemaking/nonrulemaking action should, in addition to providing the public the opportunity to respond in writing to proposed actions and/or to appear and be heard at a hearing, undertake such contacts with the public as will be helpful in resolving questions of substance and justification. Responsible persons should be receptive to proper contacts from members of the public who are affected by, or interested in, the proposed action. Contact with the public to obtain current information needed for rulemaking/nonrulemaking actions or to clarify written comments is permissible.

2–1–4. DISCLOSURE

While this policy recognizes the importance of ex parte contacts, it also contains a strict mandate to disclose these contacts. Specifically, the FAA has an obligation to conduct its rulemaking activities in a public manner, whereby interested members of the public are afforded adequate knowledge of such contacts. This is necessary to ensure all interested members of the public are afforded the opportunity to make their views known to the FAA. Without such disclosure, other interested members of the public and the FAA may be deprived of informed and valuable comments.

2–1–5. PERMITTED CONTACT

The kind of ex parte contacts permitted and the procedures to be followed depend on when the contact occurs. Under some circumstances, an ex parte contact could affect the basic openness and fairness of the rulemaking process. Even the appearance of impropriety can affect public confidence in the process. Any questions regarding the following authorized contacts should be addressed by the Office of the Chief Counsel.

a. Before the issuance of any rulemaking and/or nonrulemaking action, ex parte contacts are authorized when needed to obtain technical and economic information. Each contact that influenced the specific effort must be included in a report discussing each contact or group of related contacts. This report must be placed in the project's docket/case file.

b. During the comment period, ex parte contacts are strongly discouraged, since requests for information can be submitted in writing or at a public

meeting. The only information that should be released is that contained in the proposed rule and any other information made generally available during a public meeting. Information, such as facts not presented in the rulemaking/nonrulemaking notification or at a public meeting, or the agency's preliminary thinking on the final rule, should not be discussed. Persons who contact the agency by telephone or in person seeking to discuss the proposal should be advised that the proper avenue of communication during the comment period is by written comment submitted to the docket. When the agency determines that it would be helpful to meet with a person or group during the comment period, the meeting must be announced in the Federal Register and all interested persons must be invited.

c. In a formal public hearing, the testimony is usually recorded and the transcript added to the docket. Summaries of all substantive oral communications and copies of materials provided that could affect the agency position must be placed in the docket. Individuals who have made oral comments at meetings should be encouraged to also submit those comments to the docket in writing.

d. Persons who contact the agency simply to obtain information regarding the proposal may be provided with information that has already been made available to the general public. No record of such a contact is required.

e. Once the comment period has closed, subsequently received written communications should also be placed in the docket. Inform those who wish to submit such "late filed" comments (in accordance with Part 11), their comments will be given consideration to the extent that they cause no undue expense or delay.

f. If the agency determines that it would be helpful to meet with a person or group after the close of the comment period, the meeting must be announced in the Federal Register. Moreover, consideration should be given to reopening the comment period. Substantive oral communications other than formal meetings are discouraged. If it is discovered that such a contact has occurred, a summary of the contact must be placed in the docket if it could be perceived as influencing the rulemaking process. Such a summary must be accompanied by copies of any material distributed during meetings between the FAA and interested parties.

g. Contacts after the close of the comment period should be avoided. However, if an ex parte communication occurs that could substantially influence the rulemaking after the comment period has closed, it is the FAA's policy to consider reopening the comment period. Important information should not be disregarded simply because it was late. However, because contacts after the close of the comment period may result in reopening the comment period, they should be avoided. Written comments received after the closing date do not require reopening the comment period unless the agency is substantially and specifically influenced by the comment.

2–1–6. RECORDING CONTACTS

A record of a contact or series of contacts need only be made when it is determined that the contact influenced the agency's action. The record of a contact or series of contacts may be made at any time after the contact, but must be made before issuance of the final action. The record of ex parte contacts need not be a verbatim transcript of the communication. However, a mere recitation that on a stated day a meeting or telephone conversation was held with listed persons to discuss a named general subject is inadequate. The report of the meeting or contact should contain at a minimum:

a. The date and time of the meeting or conversation.

b. A list of the participants.

c. A summary of the discussion (more than a simple list of the subjects discussed).

d. A specific statement of any commitments made by any FAA personnel. A copy of any documents discussed should be attached to the record. Any questions on the preparation of the record should be directed to the Office of the Chief Counsel.

2–1–7. ADVICE FROM COUNSEL

Questions concerning the propriety of ex parte contacts, or the actions to be taken after such contacts, should be directed to the Office of the Chief Counsel. Ex parte contacts must be handled correctly to prevent unwarranted delay and legal challenge.

2–1–8. RELEASE OF RULEMAKING AND/OR NONRULEMAKING TEXTS

The agency policy is to not provide outside parties the texts of rulemaking/nonrulemaking documents before official release. Such disclosures may give the appearance that the agency is seeking outside party approval and may give an advantage to some parties over other members of the public. There is one exception to this policy. It may be necessary to discuss possible specific regulatory provisions under consideration to obtain information on technical, operational, and economic impacts needed for agency deliberations. Avoid discussion of specific language unless needed information cannot be obtained without discussion of the precise technical language to be used. When necessary, limit discussion and disclosure to the minimum amount of rule text necessary to accomplish the task. Preamble text is not to be distributed before publication.

2–1–9. ADDITIONAL REFERENCES

For additional information on ex parte communications, see the following:

a. DOT Order 2100.2, Policies for Public Contacts in Rulemaking.

b. Appendix 1 to Title 14 CFR Part 11, Oral Communications with the Public During Rulemaking.

Section 2. Executive Order 10854

2–2–1. SCOPE

a. Executive Order 10854 extends the application of 49 U.S.C. § 40103 to the overlying airspace of those areas of land or water outside the United States beyond the 12–mile offshore limit in which the United States, under international treaty agreement or other lawful arrangements, has appropriate jurisdiction or control.

b. Under the provisions of Executive Order 10854, airspace actions must be consistent with the requirements of national defense, international treaties or agreements made by the United States, or the successful conduct of the foreign relations of the United States.

NOTE–
See FIG 2–2–1 for the text of Executive Order 10854.

2–2–2. POLICY

Any rulemaking or nonrulemaking actions that encompass airspace outside of the United States sovereign airspace (i.e., beyond 12 NM from the United States coast line) must be coordinated with the Departments of Defense and State. All Executive Order 10854 coordination will be conducted by the Airspace Policy Group.

FIG 2–2–1
Executive Order 10854

EXECUTIVE ORDER 10854
EXTENSION OF THE APPLICATION OF THE FEDERAL AVIATION ACT OF 1958
By virtue of the authority vested in me by section 1110 of the Federal Aviation Act of 1958 (72 Stat. 800: 49 U.S.C. 1510), and as President of the United States, and having determined that such action would be in the national interest, I hereby order as follows:
The application of the Federal Aviation Act of 1958 (72 Stat. 731; 49 U.S.C. 1301 et seq.), to the extent necessary to permit the Secretary of Transportation to accomplish the purposes and objectives of Titles III and XII thereof (49 U.S.C. 1341–1355 and 1521–1523), is hereby extended to those areas of land or water outside the United States and the overlying airspace thereof over or in which the Federal Government of the United States, under international treaty, agreement or other lawful arrangement, has appropriate jurisdiction or control: Provided, that the Secretary of Transportation, prior to taking any action under the authority hereby conferred, shall first consult with the Secretary of State on matters affecting foreign relations, and with the Secretary of Defense on matters affecting national–defense interests, and shall not take any action which the Secretary of State determines to be in conflict with any international treaty or agreement to which the United States is a party, or to be inconsistent with the successful conduct of the foreign relations of the United States, or which the Secretary of Defense determines to be inconsistent with the requirements of national defense.
Dwight D. Eisenhower
The White House, November 27, 1959

Section 3. Processing Rulemaking Airspace Actions

2–3–1. PURPOSE

This section prescribes procedures to be followed when taking rulemaking actions to establish, modify, or revoke regulatory airspace.

2–3–2. RESPONSIBILITY

a. The Airspace Policy Group is responsible for processing the following actions: Class A, B, and C airspace areas; special use airspace (except controlled firing areas); offshore airspace areas; air traffic service routes; and those Class D and E airspace areas that overlie U.S. territories and possessions.

b. The Airman Certification and Air Traffic Law Branch, AGC–240, is responsible for ensuring that the airspace cases listed in paragraph a, above, meet the requirements of the Administrative Procedure Act (5 U.S.C. Chapter 5, Section 553) and DOT Order 2100.5, Policies and Procedures for Simplification Analysis and Review of Regulations.

c. Service centers are responsible for processing all Class D and E airspace area cases (except those overlying U.S. territories and possessions).

d. The Assistant Chief Counsel for each region is responsible for ensuring that all regional airspace cases meet the requirements of the Administrative Procedures Act and DOT Order 2100.5.

2–3–3. DOCKETS

a. Docket Location.

1. The official docket for both Headquarters and Service Center rulemaking cases must be maintained by DOT Docket Operations, U.S. Department of Transportation, 1200 New Jersey Avenue, SE, Room W12–140, West Building Ground Floor, Washington, DC 20590.

2. The Federal Docket Management System (FDMS) is the government–wide online database that includes DOT's public dockets. The public may review documents placed in the docket, and submit comments on proposed rules, by accessing the Federal eRulemaking Portal at **http://www.regulations.gov**.

b. Docket Identification.

1. Rulemaking cases are identified by two docket numbers. The first, an FAA docket number, consists of the acronym FAA; the current year; and a consecutively assigned number (for example, FAA–2003–14010). The second, an Airspace docket number, includes the last two digits of the calendar year; the appropriate FAA regional abbreviation for the geographic area the airspace action falls within (for example, AEA, ASO, etc.); and a consecutively assigned number within the calendar year (for example, 16–ASW–46). The FAA docket number is assigned by DOT Docket Operations. The Airspace docket number is assigned by the Service Center responsible for the geographic area the airspace action falls within, except for those airspace actions that are required to be originated by Headquarters.

2. Numbers must run consecutively within each calendar year.

c. Docket Content. The official docket must include all petitions, notices, rules, comments, correspondence, available graphics, and related material concerning the case (other than working files).

2–3–4. COMMENT PERIODS

Notice of Proposed Rulemaking (NPRM) actions should provide the following public comment periods:

a. Proposed nonsignificant rules (for example, most airspace actions): 45 days.

b. Proposed significant rules (for example, Class B and Class C actions): 60 days.

REFERENCE–
DOT Order 2100.5, Policies and Procedures for Simplification Analysis and Review of Regulations.

2–3–5. FLIGHT PROCEDURAL DATA

a. If an airspace docket requires an instrument procedure change and/or flight inspection, the appropriate Operations Support Group (OSG) must coordinate the proposed effective date with Aeronautical Information Services (AIS). The proposed effective date must consider the time needed to process procedural changes, complete Part 71

rulemaking, and allow ample time for flight inspection, if required. Any problems that could affect the proposed effective date must be coordinated with AIS and the Airspace Policy Group. See Order 8260.26, Establishing and Scheduling Standard Instrument Procedure Effective Dates, for scheduled charting deadlines and publication dates.

b. If a rule without a prior NPRM is to be issued, and flight check data is required, the OSG must provide details of the change to AIS to request flight inspection and coordinate the planned effective date.

2–3–6. SUBMISSION OF RULEMAKING AIRSPACE CASES TO HEADQUARTERS

a. To initiate Part 71 and Part 73 rulemaking for airspace actions that are processed by Headquarters, the OSG Manager must submit a request memorandum to the Airspace Policy Group Manager.

b. The request must include the following:

1. A regional docket number (except for Class B and C actions).

2. Background information to include the purpose and need for the proposed action. If an informal airspace meeting is held, provide the meeting summary, public comments, and proposed mitigations.

(a) Provide specific details of the proposed action for inclusion in the NPRM to present the public with enough information to develop effective comments.

(b) For airspace actions, the proposed description of the airspace and aeronautical chart depiction.

NOTE–
A chart depiction is not required for ATS routes.

(c) For Air Traffic Service (ATS) route actions, the proposed descriptions of the ATS route and TARGETS track plot.

(d) If radials, courses, or bearings are included as part of an airspace or ATS route description, both True and Magnetic values must be included for the NPRM.

c. If an airspace action needs to be completed by a specific date, the OSG must coordinate with any other FAA offices as necessary to ensure that sufficient lead time exists for meeting airspace rulemaking, processing and charting requirements, instrument approach procedure development, and flight inspection deadlines (if required).

d. The OSG must review all public comments posted to the Federal eRulemaking Portal (**www.regulations.gov**) or submitted directly to the FAA in response to an NPRM. The public comments must be analyzed to identify aeronautical impacts and whether mitigations are appropriate or cannot be adopted for specific reasons.

e. Within 90 days after the NPRM comment period closing, the OSG Manager will submit a memorandum to the Airspace Policy Group Manager with either a recommendation for further action (for example, proceed to final rule, changes required, withdraw the proposal, etc.), or a status update on the proposal. Include the following information in the memorandum:

1. An analysis of issues raised in the NPRM comments received and how they are being addressed or mitigated. Provide a detailed explanation for issues that cannot be mitigated.

2. Confirmation that the airspace description remains the same as proposed in the NPRM or details of the changes that are required.

NOTE–
If substantial changes are made to the proposed action, a supplemental NPRM, with a new comment period, could be required.

3. Copies of public comments received and any additional information that should be considered by the Airspace Policy Group.

4. The requested airspace effective date.

2–3–7. EFFECTIVE DATE OF FINAL RULES

a. Amendments to Parts 71 and 73 must be made effective at 0901 Coordinated Universal Time (UTC) and must coincide with 56–day en route charting dates published in FAA Order 8260.26, Establishing Submission Cutoff Dates for Civil Instrument Flight Procedures, Appendix A, Data Submission Cutoff Dates. Exceptions are as follows:

1. Safety or national interest actions that require an earlier effective time or date.

2. Editorial changes.

3. Actions that lessen the burden on the public (for example, revocation of restricted areas).

4. Class B and C airspace areas must be made effective on the appropriate sectional aeronautical charting date. To the extent practicable, Class D airspace area and restricted area rules should become effective on a sectional chart date. Consideration should be given to selection on a sectional chart date that matches a 56–day en route chart cycle date.

b. Cutoff dates are established to allow sufficient time for chart production and distribution. To meet this requirement, final rules must be published in the Federal Register on or before the applicable deadline for en route airspace date for the planned airspace effective date.

REFERENCE–
FAA Order 8260.26, Appendix A.

2–3–8. PUBLICATION IN FEDERAL REGISTER

a. The Federal Register accepts both paper and electronic submissions.

b. Paper submissions must have an original NPRM or an original final rule and a CD with two duplicate certified electronic files that are forwarded to AGC–200 for publication in the Federal Register. The Office of the Federal Register requires that all original documents be signed with blue ink.

c. Electronic submissions are submitted though the Federal Register web portal at webportal.fedreg.gov. For more information on how to get a digital signature and the submission process, see the Office of the Federal Register's Document Drafting Handbook, Chapter 6.

d. All documents must meet the criteria and format established by the Office of the Federal Register as outlined in the Document Drafting Handbook;
https://www.archives.gov/federal–register/write/handbook

Section 4. Processing Nonrulemaking Airspace Actions

2–4–1. PURPOSE

This section prescribes the procedures to be followed when establishing, modifying, or revoking nonrulemaking airspace.

2–4–2. IDENTIFICATION

Nonrulemaking cases are identified by a study number. The study number includes the last two digits of the calendar year, the appropriate FAA regional or airports office abbreviation that the action falls within, a consecutively assigned number within each calendar year, and either an "NR" (nonrulemaking), "NRA" (nonrulemaking airport), or "OE" (obstruction evaluation) suffix as appropriate.

EXAMPLE–

1. *21–AWP–1–NR for studies involving navigational aids and nonrulemaking Special Use Airspace (SUA) cases (i.e., Alert Areas, Controlled Firing Areas, MOAs, and Warning Areas).*

2. *21–ASO–1–NRA for studies involving airports.*

3. *21–AGL–1–OE for studies involving surface structures not located on public–use airports*

4. *21–ORL–1–NRA for studies processed by an airports district office.*

2–4–3. CIRCULARIZATION

a. Except for NRA airspace proposals, nonrulemaking airspace proposals must be circularized by the service area office unless procedures for processing those types of proposals allow exemptions to circularization. Each notice must contain a complete, detailed description of the proposal including charts, if appropriate, to assist interested persons in preparing comments. Circularization lists must include, but not be limited to, all known aviation interested persons and groups such as the state aviation agencies; Service Center military representatives; national and local offices of aviation organizations; local flight schools, local airport owners, managers, and fixed base operators; and local air taxi and charter flight offices. In order to ensure the widest public participation, service centers should consider all available communication alternatives for distributing circulars and receiving comments (for example, e–mail, fax, etc.). Normally, a 45–day comment period should be provided. Other parts in this order contain additional guidance regarding circularization.

b. Discuss in the nonrulemaking circular any regulatory changes (for example, Part 71, Part 73) that might be affected if the nonrulemaking proposal is adopted. Describe the regulatory changes in as much detail as is known at the time.

c. Regional/service area offices must coordinate with their respective state aviation representatives to ascertain which nonrulemaking circulars each state is interested in receiving. If various agencies within a state government request copies of particular circulars, the regional/service area office may request that one agency be designated to receive and distribute the requested copies.

d. Send one copy of each SUA nonrulemaking circular to the Rules and Regulations Group.

e. Except for Class B and Class C airspace actions, when a nonrulemaking action is associated with a rulemaking action, the nonrulemaking proposal may be included in the NPRM, and a separate nonrulemaking circular is not required. The NPRM will satisfy the circularization requirement and present the full scope of both the rulemaking and nonrulemaking proposal.

2–4–4. CIRCULARIZATION DOCUMENTATION

All notices of aeronautical studies, informal airspace meetings, and determinations issued for obstruction evaluation and airport airspace analysis studies require certificates of mailing. The certificate must be recorded in each case file as follows:

AERONAUTICAL STUDY [NUMBER]
CERTIFICATE OF MAILING
I HEREBY CERTIFY THAT A COPY OF THE ATTACHED [notice/determination] WAS MAILED TO EACH OF THE ADDRESSEES LISTED ON THE ATTACHED [mailing list/distribution list number] THIS [date] DAY OF [month/year].
SIGNED: [specialist/mail clerk/etc.]

2–4–5. SUBMISSION OF NONRULEMAKING SUA CASES TO RULES AND REGULATIONS GROUP

a. After the circular public comment period ends, the OSG must analyze all comments received and coordinate with the concerned ATC facility to develop a response to the issues raised by the comments, and determine if the proposal should be modified as a result of the comments. Coordinate with the appropriate Service Center military representative to discuss possible mitigations or changes based on the comments. If significant changes are made to what was circularized, it may be necessary to recircularize the proposal for additional public comment.

b. After considering all pertinent information, the OSG and the ATC facility will determine whether the proposal should be forwarded for approval or disapproved. If the action is to be disapproved, the OSG will comply with the guidance in Paragraph 21–5–6, Disapproval of Proposals, of this Order.

c. Within 90 days after the circular comment period closing, the OSG Manager will submit a memorandum to the Rules and Regulations Group Manager with either a recommendation to approve, or a status update on the proposal. Include the following information in the memorandum:

1. A discussion of each issue raised by the comments and how it was resolved or addressed.

2. The final version of the airspace description (including a revised chart, if applicable).

3. The requested airspace effective date.

4. Copies of public comments received and any additional information that should be considered by the Rules and Regulations Group.

2–4–6. EFFECTIVE DATE OF NONRULEMAKING ACTIONS

Nonrulemaking actions must be made effective at 0901 UTC and must coincide with the 56–day en route charting dates published in FAA Order 8260.26, Appendix A. Exceptions are as follows:

a. Safety or national interest actions that require an earlier effective time or date.

b. Editorial changes.

c. Actions that lessen the burden on the public (for example, revocation of special use airspace).

d. To the extent practical, consider making the nonrulemaking SUA effective on a sectional chart date that matches the 56–day en route charting dates.

2–4–7. PUBLICATION OF NONRULEMAKING ACTIONS

Nonrulemaking actions must be published in the National Flight Data Digest (NFDD) on or before the applicable charting cutoff date.

REFERENCE–
FAA Order 8260.26, Appendix A.

Section 5. Informal Airspace Meeting

2–5–1. PURPOSE

This section prescribes the procedures to be followed for informal airspace meetings held before the issuance of a rulemaking or nonrulemaking airspace proposal.

2–5–2. POLICY

a. Informal airspace meetings may be held when the FAA determines there is a need to obtain additional technical information or facts to assist in the development of a proposal prior to the issuance of an NPRM or a nonrulemaking circular. The number of meetings required will be determined by the Service Center office based on the scope of the proposal.

b. Informal airspace meetings are mandatory for any planned Class B and/or Class C airspace proposals prior to issuing an NPRM.

NOTE–
Meetings are not required for minor Class B or Class C airspace changes (for example, editorial corrections, ARP updates, etc.). Contact the Airspace Policy Group if in doubt whether a proposed change requires a meeting.

c. Informal airspace meetings are not a decision–making forum. The purpose is to gather additional information to be considered in developing the proposal. These meetings provide interested parties an opportunity to present views, recommendations, and comments on a proposal. All comments received during these meetings will be considered prior to any revision or issuance of a notice of proposed rulemaking.

d. At FAA's discretion, an electronic meeting format (such as webinars, podcasts, etc.) may be used to supplement the traditional meeting format. Electronic meetings must provide a method of posting questions and answers that can be viewed by all participants after the meeting. In addition, instructions for participants to submit written comments after the meeting must be included.

2–5–3. CLASS B AND C INFORMAL AIRSPACE MEETING NOTIFICATION PROCEDURES

a. The OSG must submit informal airspace meeting details to the Airspace Policy Group for preparation of the notice and submission to the Federal Register at least 90 days in advance of the first meeting date. The following meeting information is required:

1. A general explanation of the proposed action to enable interested persons to prepare comments prior to the meeting.

2. The name, address, and telephone number of the person from whom additional information may be obtained.

3. Dates and times of the meeting(s).

4. Address(es) of meeting location(s).

5. Address for submitting written comments following the meeting(s).

b. The Federal Register notice must be published a maximum of 60 days and a minimum of 30 days in advance. The comment closing date will be 30 days after the last meeting date.

c. In addition to the Federal Register publication, informal airspace meeting notices must be sent to all known aviation interested persons and groups including, but not limited to, state aviation agencies, Service Center military representatives, national and local offices of aviation organizations, local flight schools, local airport owners, managers and fixed base operators, and local air taxi and charter operators within a 100–mile radius of the primary airport for Class B airspace actions and within a 50–mile radius of the primary airport for Class C airspace actions.

2–5–4. INFORMAL AIRSPACE MEETING NOTIFICATION PROCEDURES FOR AIRSPACE ACTIONS OTHER THAN CLASS B AND CLASS C

a. When additional information is needed, or known/anticipated controversy warrants, the above procedures may also be used for informal airspace meetings concerning airport airspace analysis, SUA,

or commissioning/decommissioning of navigation aids. Every effort must be made to notify all interested aviation organizations and/or persons and groups that may be affected by the proposed action.

b. Service centers are responsible for the preparation and distribution of informal airspace meeting notices for airspace actions other than Class B and C. Meeting notices are not required to be published in the Federal Register. The notice of the meeting should be distributed at least 30 days prior to the meeting date.

c. The meeting notice must:

1. Explain that the purpose of the meeting is to solicit aeronautical comments regarding the proposal's effect on the use of the navigable airspace.

2. Provide a general explanation of the proposed action to enable interested persons to prepare comments prior to the meeting.

d. Service centers are encouraged to also make use of electronic media, local newspapers, radio, and television to supplement the dissemination of meeting notices.

2–5–5. LOCATION

Informal airspace meetings should be held at locations and times that provide an opportunity for the public to submit aeronautical comments relative to the proposed action. For larger airspace area proposals, multiple meeting locations and times may be necessary to obtain input from the public over a wider geographic area.

2–5–6. AGENDA ITEMS

Agenda items will be included in the informal airspace meeting notice. Suggested items include, but are not limited to, meeting procedures, FAA presentation on the proposed airspace action, and an opportunity for public presentations/comments. Only presentations or comments from attendees that concern the proposed action will be accepted.

2–5–7. RECORD OF MEETINGS

a. Official transcripts or minutes of informal airspace meetings must not be taken or prepared. However, the chairperson must ensure that a memorandum summarizing the discussions and issues raised at the meeting(s) is prepared. A copy of the list of attendees and any written comments submitted at the meeting(s) or during the associated comment period must be attached to the memorandum.

b. For airspace actions, a copy of the memorandum and attachments must be included in the OSG recommendation package submitted to the Airspace Policy Group.

Chapter 3. Aeronautical Information

Section 1. General

3–1–1. POLICY

All geographic (latitude and longitude) and vertical data submitted or used in airspace matters must be based on current North American Datum (NAD) criteria.

3–1–2. RESPONSIBILITY

a. Aeronautical Information Services (AIS) is responsible for coordination with charting agencies and chart producers.

b. AIS will furnish appropriate aeronautical chart cutoff and publication dates. Cutoff dates are 9 weeks (10 weeks for action involving flight check) in advance of the publication date to allow sufficient time for charting and chart distribution purposes.

c. Any information pertinent to the development of aeronautical information (for example, validation of geographical coordinates, airport geographic positions, true radials, etc.) must be obtained from AIS.

3–1–3. TRUE/MAGNETIC DIRECTIONS

All radials, courses, and bearings specified in an NPRM must be stated both as true and magnetic, except magnetic need not be stated in terminal airspace notices.

3–1–4. NAVIGATIONAL AID COORDINATES

When a navigational aid (NAVAID) is used as a reference point in a controlled airspace description, its geographic coordinates must be included in degrees, minutes, and seconds.

3–1–5. DIRECTIONS

Directions must be described as follows:

338° True – 022° True = North
023° True – 067° True = Northeast
068° True – 112° True = East
113° True – 157° True = Southeast
158° True – 202° True = South
203° True – 247° True = Southwest
248° True – 292° True = West
293° True – 337° True = Northwest

Section 2. Charted Reporting Points

3–2–1. POLICY

a. Charted reporting points should be established only when necessary to provide minimum en route altitude (MEA) changes or to assist in the separation of aircraft.

b. Reporting points should not be established solely for the purpose of communication handoffs (transfer of aircraft control from one sector/facility to another to define an approach control area of jurisdiction).

3–2–2. CHART SERIES SELECTION

The request to have a reporting point charted should be limited to the chart series necessary for its intended use. For example, a reporting point established for the high altitude structure should not appear on the low altitude charts.

3–2–3. FAA FORM 8260–2, RADIO FIX AND HOLDING DATA RECORD

a. Visual Flight Rules Fix. The appropriate air traffic field facility must forward the completed FAA Form 8260–2 through the service area office to AIS.

b. Instrument Flight Rules Fix. FAA Form 8260–2 will serve as a request form, a checklist for flight inspection in response to a request for charted reporting points, and a record of action taken to publish the data. The appropriate air traffic field facility must request flight inspection action by completing the FAA Form 8260–2 and submitting it to the FPT through the service area office. It should be forwarded through the respective service area office when necessary to establish, modify, or cancel an intersection that is used as a reporting point, or to establish, modify, or cancel a holding pattern.

3–2–4. PREPARATION OF FORM 8260–2

Instructions for preparation of FAA Form 8260–2 are contained in Order 8260.19, Flight Procedures and Airspace.

Section 3. Naming of NAVAIDs, Aeronautical Facilities, and Fixes

3–3–1. GENERAL

a. All fixes located at a common point must have the same name/code regardless of type, altitude, or route structure.

b. If one of the collocated fixes is a NAVAID, the other fixes must be assigned the same name and three–letter identifier.

3–3–2. RESPONSIBILITY

a. Service area office are responsible for assigning and changing names of NAVAID and aeronautical facilities, and must follow the instructions contained herein and in FAA Order JO 7350.9, Location Identifiers, Chapter 1.

b. AIS is responsible for issuing five–letter names for radio fixes, waypoints, marker beacons, and compass locators. Five–letter names must be issued by AIS to the Terminal Procedures and Charting Group, Major Military Commands (MAJCOM) and Air Route Traffic Control Centers (ARTCC) for future assignments.

c. AIS in conjunction with the respective service area office, must ensure that no duplication in location name exists.

3–3–3. NAMING OF NAVAIDs

a. The NAVAID name selected should represent a city, town, or prominent geographic landmark that is depicted on a sectional aeronautical chart at or near the site. If one is neither available nor suitable, a local memorial name may be used. A common, easily understood word should be selected for the NAVAID name.

b. The name must not sound similar to an existing NAVAID/fix location name within the originating ARTCC's area, the adjacent ARTCC's area, or within a 300 NM radius from the NAVAID involved.

c. Unduly long names should not be used.

d. A navigational aid with the same name as the associated airport should be located on that airport. However, in existing situations, a NAVAID off the airport with the same name as the airport may retain the airport name provided there is no other NAVAID with the same name. If retention of the airport name at an off–airport NAVAID could lead to a potentially confusing situation, the name should be changed. Only one NAVAID located on the airport may be assigned the airport name.

NOTE–
For the purpose of this paragraph only, a compass locator must be considered as a separate NAVAID.

e. Instrument Landing Systems (ILS).

1. Inner/middle fan markers (without collocated nondirectional radio beacons (NDB) or compass locators) and localizer equipment are not normally assigned names. Localizers are identified with the associated airport name and applicable runway number in official writings.

2. All outer markers must be assigned names/codes. If the outer marker is to be situated at the same geographic location as a fix, it must adopt the fix names/code.

3. All outer compass locators (LOM) and middle compass locators (LMM) must be assigned names/codes. If co–located with a fix, they must also adopt the fix name/code.

f. Names/codes assigned must be the "chart names" that will appear on aeronautical charts, in airspace dockets, and other official publications and records.

3–3–4. NAMING OF WAYPOINTS, INTERSECTIONS, AND DME FIXES

a. To decide whether a fix needs to be named, see Order 8260.19, Flight Procedures and Airspace.

b. Names assigned for waypoints, intersections, Air Traffic Control (ATC) coordination, and Distance Measuring Equipment (DME) fixes not co–located with a navigational aid must consist of a single five–letter pronounceable name. These five letters must serve as the name, identifier, and computer code.

c. Regional/service area office requests for specific five–letter names for radio fixes and waypoints should be avoided, but may be granted by AIS if feasible.

d. Five–letter names that are assigned by the Mission Support, Terminal Procedures and Charting Group and major commands will be coordinated with the associated ARTCC to preclude similar sounding fix names.

e. AIS must not duplicate any radio fix, waypoint, marker beacons or compass locators names.

f. A fix or waypoint name change is required if the fix/waypoint is moved 1 nautical mile (NM) or more unless operational requirements dictate otherwise.

Chapter 4. NAVAIDs

Section 1. General

4–1–1. PURPOSE

This chapter provides guidelines and procedures for nonrulemaking actions related to requests for the establishment, relocation, modification, and discontinuance of NAVAIDs.

4–1–2. POLICY

a. Various types of NAVAIDs are in use today, each serving a specific purpose in the National Airspace System (NAS). These aids have varied owners and operators, but the FAA has statutory authority to prescribe standards for the operation of any of these aids that are used as part of the NAS.

b. Dates for commissioning, discontinuance, or conversion of NAVAIDs that are part of the NAS must coincide with associated aeronautical charting dates.

4–1–3. RESPONSIBILITY FOR FREQUENCY SELECTION

The Interdepartmental Radio Advisory Committee (IRAC), which is composed of representatives of various Federal agencies, has delegated to the FAA the responsibility to manage frequency selections/assignments for all NAVAIDs. The frequency is selected by the regional Frequency Management Office as set forth in the FAA's 6050 series of Orders. Military and other government proponents apply for frequency authorization to the FAA through their respective headquarters. Non–Federal proponents must file with the Federal Communications Commission (FCC) and must only be notified of the frequency selected after the FCC/IRAC action is completed.

4–1–4. GOVERNING CRITERIA

Order 7031.2, Airway Planning Standard Number One – Terminal Air Navigation Facilities and Air Traffic Control Services; Order 7031.3, Airway Planning Standard Number 2 –Air Route Traffic Control; and other pertinent agency orders contain criteria governing the establishment of NAVAIDs.

4–1–5. LONG–RANGE PLANNING

Service area offices, Technical Operations service area offices, the Technical Operations ATC Facilities, Implementation Services, and the FPT, must work in concert to maintain a long–range plan for the provision of NAVAIDs and associated air traffic control services.

4–1–6. PROPOSED CHANGES

The service area office and/or FPT must submit to Technical Operations ATC Facilities, Implementation Services proposed changes to NAVAIDs that are of a magnitude to require advance budgetary planning and/or user coordination at the national level.

Section 2. FAA NAVAIDs

4–2–1. POLICY

a. Site locations for the establishment or relocation of NAVAIDs require approval by the appropriate Technical Operations service area offices, FPT, service area offices, Airports, and Flight Standards Divisions.

b. The Technical Operations service area offices' airspace focal point must request the appropriate service area office to initiate a nonrulemaking study of the selected site.

c. The Technical Operations service area office must concur with the site location before the request for study is made.

4–2–2. COORDINATION

The service area office must coordinate the proposed site with AIS, FPT, Flight Standards and Airports Divisions, as well as affected air traffic control facilities. The NAVAIDs purpose must be considered and, as appropriate, a preliminary decision made regarding:

a. The establishment of instrument procedures;

b. Airways/routes;

c. Designation of controlled airspace;

d. The ability to provide essential air traffic services;

e. The effect of the site on facility performance; and

f. The effect on the location or configuration of an airport. If all offices agree with the selected site, then the service area office should circularize the proposal, as determined necessary, for comment from the aviation community.

4–2–3. INFORMAL AIRSPACE MEETINGS

Convene an informal airspace meeting in accordance with the procedures detailed in chapter 2, section 6, of this Order. Informal airspace meetings may not be practical for time critical changes or in those cases where delay will adversely affect aviation safety. At such meetings, agency representatives should explain the planned use of the NAVAIDs, including instrument approaches or other terminal procedures or airspace planning, and any action will be subsequently handled by airspace rulemaking procedures. However, care should be taken that the agency's ex parte policy is not violated during these informal proceedings.

4–2–4. APPROVAL AUTHORITY

The service area office is responsible for coordination and final approval or disapproval of sites selected for installation of en route NAVAIDs. The regional FPT is responsible for coordination and final approval or disapproval of sites selected for installation of terminal NAVAIDs. The approval or disapproval determination must be issued by memorandum to the appropriate Technical Operations service area office. Any disapproval issued must include the reasons why a site is not acceptable. Agency personnel are reminded that en route site approval does not constitute approval of instrument approach procedures or controlled airspace planning to be processed under rulemaking action.

4–2–5. DISTRIBUTION

The service area office must distribute a copy of the approval or disapproval determination to all FAA offices that participated in the site study and to ARN–1.

4–2–6. COMMISSIONING DATE

The responsible Technical Operations service area office is authorized to proceed with installation of the NAVAID upon receipt of the site approval. As soon as possible thereafter, an estimated date of commissioning must be agreed upon by the service area office, FPT, Technical Operations service area office, and any other concerned FAA offices. To the extent possible, the date of commissioning must coincide with the associated aeronautical charting dates.

4–2–7. PROCESSING REGULATORY ACTIONS

The FPT must process the necessary instrument procedures and the service area office must process airspace rulemaking actions to be effective with the associated aeronautical charting date.

Section 3. Military NAVAIDs

4–3–1. POLICY

Military NAVAID proposals may affect airspace or airport utilization and the availability of interference protected frequencies. Consequently, military proposals involving the establishment or relocation of military NAVAIDs are forwarded to the service area office for nonrulemaking studies. Such proposals should contain the following information:

a. Site of the NAVAIDs using geographical coordinates to the nearest hundredth of a second.

b. Equipment type.

c. Power output.

d. Frequency range.

e. Any other pertinent information.

4–3–2. COORDINATION WITH MILITARY

The service area office is authorized to coordinate with the originating military organization to obtain any additional information needed for the nonrulemaking study.

4–3–3. EVALUATION BY TECHNICAL OPERATIONS SERVICES OFFICE

The regional Frequency Management Office must evaluate the military proposal to determine frequency availability and frequency protection. This evaluation must be provided to the responsible service area office.

4–3–4. CIRCULARIZATION

If the frequency evaluation report is favorable, the service area office must complete coordination with the appropriate Airports, Flight Standards, and other Technical Operations service area offices, and the FPT. If appropriate, circularize the proposal to user groups and other interested persons for comment. If the public comments indicate further discussion is warranted, then consideration should be given to holding an informal airspace meeting to discuss the proposal.

4–3–5. DETERMINATION RESPONSIBILITY

The responsibility to determine the acceptability of the military proposal is delegated to the service area office after coordination with the FPT, Technical Operations service area office, Flight Standards, and Airports Divisions. Any problems with, or objections to, the proposal must be resolved at the regional/service area office level prior to issuance of the decision. The determination must be issued in memorandum form stating that the FAA has “no objections” or “objects” to the installation of the NAVAID. Airports Divisions are cautioned to ensure that site locations for the establishment or relocation of NAVAIDs on obligated airports are in accordance with FAA approved Airport Layout Plans. Any restrictions or reasons why the proposal is objectionable must be clearly set forth in the memorandum.

4–3–6. NOTIFICATION AND DISTRIBUTION

The appropriate service area office must normally address the determination to the military organization that originated the proposal. When the request for the study originated from FAA headquarters, then the determination should be directed to the office requesting the study or relayed to the Military Command through FAA/Department of Defense (DOD) coordination procedures. Forward copies of the memorandum to ARN–1, the Technical Operations ATC Spectrum Engineering Services, Spectrum Assignment and Engineering Services, and those regional/service area offices that participated in the study.

Section 4. Non–Federal NAVAIDs

4–4–1. POLICY

The FAA's role regarding non–Federal NAVAIDs is to assist sponsors proposing to establish or relocate such aids by providing technical planning, minimum equipment and operational standards, and processing requirements for such proposals. The operation of non–Federal navigation facilities involving the approval of Instrument Flight Rules (IFR) and air traffic control procedures must be in accordance with minimum requirements set forth in Part 171 and the FAA's 6700 series of Orders.

4–4–2. REQUEST FOR ESTABLISHMENT

The proponent requesting the establishment or relocation of a non–Federal NAVAIDs, as defined in Part 171, should provide the following information:

a. The site of the NAVAIDs using geographical coordinates to the nearest hundredth second.

b. Equipment type.

c. Power output.

d. Frequency range.

e. Any other pertinent information.

4–4–3. RESPONSIBILITY

Requests received for establishment of a non–Federal NAVAID must be forwarded to the appropriate Technical Operations service area office for initial processing.

a. Technical Operations Services, Technical Operations service area offices are responsible for the overall regional/service area office coordination with the sponsor. Advice should be provided to sponsors on the minimum equipment and operational performance standards, siting requirements, and the conditions prerequisite to use of the navigational facility for any IFR procedure. Additionally:

1. Evaluate the proposal to determine frequency availability, the potential interference effects on existing/planned electronic and visual aids to navigation, and possible electromagnetic interference to radio communications frequencies.

2. Forward the proposal to the service area office, FPT and the Airports Divisions for appropriate evaluation and nonrulemaking action.

3. Request the sponsor to submit any additional information needed for the study.

4. Request the FPT to complete the necessary processing of the proposed IFR procedure.

5. Coordinate with Flight Inspection Operations office as necessary to complete appropriate flight inspection.

b. Air traffic. If the sponsor has requested establishment and approval of an IFR procedure predicated on the proposed facility, the service area office must:

1. Ensure that the necessary ATC communications can be satisfied.

2. Request the appropriate Airports, Technical Operations service area office, and Flight Standards Divisions, and FPT to study the proposal.

3. Examine the proposal regarding utilization of the airspace, aeronautical operations, and air traffic control procedures.

c. Airports Programs. The appropriate Airports Division will evaluate the proposal in reference to existing airports and planned airport development on file with the agency.

d. Flight Standards. The appropriate Flight Standards Office is the focal point for studying the effect of the proposed non–Federal NAVAID on existing or proposed VFR operations.

e. FPT. The appropriate FPT is the focal point for studying the effect of the proposed non–Federal NAVAID on existing or proposed IFR operations. In developing IFR procedures, FPT personnel are responsible for:

1. Determining whether their respective requirements outlined in Part 171 and Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS), have been satisfied.

2. Advising the appropriate air traffic office of the results of its study.

3. Initiating development of required IFR procedures.

4–4–4. EXTERNAL COORDINATION

The appropriate service area office will circularize the proposal to all interested persons for comment if the Technical Operations service area office, Airports Division, and FPTs responses are favorable. Any internal FAA problem with the proposal must be resolved prior to the circularization.

4–4–5. INFORMAL AIRSPACE MEETING

When public comments indicate that further discussion is warranted, consideration should be given to scheduling an informal airspace meeting to solicit additional input on the proposal.

4–4–6. APPROVAL AND NOTIFICATION PROCESS

The appropriate service area office must, based upon the results of the study, determine whether there are any objections to the installation or relocation of the NAVAID and so advise the originating Technical Operations service area office. The Technical Operations service area office must then forward the determination approval or disapproval to the sponsor. If the determination is favorable, the service area office must initiate the airspace regulatory action necessary for the IFR procedure.

4–4–7. DISTRIBUTION

Copies of the determination issued to the sponsor must be forwarded to ARN–1, Spectrum Assignment and Engineering Services, and to the Support Services Branch of the FCC.

Section 5. Discontinuance of FAA NAVAIDs

4–5–1. POLICY

Operational requirements, air traffic demand, and budgetary limitations are normally the basis for the retention or decommissioning of FAA NAVAIDs. Since economics are a necessary consideration, a NAVAID becomes a candidate for decommissioning when the activity level, or factors other than activity level on which it may have been justified, are eliminated or changed significantly. Discontinuance criteria are contained in the appropriate Airway Planning Standards (Orders 7031.2, Terminal, and 7031.3, En Route). Any discontinuance should be in accordance with the Federal Radio Navigation Plan.

4–5–2. RESPONSIBILITIES

a. En Route and Oceanic Services and Terminal Services must ensure that FAA–funded NAVAIDs are allocated so that they benefit the greatest number of users consistent with safety and operational efficiency. The service area office must also evaluate the need for the retention of en route NAVAIDs and recommend candidates for decommissioning when their need can no longer be justified.

b. The FPT must ensure that FAA–funded NAVAIDs are allocated so that they benefit the greatest number of users consistent with safety and operational efficiency. The FPT must also evaluate the need for the retention of terminal NAVAIDs and recommend candidates for decommissioning when their need can no longer be justified.

c. ARN–1 must recommend navigational facilities to the Director of Mission Support, Policy as candidates for decommissioning when their function can be equally or better provided by more economically efficient alternatives.

4–5–3. COORDINATION OF PROPOSALS

A navigational facility selected for decommissioning will be the subject of a nonrulemaking study. The appropriate service area office will coordinate the proposed action with personnel from the Technical Operations service area office, FPT, Airports Division, Flight Standards Division, and the regional military representative. If all concur, the service area office must circularize the proposed decommissioning to all interested persons for comment. Include in the circularization a brief description of the decommissioning effect on airspace and instrument procedures.

NOTE–
Advanced coordination should be accomplished with Transport Canada regarding facilities that would affect transborder operations. This coordination may be handled through headquarters, regional/service area offices, or direct facility to facility.

4–5–4. OBTAINING APPROVAL

In accordance with Order 1100.1, FAA Organization – Policies and Standards, Paragraph 15, certain closings, consolidation, and decommissioning may require approval of the Administrator. Upon completion of the nonrulemaking study, if applicable, the appropriate regional/service area office must forward the study with a summary of comments and a recommendation to the Administrator through the concerned office or service.

4–5–5. DISCONTINUANCE ACTION

Delay initiating steps for discontinuance of a navigational facility that requires approval from the Office of the Administrator until 10 working days after receipt of such approval.

4–5–6. CANCELLATION OF CONTROLLED AIRSPACE AND INSTRUMENT PROCEDURES

The appropriate air traffic office must ensure the designated airspace based on the NAVAID is revoked or modified. The IFP Service Provider must coordinate the cancellation/amendment of any instrument approach procedure predicated on that NAVAID before the decommissioning date.

4–5–7. DECOMMISSIONING DATE

To the extent possible, the date of decommissioning should coincide with the associated aeronautical charting dates.

4–5–8. DISCONTINUANCE OF NAVAIDs INCLUDED IN ICAO PLANS

To meet the operational requirements of United States and foreign aircraft, certain United States NAVAIDs are included in the Caribbean, North Atlantic, and Pacific Regional Air Navigation Plans of the International Civil Aviation Organization (ICAO). By international agreement, amendments to these plans cannot be made until the necessary coordination is effected through ICAO with all interested contracting states and international organizations.

4–5–9. INTERNATIONAL STAFF NOTIFICATION

The Office of International Affairs is the liaison on international issues between the FAA and U.S. Government elements and international organizations. Before action is initiated to discontinue any NAVAID included in an ICAO Air Navigation Plan, Technical Operations must notify ATO International. ATO International must then notify the Office of International Affairs of the proposed action. Notification must be made at least 90 days before the proposed effective date.

Section 6. Discontinuance of Military and Non−Federal NAVAIDs

4−6−1. POLICY

When notice of discontinuance of a military, other government, or non−Federal NAVAID is received, it must be forwarded to the appropriate service area office for processing.

4−6−2. RESPONSIBILITY

Upon receipt of the notice, the responsible service area office must, in conjunction with the Technical Operations service area office, Airports Division, and the FPT, determine if:

a. The NAVAID forms part of the Federal airway/route system.

b. An airspace designation is predicated upon the NAVAID.

c. The NAVAID is used for a published civil instrument procedure.

4−6−3. ACTION PRIOR TO DISCONTINUANCE

a. If none of the conditions in paragraph 4−6−2 exist, the air traffic office must notify user groups and other interested persons of the name of the facility, its location, and the date of discontinuance without resorting to the nonrulemaking process.

b. If any of the conditions in paragraph 4−6−2 exist, the appropriate air traffic office must:

1. Initiate the nonrulemaking process by circularizing a proposal to user groups and other interested persons for comment.

2. Coordinate with Technical Operations Services to determine feasibility of FAA takeover.

3. If discontinuance of the NAVAID is to be pursued, ensure that the airspace designated on the NAVAID is revoked or modified and that instrument procedures predicated on that NAVAID are canceled before the effective date of discontinuance.

4−6−4. DISCONTINUANCE OF NAVAIDs INCLUDED IN ICAO PLANS

Refer to paragraphs 4−5−8 and 4−5−9 of this order for requirements applicable to the discontinuance of NAVAIDs that are referenced in ICAO Air Navigation Plans.

Part 2. Objects Affecting Navigable Airspace

Chapter 5. Basic

Section 1. General

5–1–1. PURPOSE

The guidelines, procedures, and criteria detailed in this part supplement those contained in Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace, and address the following:

a. The performance of functions relating to the processing of notices of proposed construction or alteration.

b. The conduct of aeronautical studies of any existing or proposed object affecting the navigable airspace.

c. The conduct of aeronautical studies of the electromagnetic radiation effect of proposed or existing objects on the operation of air navigation facilities.

d. The conduct of aeronautical studies of the physical effect of proposed or existing objects on the line–of–sight view of all runways, taxiways, and traffic pattern areas from the airport traffic control tower.

e. The conduct of aeronautical studies regarding the physical effect of proposed or existing objects on airport approach lighting systems.

5–1–2. AUTHORITY

a. The FAA's authority to promote the safe and efficient use of the navigable airspace, whether concerning existing or proposed structures, is predominantly derived from Title 49 U.S.C. Section 44718 (Section 44718). It should be noted however, that Section 44718 does not provide specific authority for the FAA to regulate or control how land (real property) may be used in regard to structures that may penetrate navigable airspace.

b. Title 14 of the Code of Federal Regulations (14 CFR) Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace, was adopted to establish notice standards for proposed construction or alteration that may result in an obstruction or an interference with air navigation facilities and equipment or the navigable airspace.

5–1–3. POLICY

The prime objective of the FAA in administering Section 44718 and 14 CFR Part 77 in conducting aeronautical studies is to ensure the safety of air navigation and efficient utilization of navigable airspace by aircraft.

5–1–4. SCOPE

a. 49 U.S.C. Sections 40103 and 44718, and Part 77 apply only to structures located within any state, territory, or possession of the United States, within the District of Columbia, or within territorial waters (12 NM) surrounding such states, territories, or possessions.

b. Structures that are subject to study requirements associated with 49 U.S.C. Section 40103, 44718, and Part 77 may be man made (including mobile structures) or of natural growth and terrain whether existing, proposed, permanent, or temporary.

5–1–5. RESPONSIBILITY

The responsibility for managing the obstruction evaluation program for those structures that may affect the navigable airspace is delegated to the Obstruction Evaluation Group (OEG), except for those structures located on public–use airports covered under FAA Order JO 7400.2, Part 3, Airport Airspace Analysis.

NOTE–
See paragraph 10–1–3.f.

5–1–6. SENSITIVE CASES REFERRED TO WASHINGTON

The OEG Manager, or designated representative, must brief sensitive or high profile cases to the Manager, Rules and Regulations Group before issuing, revising, or extending the determination.

5–1–7. AUTOMATION

a. To the extent practicable, the obstruction evaluation/airport airspace analysis (OE/AAA) automated programs must be used in lieu of manual processing.

b. Automated obstruction evaluation (OE) correspondence forms must be used.

5–1–8. OE/AAA AUTOMATED SYSTEM AIRPORT/RUNWAY DATABASE

a. To ensure the automated Part 77 obstruction criteria and the military Part 77 obstruction criteria conflict analysis programs consider all known plans on file, the regional Airports Division is responsible for maintaining the automated airport/runway database.

1. Either the Airports Division or the Airports District Office must enter the ultimate airport reference point for any proposed public–use or military airport into the database within two working days from receipt of the information.

2. Either the Airports Division or the Airports District Office must enter any change of airport status from private–use to public–use into the database within two working days from receipt of the information. As workload permits, information on private–use airports must also be entered into the database.

3. Either the Airports Division or the Airports District Office must enter all other public–use and military airport/runway information in the database within 10 working days from receipt of the information.

b. Airports must resolve and correct any discrepancies that have been identified in the automated airport/runway database.

c. Any required corrections must be forwarded to AIS.

5–1–9. TRAINING

Employees involved with the OE/AAA program must attend the Basic Obstruction Evaluation and Airport/Airspace Analysis Course offered by the FAA Academy.

5–1–10. RELEASE OF INFORMATION

Requests from the public for access to or copies of information contained in aeronautical study files are occasionally made to the regional offices. Such requests must be processed in accordance with the provisions of the Freedom of Information Act (5 U.S.C. 552), as implemented by Part 7 of the Department of Transportation Regulations and Order 1270.1, Freedom of Information Act Program.

Section 2. Notices

5–2–1. REQUIREMENTS

a. Requirements for notifying the FAA of proposed construction or alteration are contained in Sections 77.9 (see FIG 5–2–1, FIG 5–2–2, FIG 5–2–3, FIG 5–2–4, and FIG 5–2–5).

b. No notice is required, as specified in Section 77.9(e), for certain equipment installations "of a type approved by the Administrator" when the equipment is installed in accordance with the established FAA siting criteria. Equipment installed in compliance with the siting criteria without waivers and which do not affect other runways do not have to be considered under Part 77 criteria.

c. Examples of equipment not requiring notice are:

1. Wind equipment (AWOS, ASOS, AWSS, etc.). Supplemental wind cones, wind turbines, and meteorological towers are not exempt from notice.

2. Transmissometers (Runway Visibility Value (RVV) and Runway Visual Range (RVR) equipment).

3. Instrument Landing Systems (ILS).

4. Visual Glide Slope Indicators (VGSI).

5–2–2. PROCESSING

a. Obstruction Evaluation Group (OEG) personnel must administer aeronautical studies with the coordinated assistance of Airports, Technical Operations Services, Frequency Management, Flight Standards, IFP Service Providers, Department of Defense, and Department of Homeland Security representatives.

b. The OEG must process notices received under the provisions of Sections 44718 and Part 77 as OE cases. The exception to this is notices received under those provisions that pertain to structures located on a public–use airport which must be processed by the Airports Division as a nonrulemaking airport (NRA) case (defined in Part 3, Airport Airspace Analysis, of this order).

c. If notice is required by any other FAA regulation, the appropriate division must process the notice under that regulation.

5–2–3. FAA FORMS

Standard FAA forms are established for use in conducting aeronautical studies. The standard FAA forms are:

a. FAA Form 7460–1, Notice of Proposed Construction or Alteration (OE notice).

b. FAA Form 7460–2, Notice of Actual Construction or Alteration (Supplemental Notice).

NOTE–
An electronic system to collect notice(s) of proposed construction or alteration and actual construction is available online at https://oeaaa.faa.gov.

FIG 5–2–1

NOTICE REQUIREMENT RELATED TO 200 FEET IN HEIGHT

Notice of Construction or Alteration

§77.9(a) – Any construction or alteration that is more than 200 feet AGL at its site.

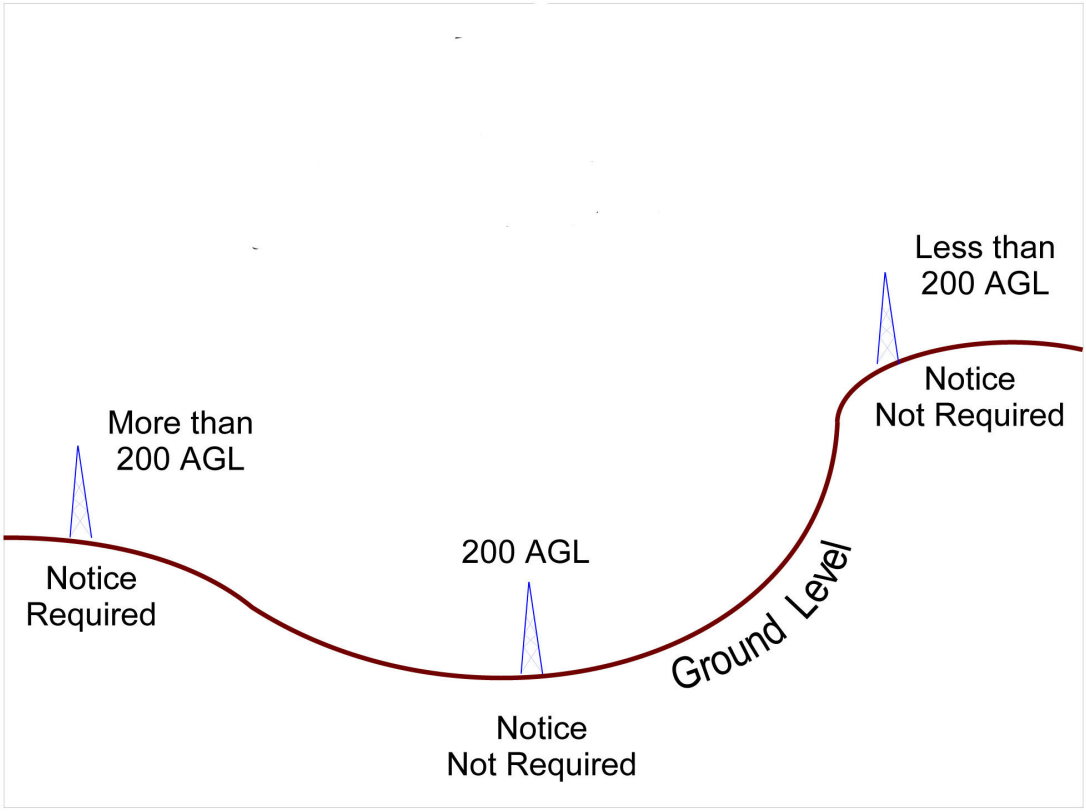
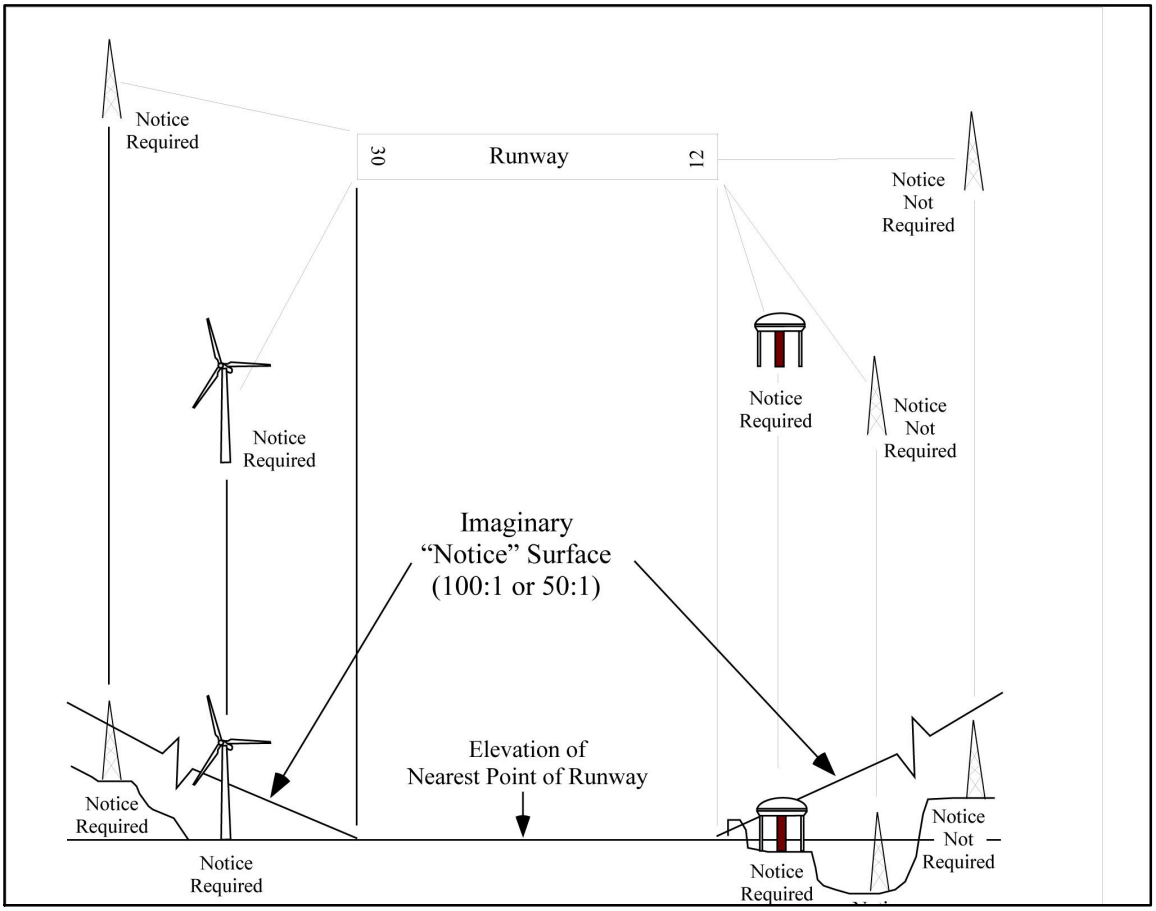


FIG 5–2–2

NOTICE REQUIREMENT RELATED TO AIRPORTS



NOTE:
Each airport must be available for public use and listed in the Chart Supplement U.S. or in either the Chart Supplement Alaska or Pacific; under construction and the subject of a notice or proposal on file with FAA, and except for DOD airports, it is clearly indicated that airport will be available for public use or for private use which has at least one FAA approved instrument approach procedure, or operated by a Federal agency or the DOD. (Heliports without specified boundaries and seaplane bases without marked sea lanes are excluded.)

§77.9(b) – Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:

(1) 100:1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each airport described in §77.9(d) with its longest runway more than 3,200 feet in actual length, excluding heliports.

(2) 50:1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport described in §77.9(d) with its longest runway not more than 3,200 feet in actual length, excluding heliports.

§77.9(d) – Any construction or alteration on any of the following airports and heliports:

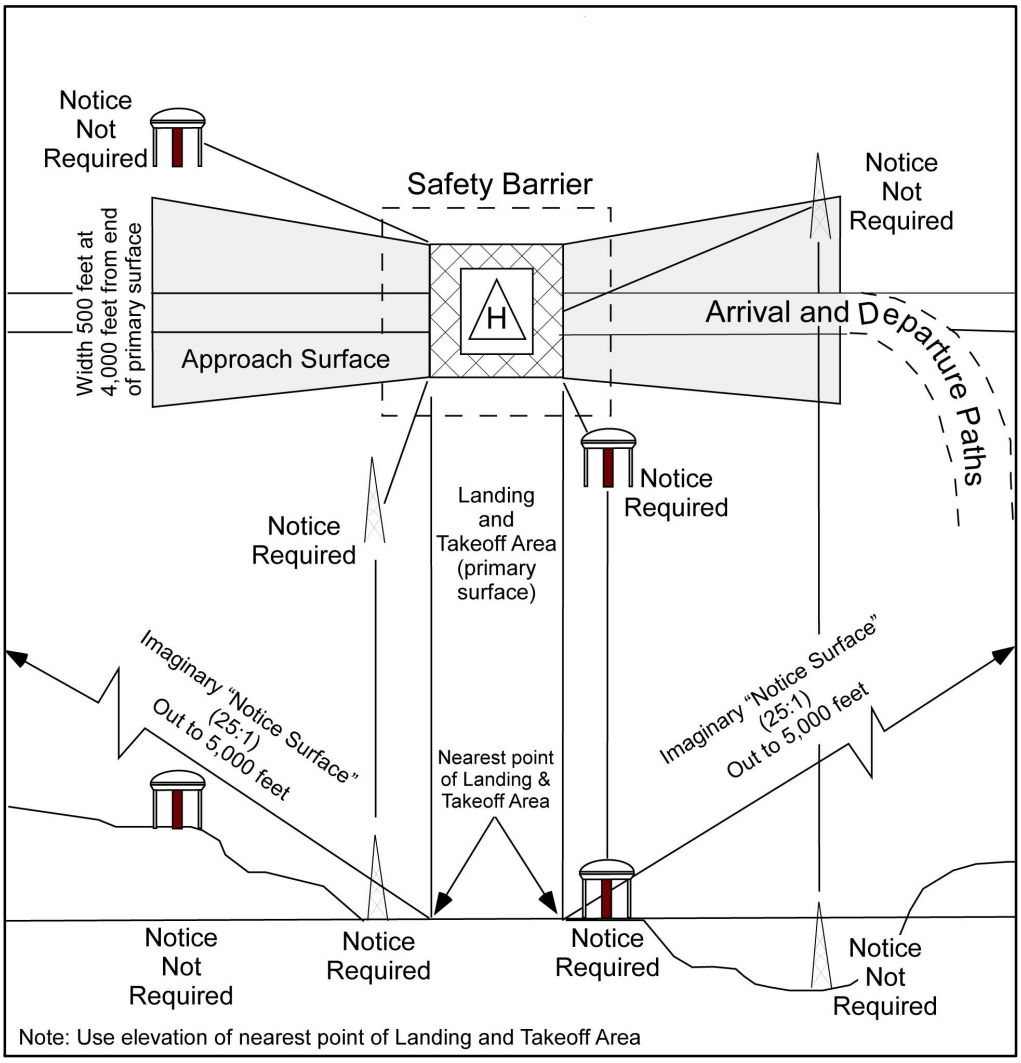
(1) A public use in the Chart Supplement U.S., Chart Supplement Alaska, or Chart Supplement Pacific of the U.S. Government Flight Information Publications;

(2) A military airport under construction, or an airport under construction that will be available for public use;

(3) An airport operated by a Federal agency or the Department of Defense;

(4) An airport or heliport with at least one FAA–approved instrument approach procedure. At private use airports with an FAA–approved instrument approach procedure, only the instrument approach procedure will be considered.

FIG 5–2–3
NOTICE REQUIREMENT RELATED TO HELIPORTS



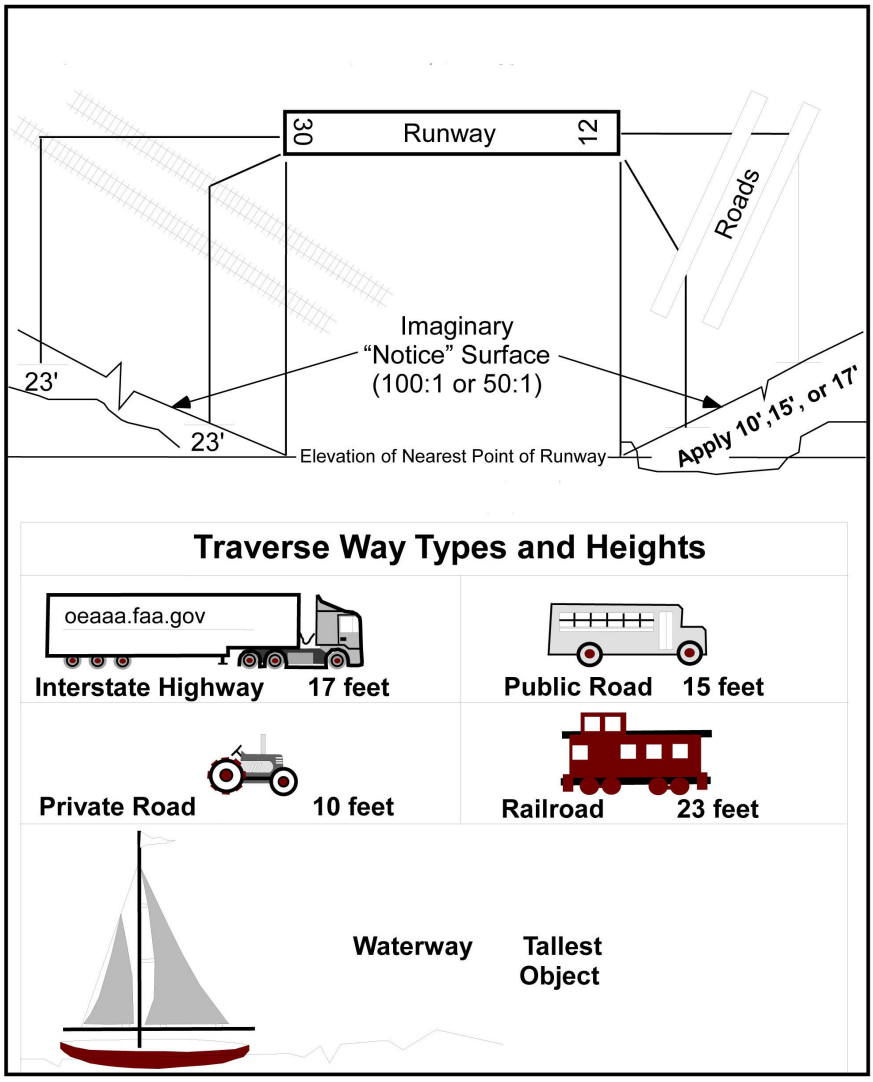
Subpart B – Notice of Construction or Alteration

§77.9(b) – Any construction or alteration that exceeds an imaginary surface extending outward and upward at any one of the following slopes:

(1) 25:1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport described in paragraph d of this section.

FIG 5–2–4

NOTICE REQUIREMENT RELATED TO TRAVERSE WAYS



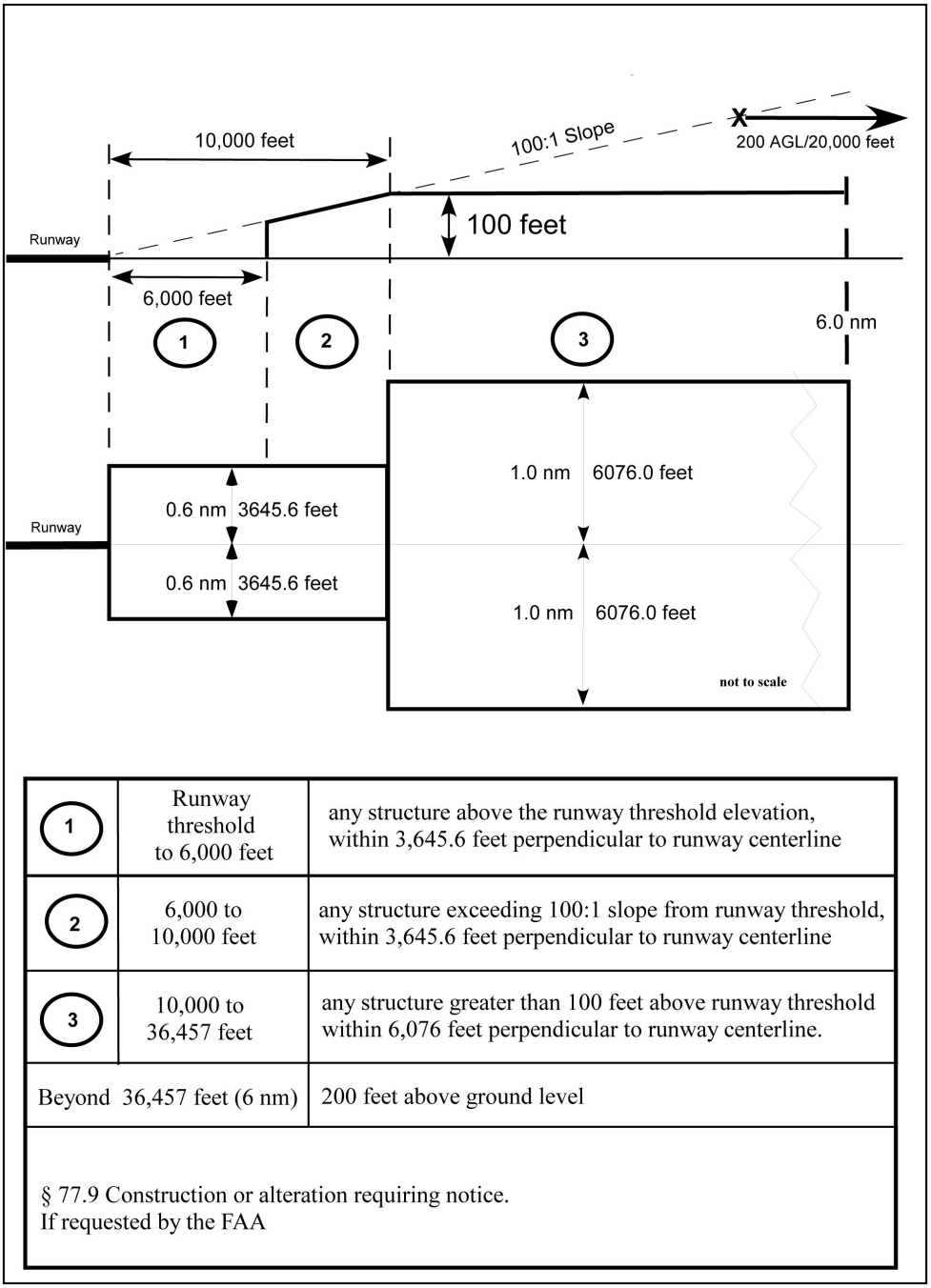
Subpart B – Notice of Construction or Alteration

§77.9 – Construction or alteration requiring notice. (c) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of paragraph (a) or (b) of this section.

FIG 5–2–5

NOTICE REQUIREMENT RELATED TO AIRPORT INSTRUMENT APPROACH AREA

Notice of Construction or Alteration



1	Runway threshold to 6,000 feet	any structure above the runway threshold elevation, within 3,645.6 feet perpendicular to runway centerline
2	6,000 to 10,000 feet	any structure exceeding 100:1 slope from runway threshold, within 3,645.6 feet perpendicular to runway centerline
3	10,000 to 36,457 feet	any structure greater than 100 feet above runway threshold within 6,076 feet perpendicular to runway centerline.
Beyond 36,457 feet (6 nm)		200 feet above ground level
§ 77.9 Construction or alteration requiring notice. If requested by the FAA		

Chapter 6. Aeronautical Studies

Section 1. General

6–1–1. POLICY

An aeronautical study must be conducted for all complete notices received.

6–1–2. AERONAUTICAL STUDY NUMBERS

For ease of use of the OE/AAA automated obstruction programs and correspondence, a separate aeronautical study number must be assigned and a separate obstruction evaluation study must be conducted for:

a. Each site (location), structure (height), or sponsor.

1. At times, a single sponsor may file notice for multiple sites. Each site must be assigned a separate aeronautical study number and a separate obstruction evaluation study must be conducted.

2. At times, a single FAA Form 7460–1 may be received for a single project that covers multiple structures such as an antenna array, windmill clusters, housing development, cluster of buildings, utility poles, or catenaries. Each structure must be assigned a separate aeronautical study number and a separate obstruction evaluation study must be conducted. However, a single determination addressing all of the structures may be issued.

3. At times, multiple sponsors may be competing for the same FCC license in the same market area and may file notice for the same communications band/frequency/channel using the same effective radiated power at the same location and height. A separate FAA Form 7460–1 should be submitted for each sponsor with information specific to the structure and sponsor. Separate aeronautical study numbers must be assigned and separate obstruction evaluation studies conducted.

NOTE–
A single structure with multiple points of interest, such as a building, may be processed as a single obstruction evaluation study provided that all information including items such as maps, blue prints, elevations, etc., are coordinated with each division for evaluation. In the automated obstruction evaluation case screen, the highest site elevation, or finished floor elevation should be recorded as the site elevation. The tallest point on the structure should be recorded as the above ground elevation, and the closest point of the structure to the closest runway should be recorded as the latitude/longitude. This information would be considered worst case and should be used for recording purposes. For analysis purposes, it may be necessary to use specific information for each point of interest.

b. Changes to marking/lighting recommendations.

c. Revisions or corrections to coordinates or elevations after the study has been verified and made available for evaluation by other FAA divisions. This would include revisions or corrections to a notice received from the sponsor; revisions or corrections made necessary by the FAA due to mistakes; revisions or corrections as a result of "as–built" surveys; and revisions or corrections due to receipt of supplemental notice.

d. Aeronautical studies that supersede previous studies must include a reference to the previous aeronautical study number.

6–1–3. STUDY OF EXISTING STRUCTURES

a. The authorities for conducting aeronautical studies of existing structures is contained in Section 40103, Section 44718, and Part 77. These studies are conducted when deemed necessary by the FAA to determine the physical or electromagnetic effect on the use of the navigable airspace and air navigation facilities. Obstruction evaluation studies may be initiated as a result of:

1. Information received or a situation observed (e.g., structures reported by flight inspection crews).

2. A request for a study from another FAA component, another agency, or a person with a valid interest in the matter.

3. A notice received under the provisions of Part 77 for proposed construction or alteration that

has already been started and, therefore, must be considered an existing structure.

4. A structure blocking all or portions of runways, taxiways, or traffic patterns from being seen from an airport traffic control tower.

5. Other situations for which such an aeronautical study would be appropriate.

b. Situations that may require obstruction evaluation of existing structures include, but are not limited to:

1. Determining the effect of a change in aeronautical procedures.

2. Determining the effect of a proposed runway construction, extension, or realignment.

3. Determining the need for providing technical assistance in the design and development of airports.

4. Determining whether the FAA should recommend that an existing structure be altered or removed.

5. Determining whether the FAA should recommend that an existing structure be made conspicuous by marking and/or lighting in accordance with current standards.

6. Determining whether the marking and/or lighting display on an existing structure can be removed or reduced without adversely affecting aviation safety or should be increased to more effectively make its presence known to airmen.

7. Determining whether an existing structure has an electromagnetic effect upon an air navigation or communications facility, or obstructs the required line of sight from an airport traffic control tower.

8. Providing recommendations to FCC concerning dismantling abandoned antenna structures.

9. Providing technical assistance or information to a person, or government organization (Federal, state or local) expressing an interest in the structure and the FAA's responsibility associated with the structure's effect on the safe and efficient use of the navigable airspace.

c. Conduct an aeronautical study for an existing structure in the same manner as proposed structures except as specifically noted in this order.

6–1–4. PROPOSALS UNDER CONSTRUCTION

A proposal for which construction has already started must be studied as an existing structure. Construction is considered to have started if actual structural work has begun such as the laying of a foundation but not including excavation.

6–1–5. STRUCTURES EXCEEDING 2,000 FEET

Any proposed structure that would exceed a height of 2,000 feet above ground is presumed to have a substantial adverse effect upon the safe and efficient use of navigable airspace and must be determined to be a hazard to air navigation unless the sponsor, at the time of filing, makes a clear and compelling showing to the contrary.

a. Notices proposing a structure greater than 2,000 feet in height above the ground that are accompanied with the detailed explanation required in Section 77.7(d) must be processed in the normal manner with one exception. The Obstruction Evaluation Group (OEG) must advise the Rules and Regulations Group when an aeronautical study for a proposed structure exceeding 2,000 feet is being conducted.

b. Notices received without the detailed explanation must be responded to with a notice stating that the proposed structure is presumed to be a hazard to air navigation and the sponsor has the burden of overcoming this presumption in accordance with Section 77.7(d).

6–1–6. FEASIBILITY STUDIES

a. A feasibility study is a limited aeronautical review based on very broad, estimated, or general information supplied for the structure. The study usually addresses only certain issues; e.g., feasibility of height at a general location, feasibility of frequency and power at a general location.

b. Requests for feasibility studies should be accommodated to the extent existing resources and workloads allow. The need for coordination with other divisions will be based on the type of information supplied for the structure.

c. A feasibility study must result in a report rather than an official determination.

d. Feasibility studies will not be accommodated for wind turbine proposals.

6–1–7. TOWER OWNERSHIP

While the FAA must maintain a means of contacting parties responsible for filing FAA Form 7460–2, it is not responsible for tracking changes in tower ownership. The FCC antenna structure registration program is specifically intended to register and maintain current files with regards to ownership of antenna structures. Therefore, if the FAA receives ownership changes it must not make those corrections to issued determinations. However, the ownership change should be noted in the automated and/or manual case file. Additionally, request that the sponsor notify the FCC, and, for assurance, forward a copy of the change to the FCC.

Section 2. Initial Processing/Verification

6–2–1. VERIFICATION/E–FILING

a. The OEG must verify each obstruction evaluation case to ensure that the submitted site elevation and coordinates appear to be correct and that all necessary information has been included. Verification must include, as a minimum, the following actions:

1. Compare the submitted site depiction to the submitted coordinates when plotted.

2. Compare the submitted site elevation to the National Elevation Dataset (NED) in the area of the submitted coordinates when plotted. Other resources may include, but are not limited to, the topographical chart contour elevation intervals, publicly available geographic information systems, or nearby prior studies.

3. If a survey is submitted, compare the information contained on the survey, with the submitted information and the site as plotted.

4. If the submission involves an existing structure, compare the submitted information to the digital obstacle file, with the previous aeronautical study (if any), and possibly the FCC tower registration information.

5. Ensure that the submission provides a complete description and clearly explains the reason for submission. The submission should include sufficient information to allow each division/service area office to accomplish its specialized portion of the obstruction evaluation.

6. If the submission involves a structure that would normally radiate frequencies, ensure that the frequencies and effective radiated power are included.

7. If the submission involves a structure over 200 feet AGL, ensure marking and/or lighting preferences are part of the submission. Sponsors must be required to specifically request the type of marking and/or lighting they desire when submitting FAA Form 7460–1. They should be encouraged to become familiar with the different type of lighting systems available. The sponsor should obtain information about these systems from the manufacturers. The sponsor can then determine which system best meets his/her needs based on purchase, installation, and maintenance costs. The FAA will consider the sponsor's desired marking and/or lighting system when conducting the aeronautical study.

b. If the submission contains errors, discrepancies, or lack of information, the OEG must request resolution by the sponsor and/or the sponsor's representative. If the sponsor does not resolve the issues within 30 days of the written request, the OEG may terminate the aeronautical study.

c. If the submission passes verification and there are no unresolved issues, initiate evaluation by other divisions by changing the status in the OE/AAA automation program to "WRK."

NOTE–
It is imperative that all data in the automated OE case file is reviewed and verified for accuracy before proceeding to "Division/Service Area Office Coordination." Any correction or change to the heights and/or coordinates after the divisions/service area offices begin evaluation must require initiating a new aeronautical study.

6–2–2. VERIFICATION/PAPER–FILING

a. Prior to assigning an aeronautical study into the OE/AAA automation program, review the submission for completeness. The following information should be considered:

1. Ground elevation of the site (site elevation).

2. Above ground elevation of the structure (AGL).

3. Latitude and longitude of the structure.

4. A 7.5–Minute U.S.G.S. Topographic Map (Quadrangle Chart) depicting the site of the structure.

b. If the submission package contains all of the required information, assign an aeronautical study number and initiate an obstruction evaluation study. Exceptions may be made for emergency situations in accordance with 77.17(d).

c. If the submission package does not contain the required information, the entire package may be returned to the sponsor with a clear explanation and a request for the sponsor to provide the information necessary to initiate the study.

d. For submission packages pertaining to structures that may be time critical, an effort should be made to obtain the required information by telephone. Information received by telephone conversation should be added to case notes. If written confirmation is received from the sponsor, it should be faxed/scanned into the file.

6–2–3. DIVISION COORDINATION

Each division described in paragraph 5–2–2 must evaluate all notices of proposed construction or alteration received regardless of whether notice was required under Part 77, except as follows:

NOTE–
For the purpose of division/service area office coordination, Frequency Management (FM) will be considered separately in addition to Technical Operations Services. It should also be noted that FM responds separately.

a. Side Mounted Non–Microwave Antennas. Airports, Flight Standards, IFP Service Providers, Technical Operations Services, and the military normally are not required to review OE cases that involve the addition of antennas to a previously studied structure that does not increase in overall height of the structure. FM will continue to evaluate these cases. The FAA must have previously studied the structure and the data of the present case and it must exactly match the data of the previously studied case.

b. Side Mounted Microwave Dishes. Airports, Flight Standards, IFP Service Providers, and the military normally must not be required to review OE cases that involve the addition of microwave dishes to a structure that does not increase in overall height. FM will continue to evaluate these cases. The FAA must have previously studied the structure and the data of the present case and it must exactly match the data of the previously studied case.

c. Marking and Lighting Changes. Airports, Flight Standards, IFP Service Providers, FM, Technical Operations Services, and the military normally are not required to review OE cases which involve only marking and lighting changes. The FAA must have previously studied the structure and the data of the present case and it must exactly match the data of the prior case.

d. Temporary Structures. Airports, FM, Department of Homeland Security, and the military normally must not be required to review OE cases which involve temporary structures of a 6 months or less duration. All appropriate divisions/service area offices must review temporary structures of a longer duration.

e. IFP OIT normally must not be required to review OE cases that are beyond 14 NM from the airport reference point of the nearest public–use or military airport and the height of the structure is not more than 200 feet above ground level.

f. Airports normally must not be required to review OE cases that are beyond the lateral limits of the Part 77 conical surface of a public–use or military airport.

g. Flight Standards may review OE cases that are circularized for public comment.

h. FM normally must only be required to review OE cases, that involve transmitting frequencies.

6–2–4. ADDITIONAL COORDINATION

Air traffic may request any division to review an OE case on a case–by–case basis. For instance, Flight Standards may be requested to review a marking and lighting change, the DOD may be requested to review a temporary structure if the closest airport is a DOD base, or FM may be requested to review a temporary structure if it radiates a frequency.

Section 3. Identifying/Evaluating Aeronautical Effect

6–3–1. POLICY

a. The prime objective of the FAA in conducting OE studies is to ensure the safety of air navigation, and the efficient utilization of navigable airspace by aircraft. There are many demands being placed on the use of the navigable airspace. However, when conflicts arise concerning a structure being studied, the FAA emphasizes the need for conserving the navigable airspace for aircraft; preserving the integrity of the national airspace system; and protecting air navigation facilities from either electromagnetic or physical encroachments that would preclude normal operation.

b. In the case of such a conflicting demand for the airspace by a proposed construction or alteration, the first consideration should be given to altering the proposal.

c. In the case of an existing structure, first consideration should be given to adjusting the aviation procedures to accommodate the structure. This does not preclude issuing a "Determination Of Hazard To Air Navigation" on an existing structure when the needed adjustment of aviation procedures could not be accomplished without a substantial adverse effect on aeronautical operations. In all cases, consideration should be given to all known plans on file received by the end of the public comment period or before issuance of a determination if the case was not circularized.

6–3–2. SCOPE

Part 77 establishes standards for determining obstructions to air navigation. A structure that exceeds one or more of these standards is presumed to be a hazard to air navigation unless the aeronautical study determines otherwise. An obstruction evaluation must identify:

a. The effect the structure would have:

1. On existing and proposed public–use, private use with at least one FAA–approved instrument approach procedure, and DOD airports and/or aeronautical facilities.

2. On existing and proposed visual flight rule (VFR)/instrument flight rule (IFR) aeronautical departure, arrival and en route operations, procedures, and minimum flight altitudes.

3. Regarding physical, electromagnetic, or line–of–sight interference on existing or proposed air navigation, communications, radar, and control systems facilities.

4. On airport capacity, as well as the cumulative impact resulting from the structure when combined with the impact of other existing or proposed structures.

b. Whether marking and/or lighting is necessary.

6–3–3. DETERMINING ADVERSE EFFECT

If a structure first exceeds the obstruction standards of Part 77, and/or is found to have physical or electromagnetic radiation effect on the operation of air navigation facilities, then the proposed or existing structure, if not amended, altered, or removed, has an adverse effect if it would:

a. Require a change to an existing or planned IFR minimum flight altitude, a published or special instrument procedure, or an IFR departure procedure.

b. Require a VFR operation, to change its regular flight course or altitude. This does not apply to VFR military training route (VR) operations conducted under Part 137, or operations conducted under a waiver or exemption to the CFR.

c. Restrict the clear view of runways, helipads, taxiways, or traffic patterns from the airport traffic control tower cab.

d. Derogate airport capacity/efficiency.

e. Affect future VFR and/or IFR operations as indicated by plans on file.

f. Affect the usable length of an existing or planned runway.

6–3–4. DETERMINING SIGNIFICANT VOLUME OF ACTIVITY

The type of activity must be considered in reaching a decision on the question of what volume of aeronautical activity is "significant." For example, if one or more aeronautical operations per day would be affected, this would indicate regular and continuing

activity, thus a significant volume no matter what the type of operation. However, an affected instrument procedure or minimum altitude may need to be used only an average of once a week to be considered significant if the procedure is one which serves as the primary procedure under certain conditions.

6–3–5. SUBSTANTIAL ADVERSE EFFECT

A proposed structure would have, or an existing structure has, a substantial adverse effect if it causes electromagnetic interference to the operation of an air navigation facility or the signal used by aircraft, or if there is a combination of:

a. Adverse effect as described in paragraph 6–3–3; and

b. A significant volume of aeronautical operations, as described in paragraph 6–3–4, would be affected.

6–3–6. RESPONSIBILITY

The FAA's obstruction evaluation program transcends organizational lines. In order to determine the effect of the structure within the required notice period, each office should forward the results of its evaluation within 15 working days to the Obstruction Evaluation Group (OEG) for further processing. In cases of evaluating the effects of a proposed wind turbine farm, see Appendix 12 for field air traffic control facility responsibility and procedures. Areas of responsibility are delegated as follows:

a. OEG personnel must:

1. Identify when the structure exceeds Section 77.17 (a)(1), (a)(2), and (a)(5) (see FIG 6−3−1 thru FIG 6−3−6) and apply Section 77.17 (b) (see FIG 5−2−4).

2. Identify the effect on existing and planned aeronautical operations, air traffic control procedures, and airport traffic patterns and making recommendations for mitigating adverse effect including marking and lighting recommendations.

3. Identify when the structure would adversely affect published helicopter route operations as specified in paragraph 6–3–8 subparagraph e, of this order, and forward the case to Flight Standards.

4. Identify whether obstruction marking/lighting are necessary and recommend the appropriate marking and/or lighting.

5. Identify when negotiations are necessary and conduct negotiations with the sponsor. This may be done in conjunction with assistance from other division/service area office personnel when their subject expertise is required (for example, in cases of electromagnetic interference).

6. Identify when circularization is necessary and conduct the required circularization process.

7. Evaluate all valid aeronautical comments received as a result of the circularization and those received as a result of the division evaluation.

8. Issue the determination (except as noted in paragraph 7–1–2, subparagraph b).

b. Regional Airports Division personnel must:

1. Verify that the airport/runway database has been reviewed, is correct, and contains all plans on file pertaining to the OE case.

2. Identify the structure's effect on existing and planned airports or improvements to airports concerning airport design criteria including potential restrictions/impacts on airport operations, capacity, efficiency and development, and making recommendations for eliminating adverse effect. Airports Divisions are not normally required to perform evaluations on OE cases that are beyond the lateral limits of the Part 77 conical surface of a public–use or military airport.

3. Determine the effect on the efficient use of airports and the safety of persons and property on the ground. Airports will resist structures and activities that conflict with an airport's planning and/or design.

4. State what mitigations may be made to mitigate or eliminate any adverse effect of the structure on existing or planned airports.

c. IFP Service Providers must:

1. Identify when the structure exceeds Section 77.17(a)(3).

2. Identify the effect upon terminal area IFR operations, including transitions; holding; instrument departure procedures; any segment of a Standard Instrument Approach Procedure (SIAP) or Special Instrument Approach Procedure (IAP), including proposed instrument procedures and departure areas.

3. State what adjustments can be made to the procedure/structure to mitigate or eliminate any adverse effects of the structure on an instrument flight procedure. Include a "no effect height" and/or survey accuracy that, if negotiated, would mitigate or eliminate adverse effect on an instrument flight procedure.

d. IFP Service Providers. In addition to 6–3–6c, the IFP Service Providers must:

1. Identify when the structure exceeds Section 77.17(a)(4).

2. Identify the effect on any IFR procedure which may include, but is not limited to: minimum en route altitudes (MEA); minimum obstruction clearance altitudes (MOCA); minimum IFR altitudes (MIA); minimum safe altitudes (MSA); minimum crossing altitudes (MCA); minimum holding altitudes (MHA); turning areas and termination areas; and making recommendations for eliminating adverse effect.

e. Aeronautical Information Services' Obstacle Impact Team (OIT). In addition to 6–3–6c and d, the IFP OIT must identify the effect on any IFR procedure which may include minimum vectoring altitudes (MVA).

f. Flight Technologies and Procedures Division (FTPD) personnel must identify the effect on fixed–wing and helicopter VFR routes, terminal operations, and other concentrations of VFR traffic. When requested by OEG, FTPD must also evaluate the mitigation of adverse effect on VFR operations for marking and/or lighting of structures.

g. Technical Operations Services personnel must identify any electromagnetic and/or physical effect on air navigation and communications facilities including:

1. The presence of any electromagnetic effect in the frequency protected service volume of the facilities shown in FIG 6–3–16, FIG 6–3–17, and FIG 6–3–18.

2. The effect on the availability or quality of navigational or communications signals to or from aircraft including lighting systems (for example, VGSI), and making recommendations to eliminate adverse effect.

3. The effect on ground–based communications and NAVAID equipment, and the signal paths between ground–based and airborne equipment, and making recommendations to eliminate adverse effect.

4. The effect on the availability or quality of ground–based primary and secondary radar; direction finders; and air traffic control tower line–of–sight visibility; and making recommendations to eliminate adverse effect.

5. The effect of sunlight or artificial light reflections, and making recommendations to eliminate adverse effect.

h. Military personnel are responsible for evaluating the effect on airspace and routes used by the military.

i. Other applicable FAA offices or services may be requested to provide an evaluation of the structure on a case–by–case basis.

FIG 6–3–1
ANYWHERE

§77.17 – Obstruction Standards.
(a)(1) – A height of 499 feet AGL at the site of the object.

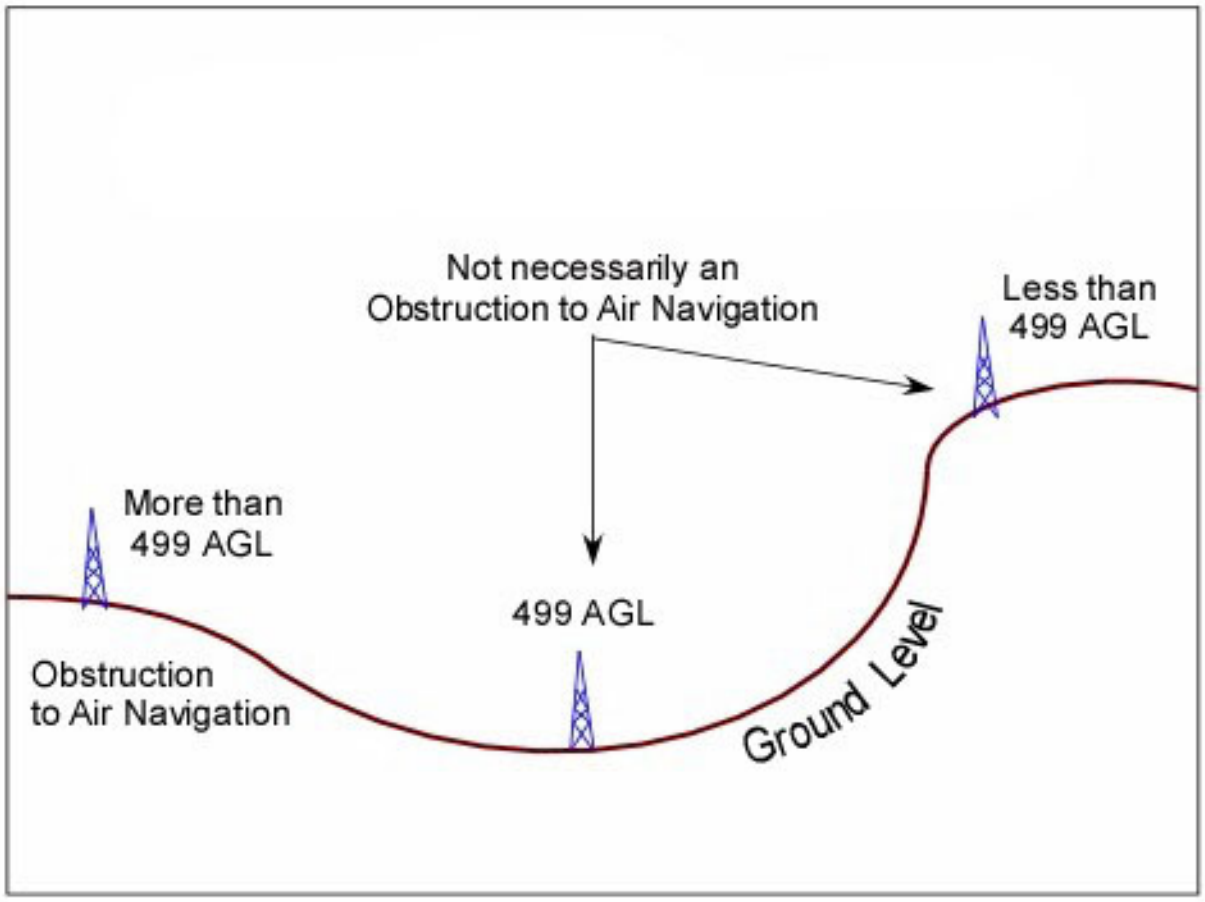
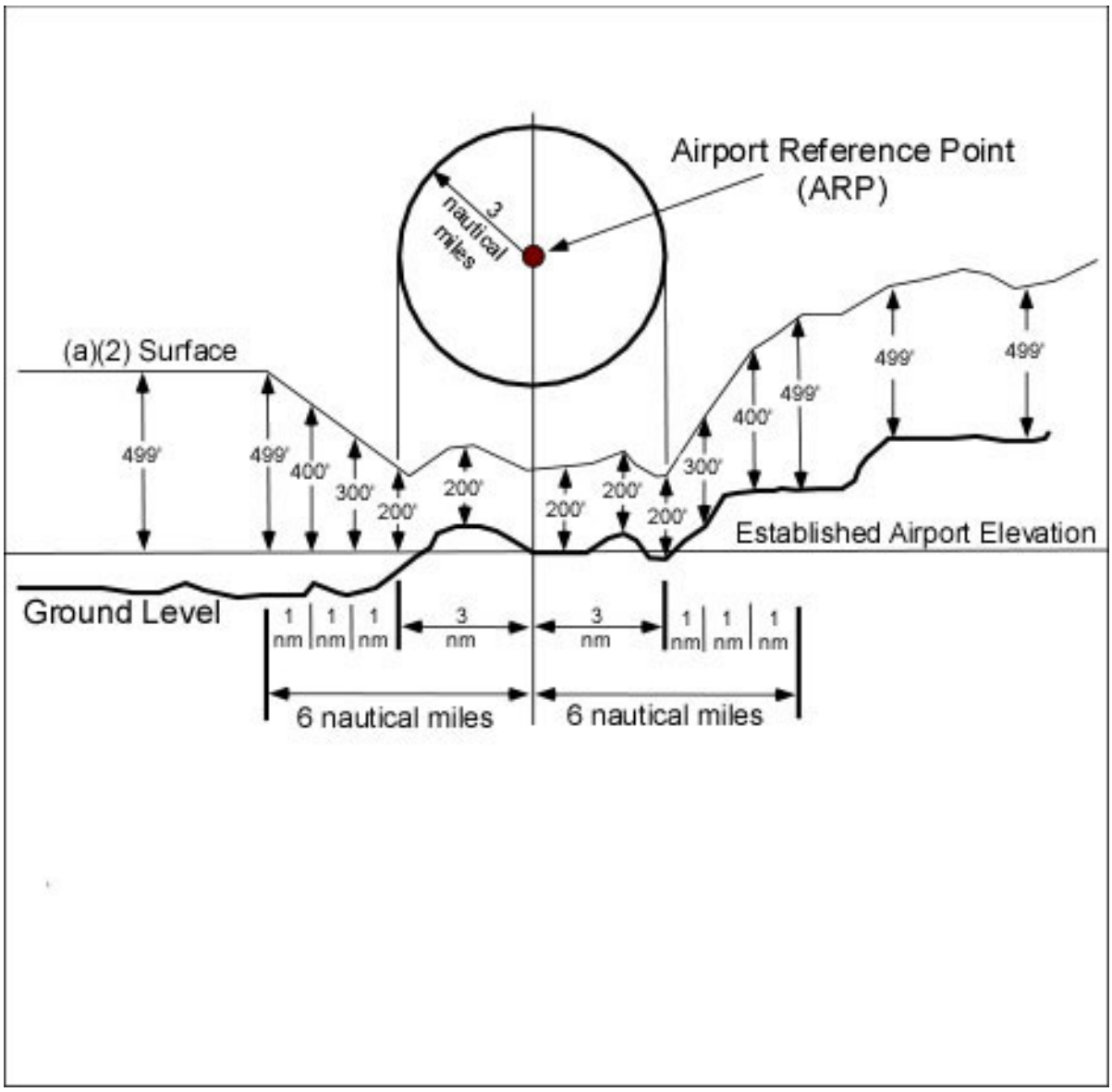


FIG 6–3–2
OBSTRUCTION STANDARDS NEAR AIRPORTS

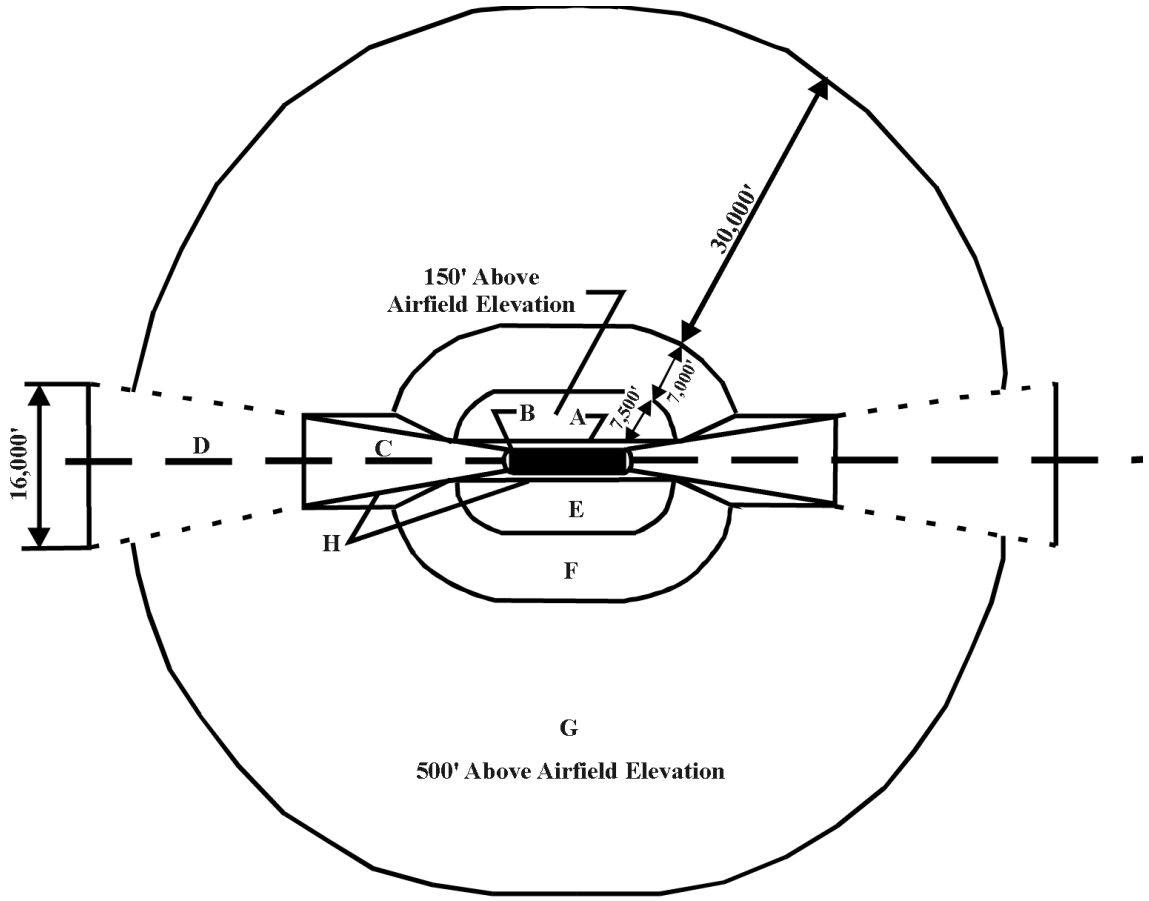


Subpart C – Obstruction Standards

§77.17(a)(2) – An object would be an obstruction to air navigation if of greater height than 200 feet above ground at its site, or above the established airport elevation, whichever is higher–
(a) within 3NM of the established reference point of an airport with its longest runway more than 3,200 feet in actual length, and
(b) that height increases in proportion of 100 feet for each additional nautical mile from the airport reference point up to a maximum of 499 feet.
Note: Heliports excluded.

FIG 6–3–3

DEPARTMENT OF DEFENSE AIRPORT IMAGINARY SURFACES



Legend

A Primary Surface
B Clear Zone Surface
C Approach-Departure Clearance Surface (Glide Angle)
D Approach-Departure Clearance Surface (Horizontal)
E Inner Horizontal Surface
F Conical Surface
G Outer Horizontal Surface
H Transitional Surface

FIG 6–3–4

DEPARTMENT OF DEFENSE AIRPORT IMAGINARY SURFACES

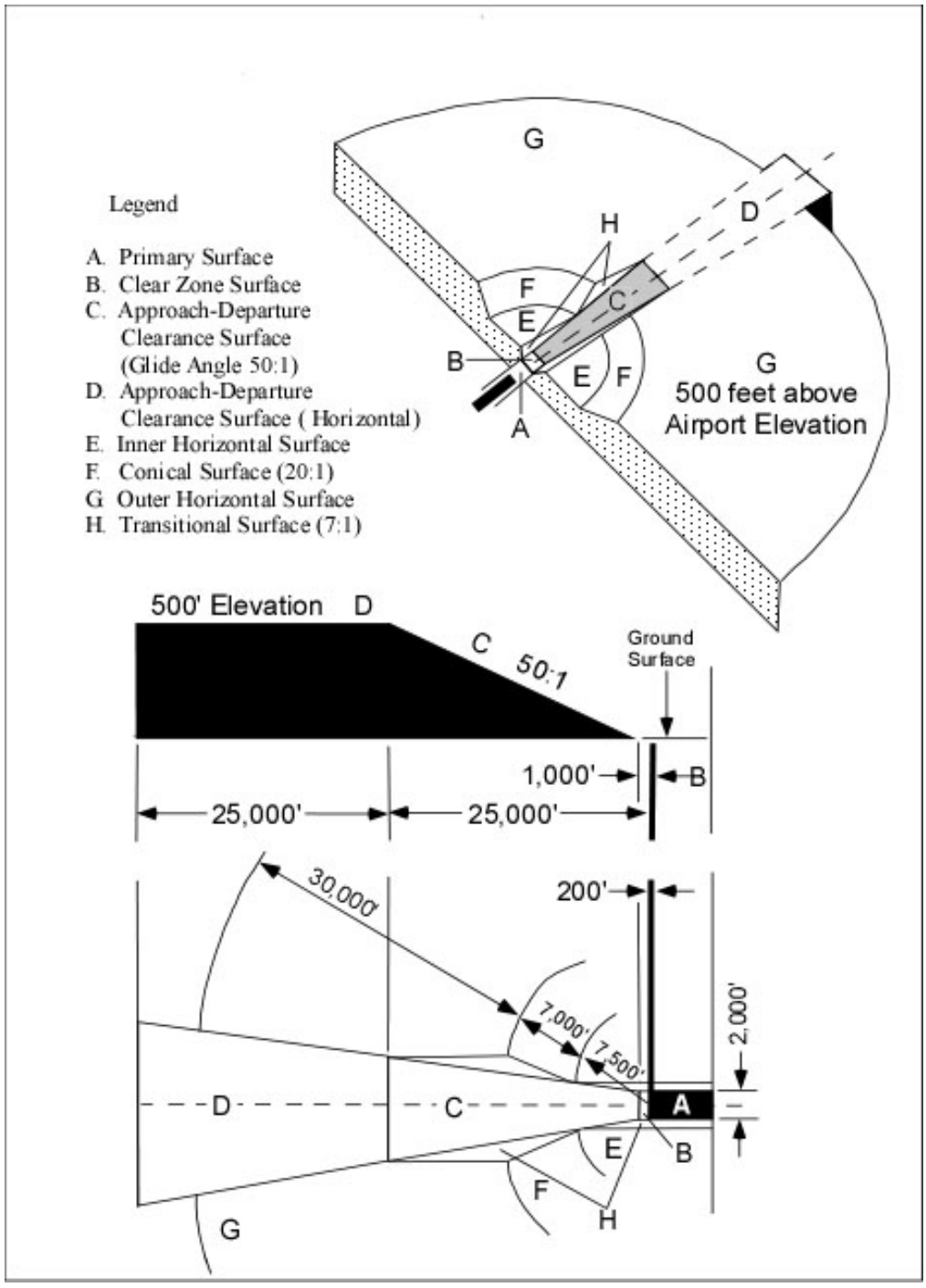


FIG 6–3–5
DEPARTMENT OF DEFENSE AIRPORT SUFACES – CLEAR ZONE

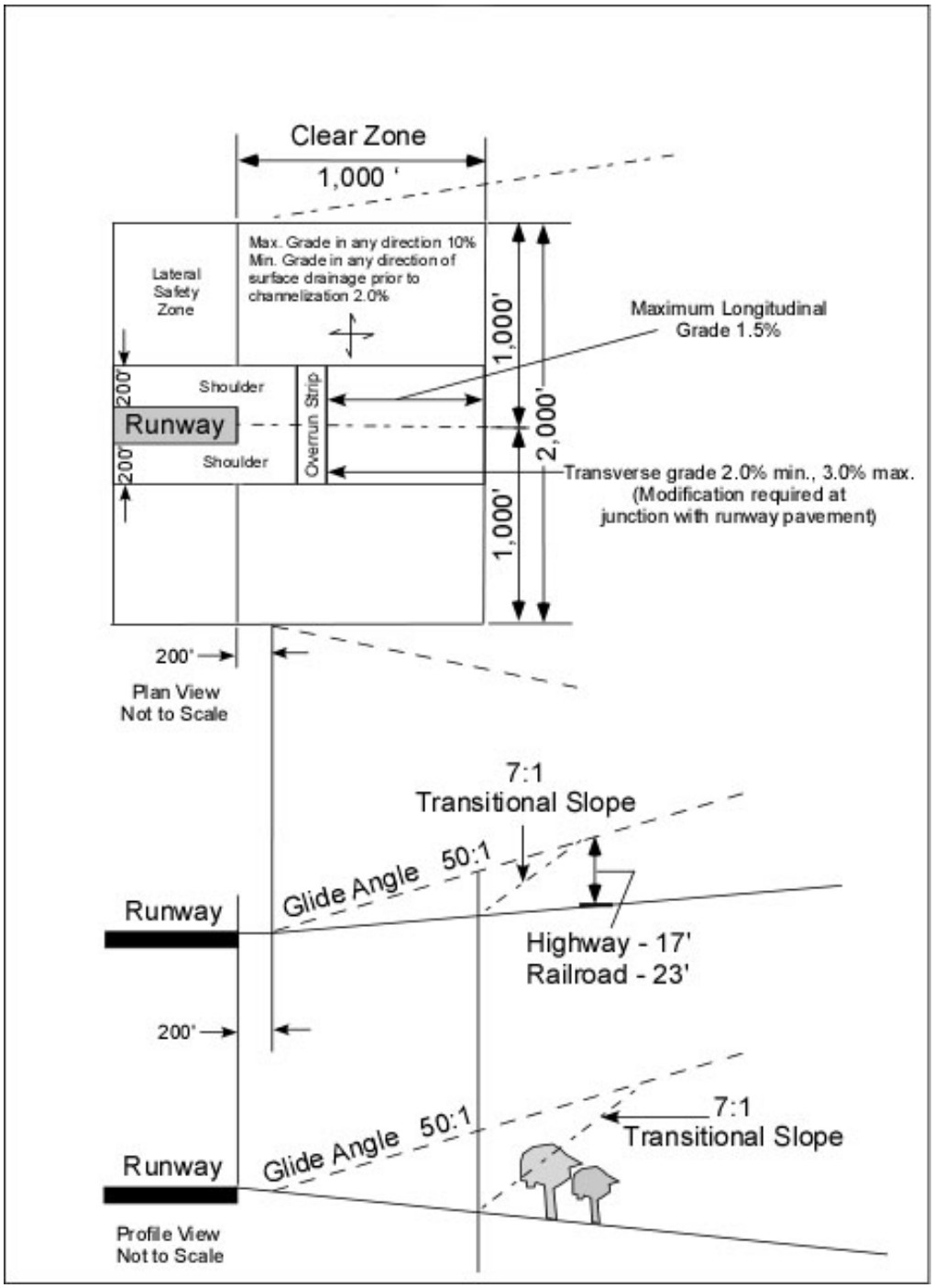


FIG 6–3–6
AIRPORT IMAGINARY SURFACES FOR HELIPORTS

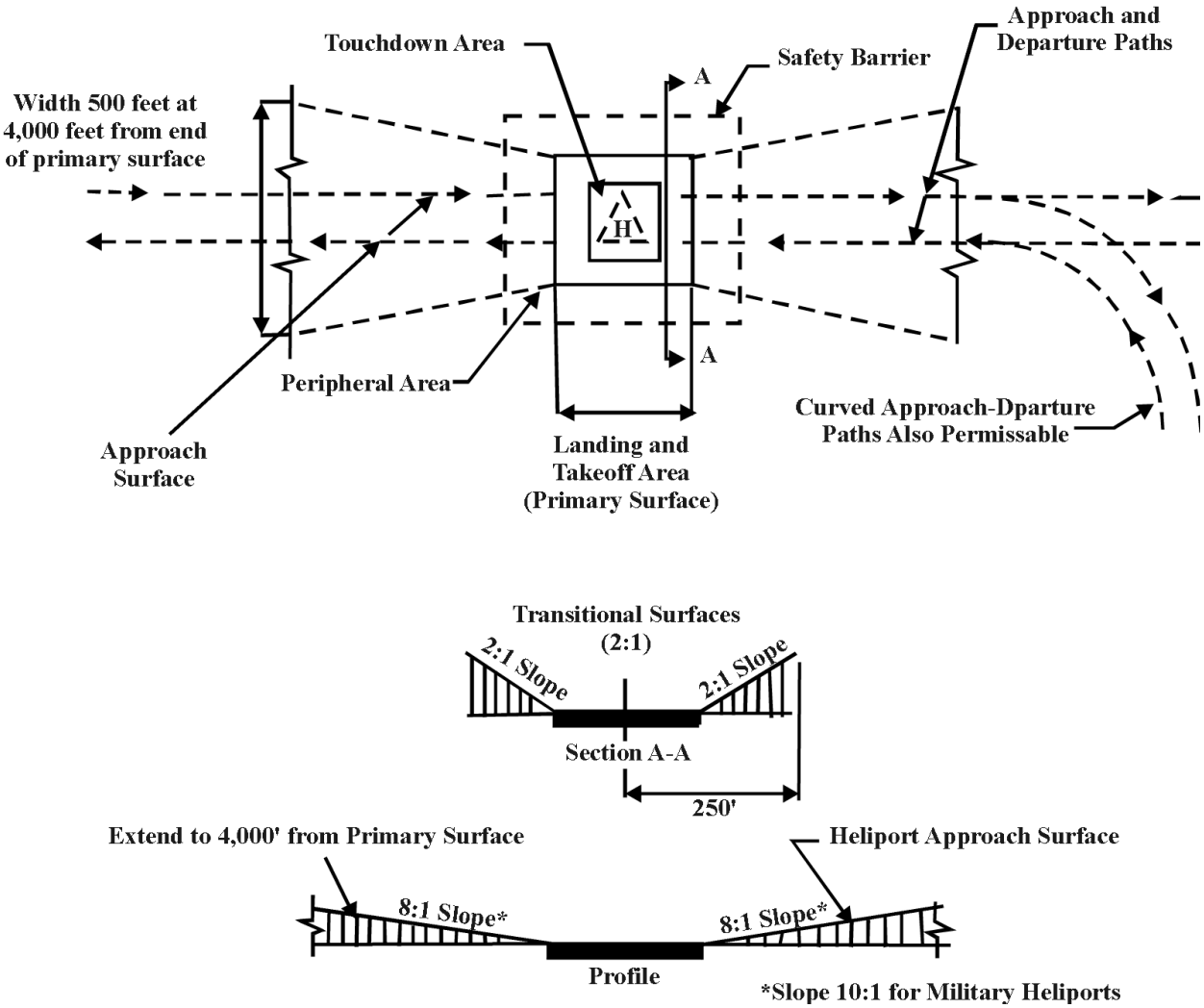


FIG 6–3–7

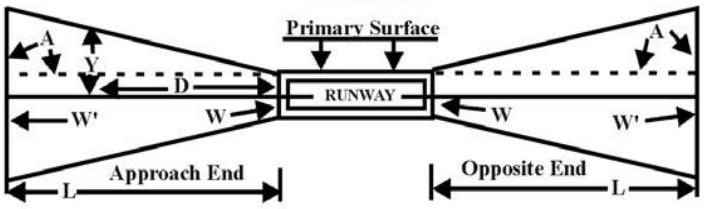
PART 77, APPROACH SURFACE DATA

RUNWAY TYPE	RWY USE AVAILABLE/PLANNED: APPROACH/OPPOSITE RUNWAY END COMBINATIONS		APPROACH SURFACE DIMENSIONS: LENGTH - L	INNER WIDTH - W	OUTER WIDTH - W'	SLOPES AND FLARE RATIOS: SLOPE RATIO	FLARE RATIO - A
UTILITY RUNWAYS	V		5,000	250	1,250	20:1	.1:1
		V	5,000	250	1,250	20:1	.1:1
	V		5,000	500	1,250	20:1	.075:1
		NP	5,000	500	2,000	20:1	.15:1
	NP		5,000	500	2,000	20:1	.15:1
		NP	5,000	500	2,000	20:1	.15:1
OTHER THAN UTILITY RUNWAYS	V		5,000	500	1,500	20:1	.1:1
		V	5,000	500	1,500	20:1	.1:1
	V		5,000	500	1,500	20:1	.1:1
		NP¾+	10,000	500	3,500	34:1	.15:1
	V		5,000	1,000	1,500	20:1	.05:1
		NP¾	10,000	1,000	4,000	34:1	.15:1
	V		5,000	1,000	1,500	20:1	.05:1
		P	50,000	1,000	16,000	50:1/40:1	.15:1
	NP¾+		10,000	500	3,500	34:1	.15:1
		NP¾+	10,000	500	3,500	34:1	.15:1
	NP¾+		10,000	1,000	3,500	34:1	.125:1
		NP¾	10,000	1,000	4,000	34:1	.15:1
	NP¾+		10,000	1,000	3,500	34:1	.125:1
		P	50,000	1,000	16,000	50:1/40:1	.15:1
	NP¾		10,000	1,000	4,000	34:1	.15:1
		NP¾	10,000	1,000	4,000	34:1	.15:1
	NP¾		10,000	1,000	4,000	34:1	.15:1
		P	50,000	1,000	16,000	50:1/40:1	.15:1
	P		50,000	1,000	16,000	50:1/40:1	.15:1
		P	50,000	1,000	16,000	50:1/40:1	.15:1

V - Visual **NP - Nonprecision** **¾+ - Visibility Minimums More Than ¾ SM**

P - Precision **¾ - Visibility Minimums As Low As ¾ SM**

EXAMPLE



Sample Use Problem: Proposed structure would be located by measurement to be 20,000 feet from the end of the primary surface and 3,400 feet at 90° from the extended centerline of a precision runway (refer to Section **77.19(c)** for relation of primary surface to end of runway). To determine whether it would fall within the approach surface of that runway, apply the following formula:

$$Y = D \times A + W/2$$

Y = distance for runway centerline to edge of the approach

D = distance from end of primary surface at which proposed construction is 90° from extended runway centerline

Y = 20,000 x 15 +1,000/2 Y = 3,000 + 500 Y = 3,500 (structure would be within approach surface)

6–3–7. AIRPORT SURFACES AND CLEARANCE AREAS

a. CIVIL AIRPORT SURFACES

1. Civil airport imaginary surfaces are defined in Section 77.19 and are based on the category of each runway according to the type of approach (visual, nonprecision, or precision) available or planned for each runway end (see FIG 6–3–7). The appropriate runway imaginary surface must be applied to the primary surfaces related to the physical end of the specific runway surface that is usable for either takeoff or landing.

2. Approach Surface Elevation – Use the runway centerline elevation at the runway threshold and the elevation of the helipad as the elevation from which the approach surface begins (see Sections 77.19 and 77.23).

3. Heliport imaginary surfaces are defined in Section 77.23 and are based upon the size of the takeoff and landing area.

4. Planned Airport/Runway Improvements – Consider the planned runway threshold and approach type when there is a plan on file with the FAA or with an appropriate military service to extend the runway and/or upgrade its use or type of approach. The existing runway threshold and type of approach may be used for temporary structures/equipment, as appropriate.

b. DOD AIRPORT SURFACES – The obstruction standards in Section 77.19, Civil Airport Imaginary Surfaces, apply to civil operated joint–use airports. The obstruction standards in Section 77.21, DOD Airport Imaginary Surfaces, are applicable only to airports operated and controlled by a DOD service of the United States, regardless of whether use by civil aircraft is permitted.

c. TERMINAL OBSTACLE CLEARANCE AREA – The terminal obstacle clearance area specified in Section 77.17(a)(3) includes the initial, intermediate, final, and missed approach segments of an instrument approach procedure, and the circling approach and instrument departure areas. The applicable FAA approach and departure design criteria are contained in the 8260.3 Order series.

d. EN ROUTE OBSTACLE CLEARANCE AREA – The en route obstacle clearance area specified in Section 77.17(a)(4) is applicable when evaluating the effect of a structure on an airway, a feeder route, and/or an approved off–airway route (direct route) as prescribed in the 8260.3 Order series.

6–3–8. EVALUATING EFFECT ON VFR OPERATIONS

a. PURPOSE. These guidelines are for use in determining the effect of structures, whether proposed or existing, upon VFR aeronautical operations in the navigable airspace. The intent of these guidelines is to provide a basis for analytical judgments in evaluating the effect of structures on VFR operations.

b. CONSIDERATIONS

1. Minimum VFR Flight Altitudes. Minimum VFR flight altitudes are prescribed by regulation. Generally speaking, from a VFR standpoint, the navigable airspace includes all airspace 500 feet AGL or greater and that airspace below 500 feet required for:

(a) Takeoff and landing, including the airport traffic pattern.

(b) Flight over open water and sparsely populated areas (an aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure).

(c) Helicopter operations when the operation may be conducted without hazard to persons and property on the surface.

2. VFR Weather Minimums. Proposed or existing structures potentially have the greatest impact in those areas where VFR operations are conducted when ceiling and/or visibility conditions are at or near VFR weather minimums. Any structure that would interfere with a significant volume of low altitude flights by actually excluding or restricting VFR operations in a specific area would have a substantial adverse effect and may be considered a hazard to air navigation.

3. Marking and/or Lighting of Structures. Not every structure penetrating the navigable airspace is considered to be a hazard to air navigation. Some may be marked and/or lighted so pilots can visually observe and avoid the structures.

4. Shielded Structures. A structure may be "shielded" by being located in proximity to other permanent structures or terrain and would not, by

itself, adversely affect aeronautical operations (see paragraph 6–3–13).

5. Height Of Structures. Structures are of concern to pilots during a climb after takeoff, low altitude operations, and when descending to land. Any structure greater than 500 feet AGL, or structures of any height which would affect landing and takeoff operations, requires extensive evaluation to determine the extent of adverse effect on VFR aeronautical operations.

6. Airport Traffic Patterns. The primary concern regarding structures in airport traffic pattern areas is whether they would create a dangerous situation during a critical phase of flight.

7. Class B and C Airspace. Structures that exceed obstruction standards in areas available for VFR flight below the floor of Class B or C airspace areas require careful evaluation. Class B and C airspace areas are designed to provide a more regulated environment for IFR and VFR traffic in and around certain airports. Consequently, the floors of some Class B and C areas compress VFR operations into airspace of limited size and minimum altitude availability.

8. VFR Routes. Pilots operating VFR frequently fly routes that follow rivers, coastlines, mountain passes, valleys, and similar types of natural landmarks or major highways, railroads, powerlines, canals, and other manmade structures. A VFR route may also be comprised of specific radials of a Very High Frequency Omnidirectional Range (VOR). These routes may correspond to an established Federal Airway, direct radials between navigation facilities, or a single radial providing transition to a route predicated on visual aids. While there may be established minimum en route altitudes for segments of these routes and navigation is dependent upon adequate signal reception, a VFR pilot may fly at an altitude below the established minimum altitude in order to maintain visual contact with the ground. The basic consideration in evaluating the effect of obstructions on operations along these routes is whether pilots would be able to visually observe and avoid them during marginal VFR weather conditions. At least 1–mile flight visibility is required for VFR operations beneath the floor of controlled airspace. This means that a surface reference used for VFR low altitude flight must be horizontally visible to pilots for a minimum of 1 mile.

c. EN ROUTE OPERATIONS. The area considered for en route VFR flight begins and ends outside the airport traffic pattern airspace area or Class B, C, and D airspace areas.

1. A structure would have an adverse effect upon VFR air navigation if its height is greater than 499 feet above the surface at its site, and within 2 statute miles of any regularly used VFR route (see FIG 6–3–8).

2. Evaluation of obstructions located within VFR routes must recognize that pilots may, and sometimes do, operate below the floor of controlled airspace during low ceilings and 1–mile flight visibility. When operating in these weather conditions and using pilotage navigation, these flights must remain within 1 mile of the identifiable landmark to maintain visual reference. Even if made more conspicuous by the installation of high intensity white obstruction lights, a structure placed in this location could be a hazard to air navigation because after sighting it, the pilot may not have the opportunity to safely circumnavigate or overfly the structure.

3. VFR DOD TRAINING ROUTES (VR) – Operations on VRs provide DOD aircrews low altitude, high speed navigation and tactics training, and are a basic requirement for combat readiness (see FAA Order JO 7610.4, Special Operations). Surface structures have their greatest impact on VFR operations when ceiling and visibility conditions are at or near basic VFR minimums. Accordingly, the guidelines for a finding of substantial adverse effect on en route VFR operations are based on consideration for those operations conducted under Part 91 that permits flight clear of clouds with 1 mile flight visibility outside controlled airspace. In contrast, flight along VRs can be conducted only when weather conditions equal or exceed 3,000 feet ceiling and 5 miles visibility. A proposed structure's location on a VR is not a basis for determining it to be a hazard to air navigation; however, in recognition of the DOD's requirement to conduct low altitude training, disseminate Part 77 notices and aeronautical study information to DOD representatives. Additionally, attempt to persuade the sponsor to lower or relocate a proposed structure that exceeds obstruction standards and has been identified by the DOD as detrimental to its training requirement.

d. AIRPORT AREAS – Consider the following when determining the effect of structures on VFR operations near airports:

1. Traffic Pattern Airspace – There are many variables that influence the establishment of airport arrival and departure traffic flows. Structures in the traffic pattern airspace may adversely affect air navigation by being a physical obstruction to air navigation or by distracting a pilot's attention during a critical phase of flight. The categories of aircraft using the airport determine airport traffic pattern airspace dimensions.

(a) Traffic Pattern Airspace dimensions (See FIG 6–3–9).

(b) Within Traffic Pattern Airspace – A structure that exceeds a 14 CFR, Part 77 obstruction standard and that exceeds any of the following heights is considered to have an adverse effect and would have a substantial adverse effect if a significant volume of VFR aeronautical operations are affected except as noted in paragraph 6–3–8 d.1.(f) and (g) (see FIG 6–3–10).

(c) The height of the transition surface (other than abeam the runway), the approach slope (up to the height of the horizontal surface), the horizontal surface, and the conical surface (as applied to visual approach runways, Section 77.19).

(d) Beyond the lateral limits of the conical surface and in the climb/descent area – 350 feet above airport elevation or the height of 14 CFR Section 77.17(a)(2), whichever is greater not to exceed 499 feet above ground level (AGL). The climb/descent area begins abeam the runway threshold being used and is the area where the pilot is either descending to land on the runway or climbing to pattern altitude after departure. (The area extending outward from a line perpendicular to the runway at the threshold, see FIG 6–3–11).

(e) Beyond the lateral limits of the conical surface and not in the climb/descent area of any runway – 499 feet above airport elevation (AE) not to exceed 499 feet AGL.

(f) An existing structure (that has been previously studied by the FAA), terrain, or a proposed structure (that would be shielded by existing structures) may not be considered to have a substantial adverse effect. In such instances, the traffic pattern may be adjusted as needed on a case–by–case basis.

(g) Exceptions may be made on a case–by–case basis when the surrounding terrain is significantly higher than the airport elevation, the established traffic pattern altitude is less than 800 feet above airport elevation or "density altitude" is a consideration.

2. Terminal Transition Routes – A structure would have an adverse effect upon VFR air navigation if it:

(a) Exceeds a height of 499 feet above the surface at its site; and

(b) Is located within 2 statute miles of the centerline of any regularly used VFR route (see FIG 6–3–8).

3. VFR Approach Surface Slope Ratios – A structure would have an adverse effect upon VFR air navigation if it penetrates the approach surface slope of any runway. The following slope ratios are applied to the end of the primary surface:

(a) 20:1 for civil visual approaches.

(b) 50:1 for DOD runway approaches.

(c) 8:1 for civil helicopter approaches surfaces.

(d) 10:1 for DOD helicopter approach surfaces.

FIG 6–3–8
VFR ROUTES

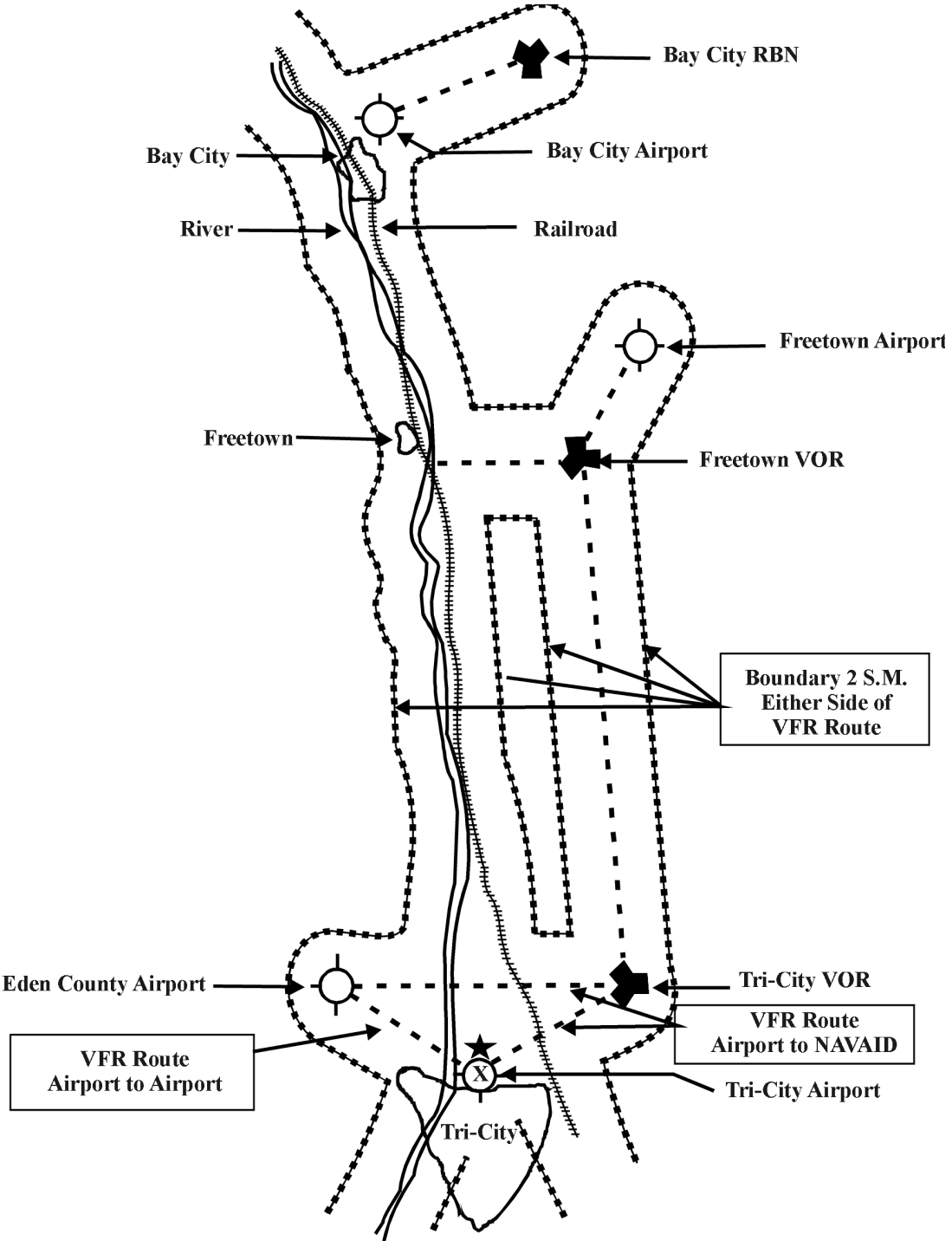
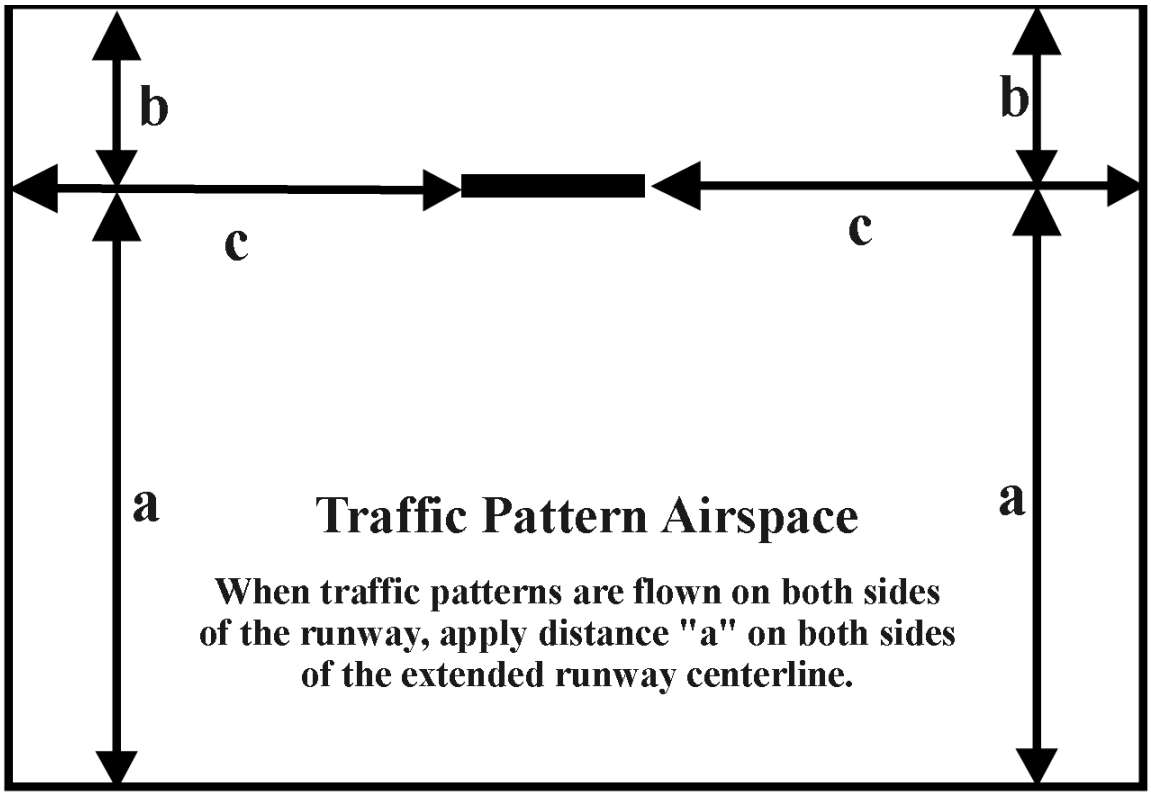


FIG 6–3–9
TRAFFIC PATTERN AIRSPACE



Aircraft Category	Distance (nautical miles)			
	a	b	c	d*
A	1.25	.25	1.25	.375
B	1.5	.25	1.5	.5
C	2.25	.5	2.25	.875
D	4.0	.5	3.0	1.0

*Increase distance "C" by adding distance specified in "d" for each aircraft over four (of the same category) anticipated to be operating in the traffic pattern at the same time.

FIG 6–3–10
TRAFFIC PATTERN AIRSPACE ADVERSE EFFECT

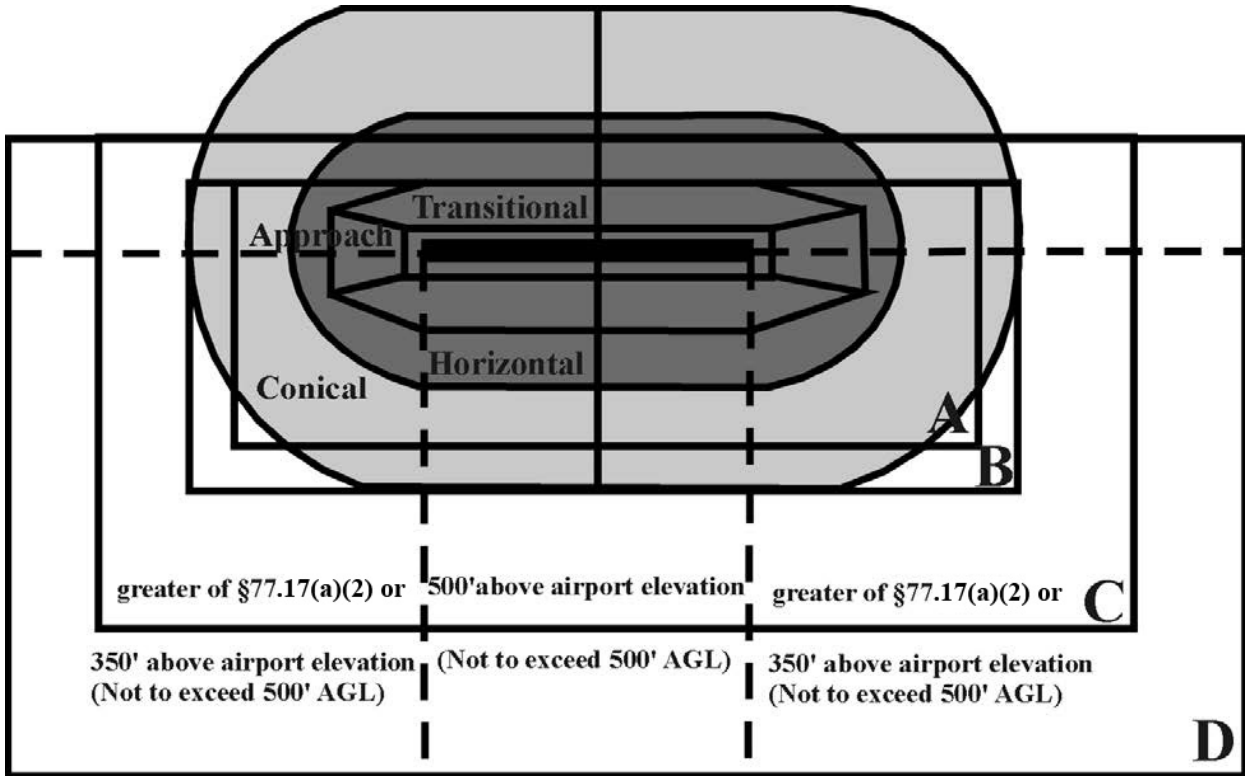
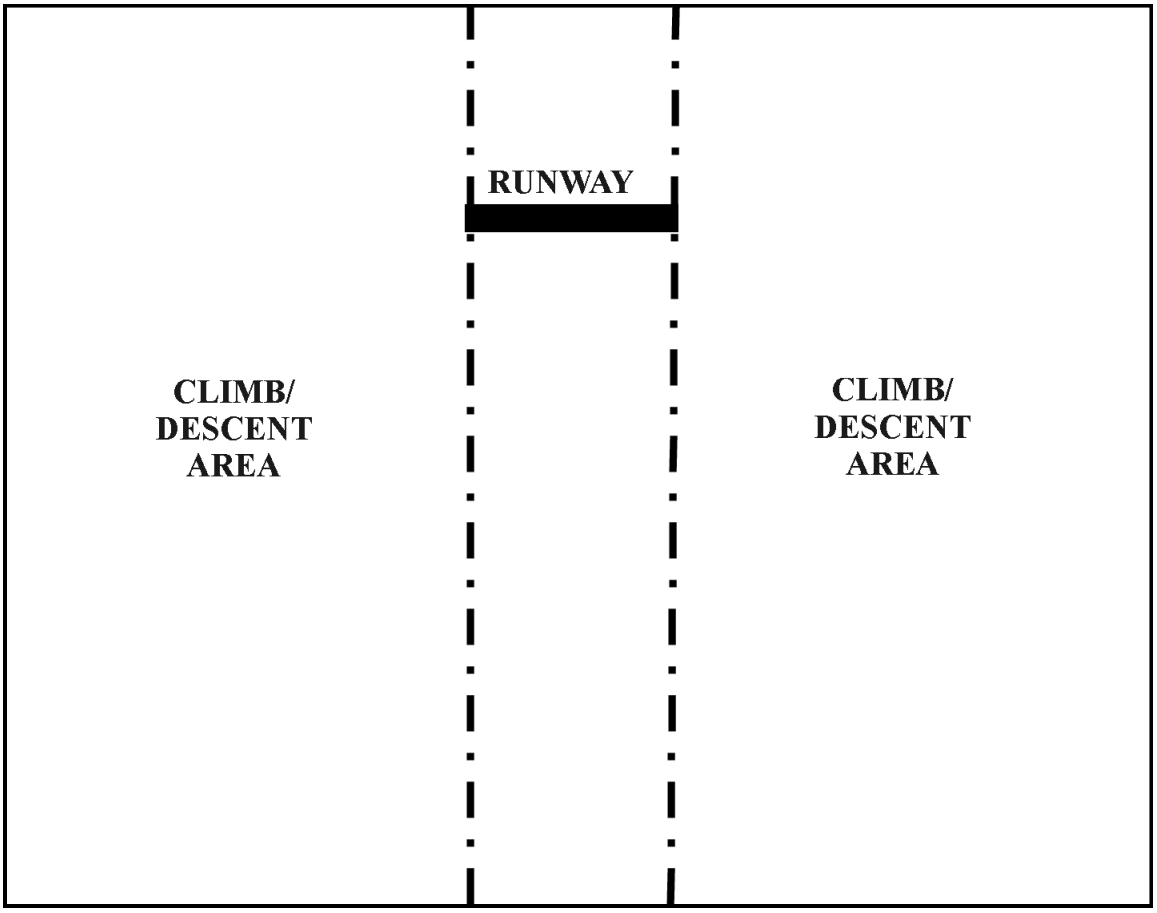


FIG 6–3–11
TRAFFIC PATTERN AIRSPACE CLIMB/DESCENT AREAS



e. HELICOPTERS – The special maneuvering characteristics of helicopters are recognized in Sections 91.119 and 91.155, provided operations are conducted without hazard to persons or property on the ground. Helicopter pilots must also operate at a speed that will allow them to see and avoid obstructions. Consequently, proposed or existing structures are not considered factors in determining adverse effect upon helicopter VFR operations except as follows:

1. En route. When the Administrator prescribes routes and altitudes for helicopters, the exemptions to Part 91 for helicopters do not apply. Thus, any structure would have an adverse effect if it penetrates an imaginary surface 300 feet below an established helicopter minimum flight altitude and is located within 250 feet either side of the established route's centerline.

2. Heliport Landing/Takeoff Area. Any structure would have an adverse effect if it would exceed any of the heliport imaginary surfaces. Although helicopter approach–departure paths may curve, the length of the approach–departure surface remains fixed.

f. AGRICULTURAL AND INSPECTION AIRCRAFT OPERATIONS – Rules that apply to agricultural dispensing operations, as prescribed in Part 137, allow deviation from Part 91 altitude restrictions. It is the pilot's responsibility to avoid obstacles because the agricultural operations must be conducted without creating a hazard to persons or property on the surface. Similar operations include pipeline, power line, and military low–level route inspections. Consequently, these operations are not considered in reaching a determination of substantial adverse effect.

NOTE–
Before and after the dispensing is completed, the pilot is required to operate under the Part 91 minimum altitudes.

g. OPERATIONS UNDER WAIVER OR EXEMPTION TO CFR – Waivers and/or exemptions to CFR operating rules include provisions to ensure achievement of a level of safety equivalent to that which would be present when complying with the regulation waived or exempted. Additionally, waivers and exemptions do not relieve pilots of their responsibility to conduct operations without creating a hazard to persons and property on the surface. Accordingly, a determination of hazard to air navigation must not be based upon a structure's effect on aeronautical operations conducted under a waiver or exemption to CFR operating rules.

6–3–9. EVALUATING EFFECT ON IFR OPERATIONS

a. PURPOSE. This section provides general guidelines for determining the effect of structures, whether proposed or existing, upon IFR aeronautical operations.

b. STANDARDS. Obstruction standards are used to identify potential adverse effects and are not the basis for a determination. The criteria used in determining the extent of adverse affect are those established by the FAA to satisfy operational, procedural, and electromagnetic requirements. These criteria are contained in regulations, advisory circulars, and orders (for example, the 8260 Order series and FAA Order JO 7110.65). Obstruction evaluation personnel must apply these criteria in evaluating the extent of adverse effect to determine if the structure being studied would actually have a substantial adverse effect and would constitute a hazard to air navigation.

c. IFR MINIMUM FLIGHT ALTITUDES. Technical Operations Aviation System Standards is the principal FAA element responsible for establishing instrument procedures and minimum altitudes for IFR operations. FPT personnel must evaluate the effect of proposed structures on IFR aeronautical operations as outlined in Order 8260.19, Flight Procedures and Airspace.

d. EN ROUTE IFR OPERATIONS

1. Minimum En Route Altitudes (MEA). MEAs are established for each segment of an airway or an approved route based upon obstacle clearance, navigational signal reception, and communications. The MEA assures obstruction clearance and acceptable navigational signal coverage over the entire airway or route segment flown. Any structure that will require an MEA to be raised has an adverse effect. Careful analysis by the appropriate IFP Service Provider and air traffic personnel is necessary to determine if there would be a substantial adverse effect on the navigable airspace. Generally, the loss of a cardinal altitude is considered a substantial adverse effect. However, the effect may not be substantial if the aeronautical study discloses that the

affected MEA is not normally flown by aircraft, nor used for air traffic control purposes

2. Minimum Obstruction Clearance Altitudes (MOCA). MOCAs assure obstacle clearance over the entire route segment to which they apply and assure navigational signal coverage within 22 NM of the associated VOR navigational facility. For that portion of the route segment beyond 22 NM from the VOR, where the MOCA is lower than the MEA and there are no plans to lower the MEA to the MOCA, a structure that affects only the MOCA would not be considered to have substantial adverse effect. Other situations require study as ATC may assign altitudes down to the MOCA under certain conditions.

3. Minimum IFR Altitudes (MIA). These altitudes are established in accordance with Order 7210.37, En Route Minimum IFR Altitude Sector Charts, to provide the controller with minimum IFR altitude information for off–airway operations. MIAs provide the minimum obstacle clearance and are established without respect to flight–checked radar or normal radar coverage. Any structure that would cause an increase in a MIA is an obstruction, and further study is required to determine the extent of adverse effect. Radar coverage adequate to vector around such a structure is not, of itself, sufficient to mitigate a finding of substantial adverse effect that would otherwise be the basis for a determination of hazard to air navigation.

4. IFR Military Training Routes (IRs) – Operations on IR's provide pilots with training for low altitude navigation and tactics (see FAA Order JO 7610.4, Special Operations). Flight along these routes can be conducted below the minimum IFR altitude specified in Part 91, and the military conducts operational flight evaluations of each route to ensure compatibility with their obstructions clearance requirements. A proposed structure's location on an IR is not a basis for determining it to be a hazard to air navigation; however, in recognition of the military's requirement to conduct low altitude training, disseminate Part 77 notices and aeronautical study information to military representatives. Additionally, attempt to persuade the sponsor to lower, or relocate proposed structures that exceed obstruction standards and have been identified by the military as detrimental to their training requirement.

5. Radar Bomb Sites (RBS) – These sites are a vital link in the low level training network used by the U.S. Air Force to evaluate bomber crew proficiency. They provide accurate radar records for aircraft flying at low altitudes attacking simulated targets along the RBS scoring line. An obstruction located within the flights' RBS boundaries may have a substantial adverse effect and a serious operational impact on military training capability.

e. TERMINAL AREA IFR OPERATIONS. The obstruction standards contained in Part 77 are also used to identify obstructions within terminal obstacle clearance areas. Any structure identified as an obstruction is considered to have an adverse effect; however, there is no clear–cut formula to determine what extent of adverse effect is considered substantial. Instrument approach and departure procedures are established in accordance with published obstacle clearance guidelines and criteria. However, there are segments of instrument approach procedures where the minimum altitudes may be revised without substantially effecting landing minimums. Thus, the determination must represent a decision based on the best facts that can be obtained during the aeronautical study.

1. Standard Instrument Approach Procedures (SIAP)/Special IAP. IFP Service Providers are responsible for evaluating the effect of structures upon any segment of, or departure restriction associated with, any FAA approved procedure they maintain. However, all personnel involved in the obstruction evaluation process should be familiar with all aspects of the terminal area IFR operations being considered. If any IFP Service Provider determines a structure will affect instrument flight procedures, their evaluation should include those procedural adjustments that can be made without adversely affecting IFR operations. When the study discloses that procedural adjustments to reduce or mitigate any adverse effect cannot be accomplished, then the comments to OEG must identify the significance of this effect on the procedure.

NOTE–
This paragraph applies to any SIAP and Special IAP at public–use and private–use airports.

2. Minimum Vectoring Altitudes (MVA). These altitudes are based upon obstruction clearance requirements only (see Order 8260.19). The area considered for obstacle clearance is the normal operational use of the radar without regard to the flight–checked radar coverage. It is the responsibility of individual controllers to determine that a target

return is adequate for radar control purposes. MVAs are developed by terminal facilities, approved by the Terminal Procedures and Charting Group and published for controllers on MVA Sector Charts. Any structure that would cause an increase in an MVA is an obstruction and a study is required to determine the extent of adverse effect. Radar coverage adequate to vector around such a structure is not, of itself, sufficient to mitigate a finding of substantial adverse effect that would otherwise be the basis for a determination of hazard to air navigation.

3. Military Airports. With the exception of the U.S. Army, the appropriate military commands establish and approve terminal instrument procedures for airports under their respective jurisdictions. Consequently, the OEG must ensure that the military organizations are provided the opportunity to evaluate a structure that may affect their operations. While the military has the responsibility for determining the effect of a structure, it is expected that the FPT will assist air traffic in reconciling differences in the military findings.

4. Departure Procedures. TERPS, Chapter 12, Civil Utilization of Area Navigation (RNAV) Departure Procedures, contains criteria for the development of IFR departure procedures. An obstacle that penetrates the 40:1 departure slope is considered to be an obstruction to air navigation. Further study is required to determine if adverse effect exists. Any proposed obstacle that penetrates the 40:1 departure slope, originating at the departure end of runway (DER) by up to 35 feet will be circularized. If an obstacle penetrates the 40:1 departure slope by more than 35 feet, it is presumed to be a hazard, and a Notice of Presumed Hazard will be issued, and processed accordingly. Analysis by the Terminal Procedures and Charting Group and air traffic personnel is necessary to determine if there would be a substantial adverse effect on the navigable airspace.

5. Minimum Safe Altitudes (MSA). A MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These are either Minimum Sector Altitudes, established for all procedures within a 25–mile radius of the navigational facility (may be increased to 30 miles under certain conditions), or Emergency Safe Altitudes, established within a 100–mile radius of the navigation facility and normally used only in military procedures at the option of the approval authority. These altitudes are designed for emergency use only and are not routinely used by pilots or by air traffic control. Consequently, they are not considered a factor in determining the extent of adverse effect, used as the basis of a determination, or addressed in the public notice of an aeronautical study.

f. CONSIDERING ACCURACY. Experience has shown that submissions often contain elevation and/or location errors. For this reason, the IFP Service Providers use vertical and horizontal accuracy adjustments, as reflected below, to determine the effect on IFR operations.

1. Accuracy Application – Current directives require the IFP Service Provider to apply accuracy standards to obstacles when evaluating effects on instrument procedures. These accuracy standards typically require an adjustment of 50 feet vertically and 250 feet horizontally to be applied in the most critical direction. Normally, these adjustments are applied to those structures that may become the controlling obstructions and are applicable until their elevation and location are verified by survey.

2. Certified Accuracy – The IFP Service Provider must notify OEG whenever certified accuracy would lessen the adverse effect upon IFR procedures. The OEG will review and determine whether to request a surveyed verification of the elevation and location. The acceptable accuracy verification method must be provided and certified by a licensed engineer or surveyor. The survey must include the plus or minus accuracy required, as well as the signature of the engineer/surveyor and the appropriate seal.

3. Determination – A final determination based on improved accuracy must not be issued until after the certified survey is received and evaluated by the OEG.

4. Survey Information Distribution – When the certified survey is received, OEG personnel must ensure that the survey information is uploaded into the OE/AAA system and change the accuracy code within the study as appropriate.

6–3–10. EVALUATING EFFECT ON AIR NAVIGATION AND COMMUNICATION FACILITIES

a. The FAA is authorized to establish, operate, and maintain air navigation and communications facilities and to protect such facilities from interference. During evaluation of structures, factors that may adversely affect any portion or component of the NAS must be considered. Since an electromagnetic interference potential may create adverse effects as serious as those caused by a physical penetration of the airspace by a structure, those effects must be identified and stated. Proposals will be handled, when appropriate, directly with FCC through Spectrum Assignment and Engineering Services.

b. Technical operations services personnel must evaluate notices to determine if the structure will affect the performance of existing or proposed NAS facilities. The study must also include any plans for future facilities, proposed airports, or improvements to existing airports.

c. The physical presence of a structure and/or the electromagnetic signals emanating or reflecting there from may have a substantial adverse effect on the availability, or quality of navigational and communications signals, or on air traffic services needed for the safe operation of aircraft. The following general guidelines are provided to assist in determining the anticipated interference.

1. Instrument Landing System (ILS) – Transmitting antennas are potential sources of electromagnetic interference that may effect the operation of aircraft using an ILS facility. The antenna height, radiation pattern, operating frequency, effective radiated power (ERP), and its proximity to the runway centerline are all factors contributing to the possibility of interference. Normally, any structure supporting a transmitting antenna within the established localizer and/or glide–slope service volume area must be studied carefully. However, extremes in structure height, ERP, frequency, and/or antenna radiation pattern may require careful study of structures up to 30 NM from the ILS frequency's protected service volume area.

(a) ILS Localizer. Large mass structures adjacent to the localizer course and/or antenna array are potential sources of reflections and/or re–radiation that may affect facility operation. The shape and intensity of such reflections and/or re–radiation depends upon the size of the reflecting surface and distance from the localizer antenna. The angle of incidence reflection in the azimuth plane generally follows the rules of basic optical reflection. Normally, in order to affect the course, the reflections must come from structures that lie in or near the on–course signal. Large mass structures of any type, including metallic fences or powerlines, within plus/minus 15 degrees of extended centerline up to 1 NM from the approach end of the runway and any obstruction within 500 feet of the localizer antenna array must be studied carefully. (Refer to FAA Order 6750.16, Siting Criteria for Instrument Landing Systems).

(b) ILS Glide Slope. Vertical surfaces within approximately 1,000 feet of the runway centerline and located up to 3,000 feet forward of the glide slope antenna can cause harmful reflections. Most interference to the glide slope are caused by discontinuities in the ground surface, described approximately as a rectangular area 1,000 feet wide by 5,000 feet long, extending forward from the glide slope antenna and centered at about the runway centerline. Discontinuities are usually in the form of rough terrain or buildings (refer to FAA Order 6750.16, Siting Criteria for Instrument Landing Systems).

2. Very High Frequency Omni–Directional Radio Range and Tactical Air Navigation Aid (VOR/TACAN). Usually, there should be no reflecting structures or heavy vegetation (trees, brush, etc.) within a 1,000 foot radius of the VOR or the TACAN antenna. Interference may occur from large structures or powerlines up to 2 NM from the antenna. Wind turbines are a special case, in that they may cause interference up to 8 NM from the antenna. (Refer to FAA Order 6820.10, VOR, VOR/DME, and TACAN Siting Criteria).

3. Air Route Surveillance Radar/Airport Surveillance Radar (ARSR/ASR). Normally, there should be no reflecting structures within a 1,500–foot radius of the radar antenna. In addition, large reflective structures up to 3 NM from the antenna can cause interference unless they are in the "shadow" of topographic features. Wind turbines are a special case, in that they may cause interference up to the limits of the radar line of site.

4. Air Traffic Control Radar Beacon (ATCRB). The effects encountered due to reflections of the secondary radar main lobe are more serious than those associated with primary radar. Therefore, it is necessary to ensure that no large vertical reflecting surface penetrates a 1,500–foot radius horizontal plane located 25 feet below the antenna platform. In addition, interference may occur from large structures up to 12 miles away from the antenna. This distance will depend on the area of the reflecting surface, the reflection coefficient of the surface, and its elevation with respect to the interrogator antenna. (Refer to FAA Order 6310.6, Primary/Secondary Terminal Radar Siting Handbook).

5. Directional Finder (DF). The DF antenna site should be free of structures that will obstruct line–of–sight with aircraft at low altitudes. The vicinity within 300 feet of the antenna should be free of metallic structures which can act as re–radiators.

6. Communication Facilities. Minimum desirable distances to prevent interference problems between communication facilities and other construction are:

(a) 1,000 feet from power transmission lines (other than those serving the facility) and other radio or radar facilities.

(b) 300 feet from areas of high vehicle activity such as highways, busy roads, and large parking areas.

(c) One (1) NM from commercial broadcasting stations (e.g., FM, TV).

7. Approach Lighting System. No structure, except the localizer antenna, the localizer far field monitor antenna, or the marker antenna must protrude above the approach light plane. For approach light plane clearance purposes, all roads, highways, vehicle parking areas, and railroads must be considered as vertical solid structures. The clearance required above interstate highways is 17 feet; above railroads, 23 feet; and for all other public roads, highways, and vehicle parking areas, 15 feet. The clearance required for a private road is 10 feet or the highest mobile structure that would normally use the road, which would exceed 10 feet. The clearance for roads and highways must be measured from the crown of the road; the clearance for railroads must be measured from the top of the rails. For vehicle parking areas, clearance must be measured from the average grade in the vicinity of the highest point. Relative to airport service roads substantial adverse effect can be eliminated if all vehicular traffic is controlled or managed by the air traffic control facility. A clear line–of–sight is required to all lights in the system from any point on a surface, one–half degree below the aircraft descent path and extending 250 feet each side of the runway centerline, up to 1,600 feet in advance of the outermost light in the system. The effect of parked or taxiing aircraft must also be considered when evaluating line–of–sight for approach lighting systems.

8. Visual Approach Slope Indicator (VASI)/Precision Approach Path Indicator (PAPI). No structures or obstructions must be placed within the clearance zone for the particular site involved or the projected visual glide path.

NOTE–
VASI and PAPA now fall under the heading of VGSI.

9. Runway End Identifier Lights (REIL). No structures or obstructions must be placed within the established clearance zone.

d. Factors that modify the evaluation criteria guidelines require consideration. Some facility signal areas are more susceptible to interference than others. The operational status of some signals may already be marginal because of existing interference from other structures. In addition, the following characteristics of structures must be considered:

1. The higher the structure's height is in relation to the antenna, the greater the chance of interfering reflections. Any structure subtending a vertical angle greater than one degree from the facility is usually cause for concern. Tall structures, such as radio towers and grain elevators, can interfere from distances greater than those listed in the general criteria.

2. The type of construction material on the reflecting surface of the structure is a factor, with nonmetallic surfaces being less troublesome than metallic or metallic impregnated glass.

3. Aircraft hangars with large doors can be a special problem because the reflecting surface of the hangar varies appreciably with changes in the position of the doors.

4. Interference is usually caused by mirror reflections from surfaces on the structure. Orientation of the structure therefore plays an important part in

the extent of the interference. Reflections of the largest amplitude will come from signals striking a surface perpendicular to the signals. Signals striking a surface at a shallow angle will have a smaller amplitude.

e. Air traffic personnel must request technical operations services personnel to assist them in discussions with sponsors to explore alternatives to resolve the prospective adverse effects to facilities. These may involve design revisions, relocation, or reorientation depending on the character of the construction and facility involved.

f. Attempt to resolve electromagnetic interference (EMI) before issuing a hazard determination. Notify the sponsor by letter (automated DPH letter) that the structure may create harmful EMI and include in the letter the formula and values that were applied, the specific adverse effects expected, and an offer to consider alternatives. Provide the sponsor, as well as the FAA, ample time to exhaust all available avenues for positive resolution. The intent of this process is to allow the sponsor adequate time to consider the problems and the alternatives before a decision is rendered by the issuance of the FAA determination. Follow these guidelines in all situations where harmful EMI is projected by the study.

6–3–11. EVALUATING PLANNED OR FUTURE AIRPORT DEVELOPMENT PROGRAMS

The national system of airports consists of public, civil, and joint–use airport facilities considered necessary to adequately meet the anticipated needs of civil aeronautics. Airport Planning and Programming Offices are the most accurate sources of up–to–date information on airport development plans. Consequently, Airports personnel are expected to extensively review structures in reference to the safe and orderly development of airport facilities, including what development will realistically be accomplished within a reasonable time. Areas of consideration in accomplishing this responsibility are:

a. Future Development of Existing Airports. A detailed review in this area requires looking at current planned airport projects, national airport plan data, and land–use planning studies in the vicinity of the structure. The results of the study forwarded to air traffic must include appropriate comments regarding the extent of Federal aid, sponsor airport investments, the airport owner's obligations in existing grant–in–aid agreements, and anticipated aeronautical activity at the airport and in the general area. If a structure would adversely impact an airport's efficiency, utility, or capacity, the responsible Airports Office should document this impact in its evaluation. Comments should include recommended new location(s) for the structure as appropriate.

b. New Airport Development. When a structure requiring notice under Part 77 and any new airport development are both in the same vicinity, Airports personnel must study the interrelationship of the structure and the airport. Additionally, supplemental information on the proposed airport site must be furnished to the OEG. If a substantial adverse effect is anticipated, Airports personnel must provide detailed comments and specific recommendations for mitigating the adverse effects.

6–3–12. EVALUATING TEMPORARY CONSTRUCTION

a. Temporary Construction Equipment. Construction of structures normally requires use of temporary construction equipment that is of a greater height than the proposed structure. Appropriate action is necessary to ensure that the temporary construction equipment does not present a hazard to air navigation. It is not possible to set forth criteria applicable to every situation; however, the following action examples may help to minimize potential problems:

1. If use of the temporary construction equipment is on an airport, it may be necessary to negotiate with airport managers/owners to close a runway, taxiway, temporarily move a runway threshold, or take other similar action.

2. Negotiate with equipment operators to raise and lower cranes, derricks, or other construction equipment when weather conditions go below predetermined minimums as necessary for air traffic operations or as appropriate for the airport runways in use.

3. Control the movement of construction vehicle traffic on airports.

4. Adjust minimum IFR altitudes or instrument procedures as necessary to accommodate the

construction equipment if such action will not have serious adverse effects on aeronautical operations.

5. Request that the temporary construction equipment be properly marked and/or lighted if needed.

b. Temporary Structures – OE notices for temporary structures are processed in the same manner as a permanent structure, but require special consideration in determining the extent of adverse effect. This is especially true of structures such as cranes and derricks that may only be at a particular site for a short time period. As a general policy, it is considered in the public interest to make whatever adjustments necessary to accommodate the temporary structure of 30 days or less if there is no substantial adverse affect on aeronautical operations or procedures. However, this policy does not apply if the aeronautical study discloses that the structure would be a hazard to aviation. Reasonable adjustments in aeronautical operations and modifications to the temporary structure should be given equal consideration.

6–3–13. CONSIDERING SHIELDING

Shielding as described below should not be confused with notice criteria as stated in Section 77.9(e).

a. Consideration. Shielding is one of many factors that must be considered in determining the physical effect a structure may have upon aeronautical operations and procedures. Good judgment, in addition to the circumstances of location and flight activity, will influence how this factor is considered in determining whether proposed or existing structures would be physically shielded.

b. Principle. The basic principle in applying the shielding guidelines is whether the location and height of the structures are such that aircraft, when operating with due regard for the shielding structure, would not collide with that structure.

c. Limitations. Application of the shielding effect is limited to:

1. The physical protection provided by existing natural terrain, topographic features, or surface structures of equal or greater height than the structure under study; and

2. The structure(s) providing the shielding protection is/are of a permanent nature and there are no plans on file with the FAA for the removal or alteration of the structure(s).

d. Guidelines. Any proposed construction of or alteration to an existing structure is normally considered to be physically shielded by one or more existing permanent structure(s), natural terrain, or topographic feature(s) of equal or greater height if the structure under consideration is located:

1. Not more than 500 feet horizontal distance from the shielding structure(s) and in the congested area of a city, town, or settlement, provided the shielded structure is not located closer than the shielding structures to any heliport or airport located within 5 miles of the structure(s).

2. Such that there would be at least one such shielding structure situated on at least three sides of the shielded structure at a horizontal distance of not more than 500 feet.

3. Within the lateral dimensions of any runway approach surface but would not exceed an overall height above the established airport elevation greater than that of the outer extremity of the approach surface, and located within, but would not penetrate, the shadow plane(s) of the shielding structure(s).

e. OEG must coordinate with FPT before applying shielding criteria for precision approach surface penetrations.

NOTE–
See FIG 6–3–7 and FIG 6–3–12.

6–3–14. CONSIDERING SHADOW PLANE

The term “shadow plane” means a surface originating at a horizontal line passing through the top of the shielding structure at right angles to a straight line extending from the top of the shielding structure to the end of the runway. The shadow plane has a width equal to the projection of the shielding structure’s width onto a plane normal to the line extending from the top and center of the shielding structure to the midpoint of the runway end. The shadow plane extends horizontally outward away from the shielding structure until it intersects or reaches the end of one of the imaginary approach area surfaces; see FIG 6–3–13, FIG 6–3–14, and FIG 6–3–15.

6–3–15. RECOMMENDING MARKING AND LIGHTING OF STRUCTURES

a. STANDARDS. FAA standards, procedures, and types of equipment specified for marking and lighting structures are presented in AC 70/7460–1, Obstruction Marking and Lighting. These standards provide a uniform means to indicate the presence of structures and are the basis for recommending marking and lighting to the public. These standards are the minimum acceptable level of conspicuity to warn pilots of the presence of structures. They must also apply when Federal funds are to be expended for the marking and lighting of structures.

b. AERONAUTICAL STUDY. All aeronautical studies must include an evaluation to determine whether obstruction marking and/or lighting are necessary and to what extent. The entire structure or complex, including closely surrounding terrain and other structures, must be considered in recommending marking and lighting. A subsequent study may indicate a need to change an earlier determination by recommending marking and/or lighting when such recommendation was not made in the original study or, in some cases, after a determination was issued.

1. Proposed Structures. A change in runway length or alignment, a new airport development project, a change in aeronautical procedures, or other similar reasons may be cause for additional study of proposed structures to determine whether marking and/or lighting are now appropriate even when not recommended in the original study.

2. Existing Structures. A marking and/or lighting recommendation may be made at any time. In making the recommendation consider changes that have occurred in the vicinity of the structure since the initial determination was made and include such factors as increased aircraft activity, the closing of an airport, changes in IFR and VFR routes, and shielding by taller structures.

c. RECOMMENDATIONS. Recommend the marking and/or lighting standard most appropriate for the height and location of any temporary or permanent structure that:

1. Exceeds 200 feet in overall height above ground level at its site or exceeds any obstruction standard contained in Part 77, Subpart C, unless an aeronautical study shows the absence of such marking and/or lighting will not impair aviation safety.

2. Is not more than 200 feet AGL, or is not identified as an obstruction under the standards of Part 77, Subpart C, but may indicate by its particular location a need to be marked or lighted to promote aviation safety.

d. PARTIAL MARKING AND/OR LIGHTING. Omitting marking and/or lighting on the structure's bottom section; for example, the lowest 200 feet of a tall structure should be discouraged unless that part of the structure is shielded. Marking and lighting standards are based on a total system configuration and are only effective when used as intended. Therefore, the structure and its location must be given careful consideration before recommending partial marking and/or lighting.

e. OMISSION/DELETION OF MARKING AND/OR LIGHTING. When recommending that marking and/or lighting be omitted because the structure is sufficiently conspicuous by its shape, size, and/or color, include a judgment that the structure would not blend into any physical or atmospheric background that may reasonably be expected in the vicinity.

f. EXCESSIVE MARKING AND/OR LIGHTING. Recommend specific advisory circular chapters, paragraphs, and, when appropriate, specific intensities that address the minimum marking and/or lighting standards for safety. Recommendation of specific chapters allow for the use of those chapters only, although they may contain references to other chapters. If the sponsor insists on or the FAA finds that high intensity white lights would not be objectionable, indicate in the determination that the FAA does not object to increased conspicuity provided the lighting is in accordance with guidelines of AC 70/7460–1, Obstruction Marking and Lighting.

g. VOLUNTARY MARKING AND/OR LIGHTING. When it is determined not necessary for aviation safety, marking and/or lighting may be accomplished on a voluntary basis. However, marking and/or lighting should not be a condition of the determination, but instead, it must be recommended that, if voluntary, marking and/or lighting be installed and maintained in accordance with AC 70/7460–1.

h. HIGH AND MEDIUM INTENSITY WHITE OBSTRUCTION LIGHTING SYSTEMS:

1. High intensity lighting systems should not be recommended for structures 700 feet above ground level or less, except when an aeronautical study shows otherwise. This does not apply to catenary support structures.

2. Use caution in recommending the use of high or medium intensity white obstruction lighting systems, especially in a populated area. Aircraft operations can be adversely affected where strobe–lighted structures are located in an area of limited visual cues. These situations can contribute to spatial disorientation when pilots are maneuvering in minimum visibility conditions. Marine or surface vessels and other vehicles, especially on nearby elevated roadways, could also experience operational difficulties from strobe lights. External shielding may minimize adverse effects. Examples are:

(a) At locations within the airport/heliport environment in a sparsely lighted rural setting.

(b) At an offshore installation.

3. Dual lighting systems should be considered when a structure is located in or near residential areas, especially in hilly terrain where some houses are higher than the base of the structure.

i. LIGHTED SPHERICAL MARKERS. Lighted spherical markers are available for increased night conspicuity of high–voltage (69kv or greater) transmission–line catenary wires. These markers should be recommended for increased night conspicuity for such wires when located near airports, heliports, across rivers, canyons, lakes, etc. Consider the following when recommending lighted spherical markers: aeronautical activity, nighttime operations, low level operations, local weather conditions, height of wires, length of span, etc. If the support structures are to be lighted, also consider lighting the catenary wires. Installation, size, color, and pattern guidelines can be found in Advisory Circular 70/7460–1, Obstruction Marking and Lighting.

j. DEVIATIONS AND MODIFICATION TO MARKING AND/OR LIGHTING. When the sponsor or owner of a structure requests permission to deviate from or modify the recommended marking and/or lighting, an appropriate aeronautical study should be made to determine whether the deviation/modification is acceptable, and/or whether the recommended marking and/or lighting should be retained.

1. A deviation refers to a change from the standard patterns, intensities, flashing rates, etc. A marking and lighting deviation is considered to be marking patterns or colors and lighting patterns, intensities, flashing rates, or colors other than those specified in AC 70/7460–1.

(a) Examples of deviations are contained in the AC 70/7460–1 and requests for deviations must be forwarded to the OEG to conduct an aeronautical study for the proposal. The results of the evaluation will be sent to the Team Manager for review.

(b) Deviations require final approval by the OEG Group Manager. The Team Manager will forward the results of the study to the OEG Group Manager for approval or denial and the OEG must effect all coordination necessary for issuing the decision.

2. The OEG may approve a request for a modified application of marking and/or lighting. Examples of modified applications may be found in AC 70/7460–1. A modified application of marking and lighting refers to the amount of standard marking and/or lighting such as:

(a) Placing the standard marking and/or lighting on only a portion of a structure.

(b) Adding marking and/or lighting in addition to the standard marking and lighting to improve the conspicuity of the structure;

(c) Reducing the amount of standard marking and/or lighting to the extent of eliminating one or the other as may be considered appropriate.

(d) Adjusting the standard spacing of recommended intermediate light levels for ease of installation and maintenance as considered appropriate.

6–3–16. NEGOTIATIONS

Negotiations must be attempted with the sponsor to reduce the structure's height so that it does not exceed obstruction standards, mitigate any adverse effects on aeronautical operations, air navigation and/or communication facilities, or eliminate substantial adverse effect. If feasible, recommend collocation of

the structure with other structures of equal or greater heights. Include in the aeronautical study file and determination a record of all the negotiations attempted and the results. If negotiations result in the withdrawal of the OE notice, the obstruction evaluation study may be terminated. Otherwise, the obstruction evaluation must be continued to its conclusion.

6–3–17. CIRCULARIZATION

a. Circularizing a public notice allows the FAA to solicit information that may assist in determining what effect, if any, the proposed structure would have to the navigable airspace. The OEG determines when it is necessary to distribute a public notice.

1. If a structure first exceeds obstruction standards, then a public notice should be circularized if:

(a) An airport is affected;

(b) There is possible VFR effect; or

(c) There is a change in aeronautical operations or procedures.

2. Circularization is not necessary for the following types of studies:

(a) A reduction in the height of an existing structure.

(b) A structure that would be located on a site in proximity to another previously studied structure, would have no greater effect on aeronautical operations and procedures, and the basis for the determination issued under the previous study could be appropriately applied.

(c) A proposed structure replacing an existing or destroyed structure, that would be located on the same site and at the same or lower height as the original structure, and marked and/or lighted under the same provisions as the original structure (this does not preclude a recommendation for additional marking/lighting to ensure conspicuity).

(d) A proposed structure that would be in proximity to, and have no greater effect than, a previously studied existing structure, and no plan is on file with the FAA to alter or remove the existing structure.

(e) A structure that would be temporary and appropriate temporary actions could be taken to accommodate the structure without an undue hardship on aviation.

(f) A structure found to have substantial adverse effect based on an internal FAA study.

(g) A structure that would exceed Part 77.17 (a)(2) and would be outside the traffic pattern.

(h) A structure that would affect IFR operations but would only need FAA comment. For instance a structure that:

(1) Would raise a MOCA, but not a MEA.

(2) Would raise a MVA.

(3) Would raise a MIA.

3. Circularization for existing structures will be determined on a case–by–case basis.

b. Each public notice (automated letter CIR) must contain:

1. A complete, detailed description of the structure including, as appropriate, illustrations or graphics depicting the location of the structure:

(a) On–airport studies. Use airport layout plans or best available graphic.

(b) Off–airport studies. Use the appropriate aeronautical chart. Additional illustrations may be included, as necessary.

2. A complete description of the obstruction standards that are exceeded, the number of feet by which the structure exceeds the standards.

3. An explanation of the potential effects of the structure in sufficient detail to assist interested persons in formulating comments on how the structure would affect aeronautical operations.

4. A date by which comments are to be received. The date established should normally allow interested persons 30 days in which to submit comments, but a shorter comment period may be established depending upon circumstances.

c. Public notices should be distributed to those who can provide information needed to assist in evaluating the aeronautical effect of the structure. As a minimum, the following governmental agencies, organizations, and individuals should be included on distribution lists due to their inherent aeronautical interests:

1. The sponsor and/or his representative.

2. All known aviation interested persons and groups such as state, city, and local aviation authorities; airport authorities; various military organizations within the DOD; flying clubs; national, state, and local aviation organizations; flight schools; fixed base operators; air taxi, charter flight offices; and other organizations or individuals that demonstrate a specific aeronautical interest such as county judges and city mayors.

3. Airport owners as follows:

(a) All public–use airports within 13 NM of the structure.

(b) All private–use airports within 5 NM of the structure.

4. The specific FAA approach facility, en route facility (ARTCC), and Flight Service Station (FSS) in whose airspace the structure is located.

5. Flight Standards.

6. An adjacent regional/service area office if the structure is within 13 NM of the regional state boundary.

7. As appropriate, state and local authorities; civic groups; organizations; and individuals who do not have an aeronautical interest, but may become involved in specific aeronautical cases, must be included in the notice distribution, and given supplemental notice of actions and proceedings on a case–by–case basis. Those involved should clearly understand that the public notice is to solicit aeronautical comments concerning the physical effect of the structure on the safe and efficient use of airspace by aircraft.

8. A proposed structure that penetrates the 40:1 by 35 feet or more, departure slope must be circularized to the following:

(a) Aircraft Owners and Pilots Association;

(b) National Business Aviation Association;

(c) Regional Air Line Association;

(d) Department of Defense;

(e) Air Transport Association;

(f) Air Line Pilots Association; and

(g) Other appropriate persons and organizations listed in this section.

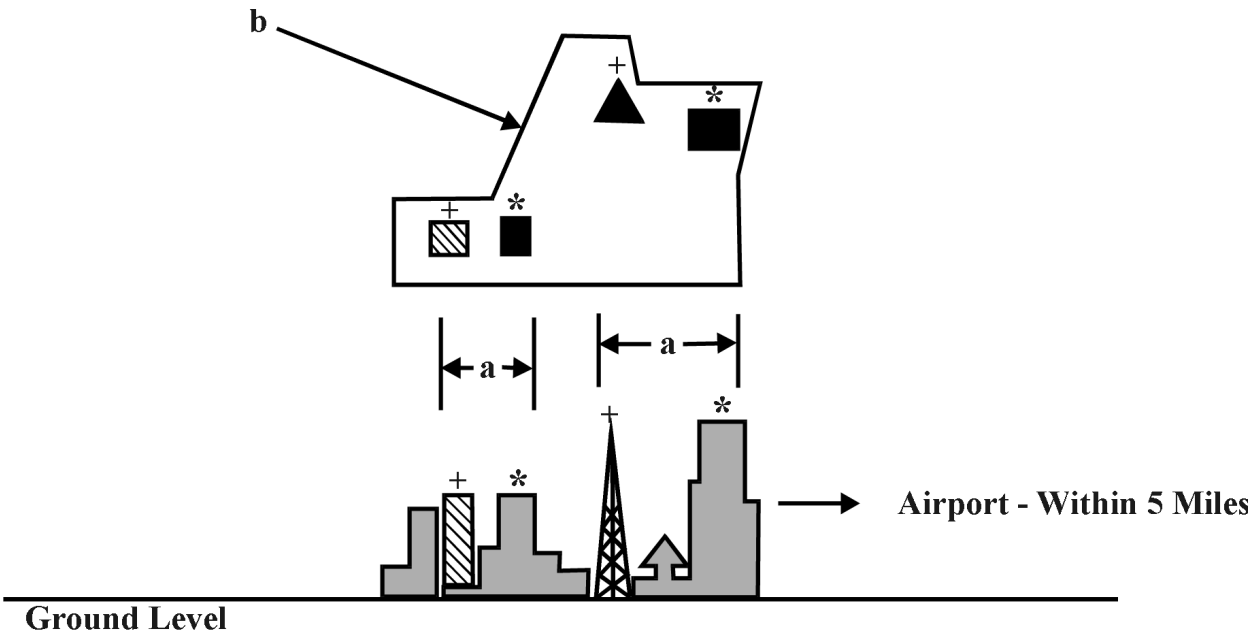
d. Document and place in the obstruction evaluation file the names of each person and/or organizations to which public notice was sent. Reference to a distribution code, mailing list, or other evidence of circularization is sufficient provided a printout or list of each coded distribution is maintained for future reference. Also record the time period during which each printout or list is used. The retention schedule is listed in Order 1350.15, Records Organization, Transfer, and Destruction Standards.

e. Consider only valid aeronautical objections or comments in determining the extent of adverse effect of the structure. Comments of a non–aeronautical nature are not considered in obstruction evaluation as described in Part 77.

f. If the sponsor agrees to revise the project so that it does not exceed obstruction standards and would have no adverse effect, cancel the public notice, advise interested parties, as necessary, revise the obstruction evaluation study, and proceed as appropriate.

FIG 6–3–12

STANDARDS FOR DETERMINING SHIELDING: CONGESTED PART OF CITY, TOWN, OR SETTLEMENT



\+ **Shielded Object**

* **Shielding Object**

a Not More Than 500 Feet

FIG 6–3–13
STANDARDS FOR DETERMINING SHIELDING

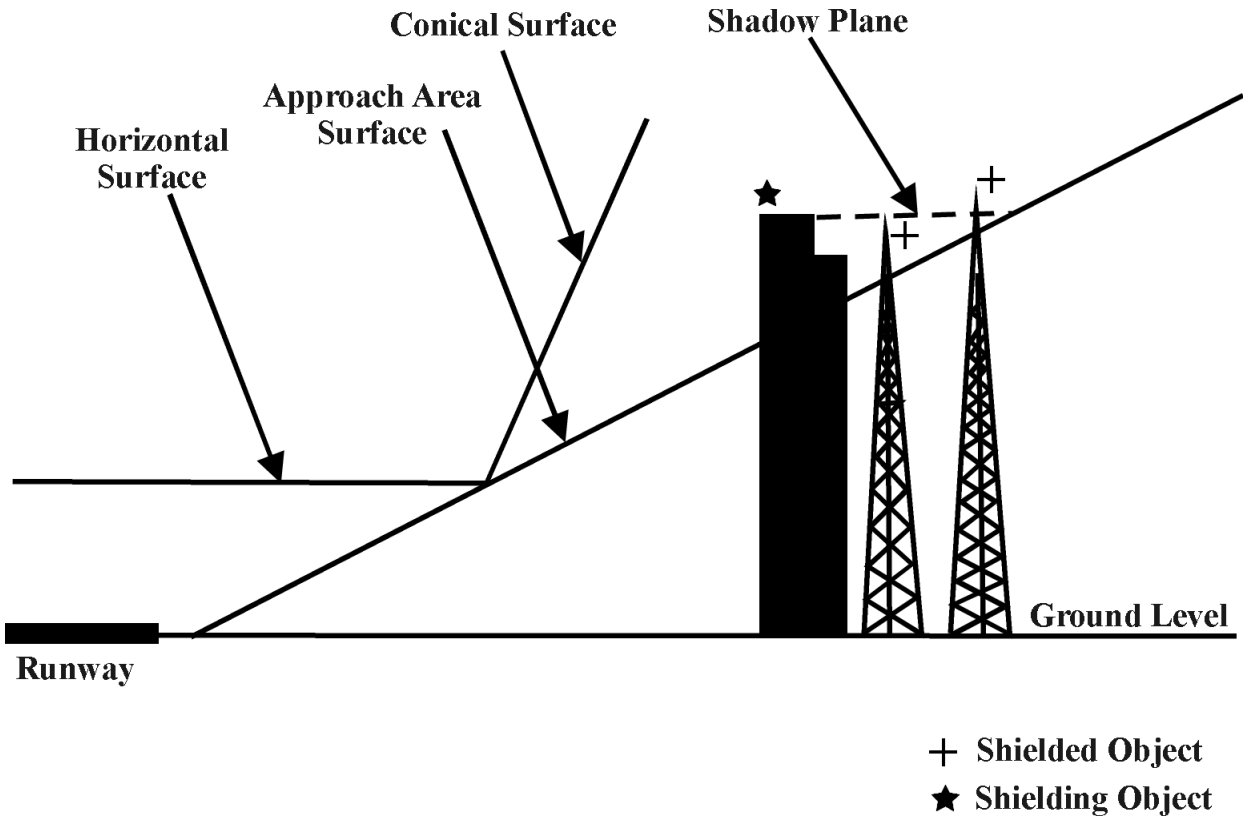


FIG 6–3–14

STANDARDS FOR DEVELOPING SHIELDING: PERSPECTIVE OF A SHADOW PLANE

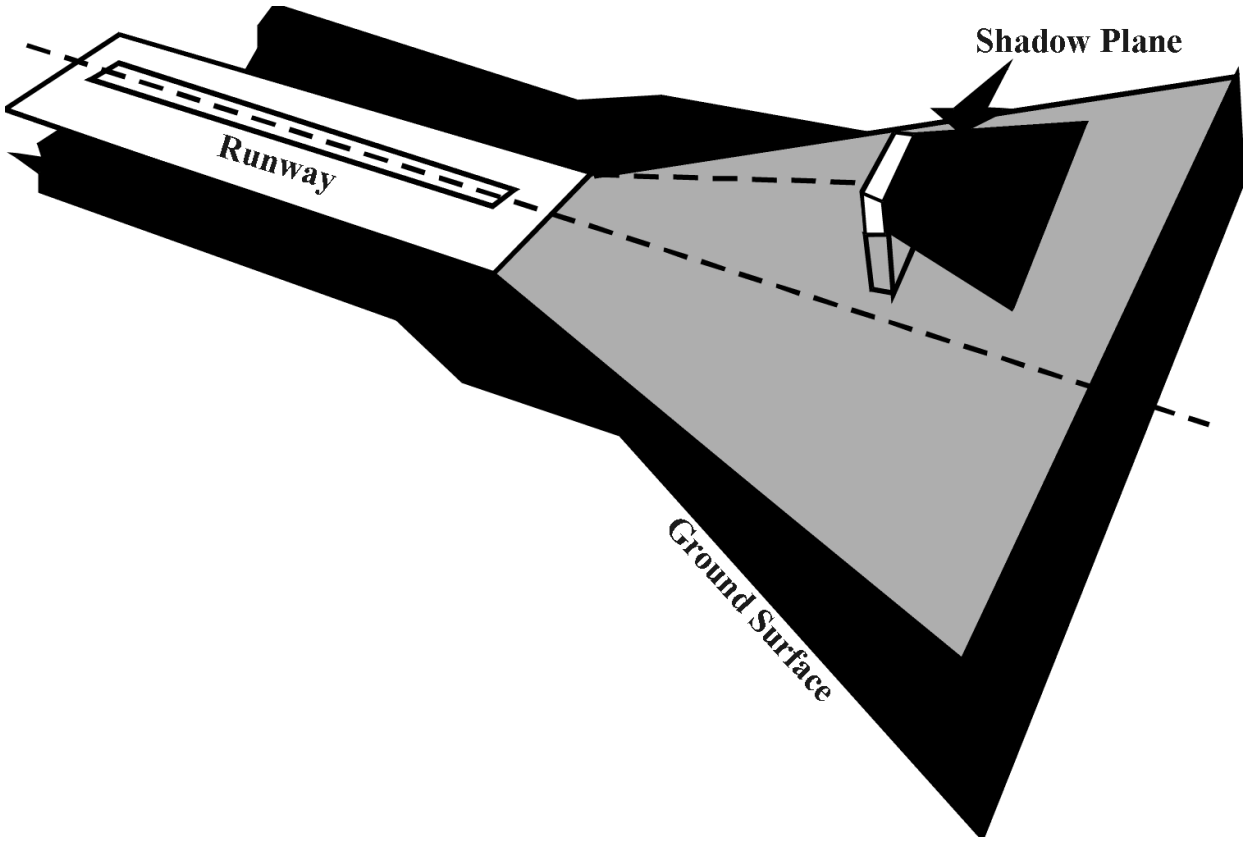


FIG 6–3–15
STANDARDS FOR DETERMINING SHIELDING: EXAMPLES OF SHADOW PLANES

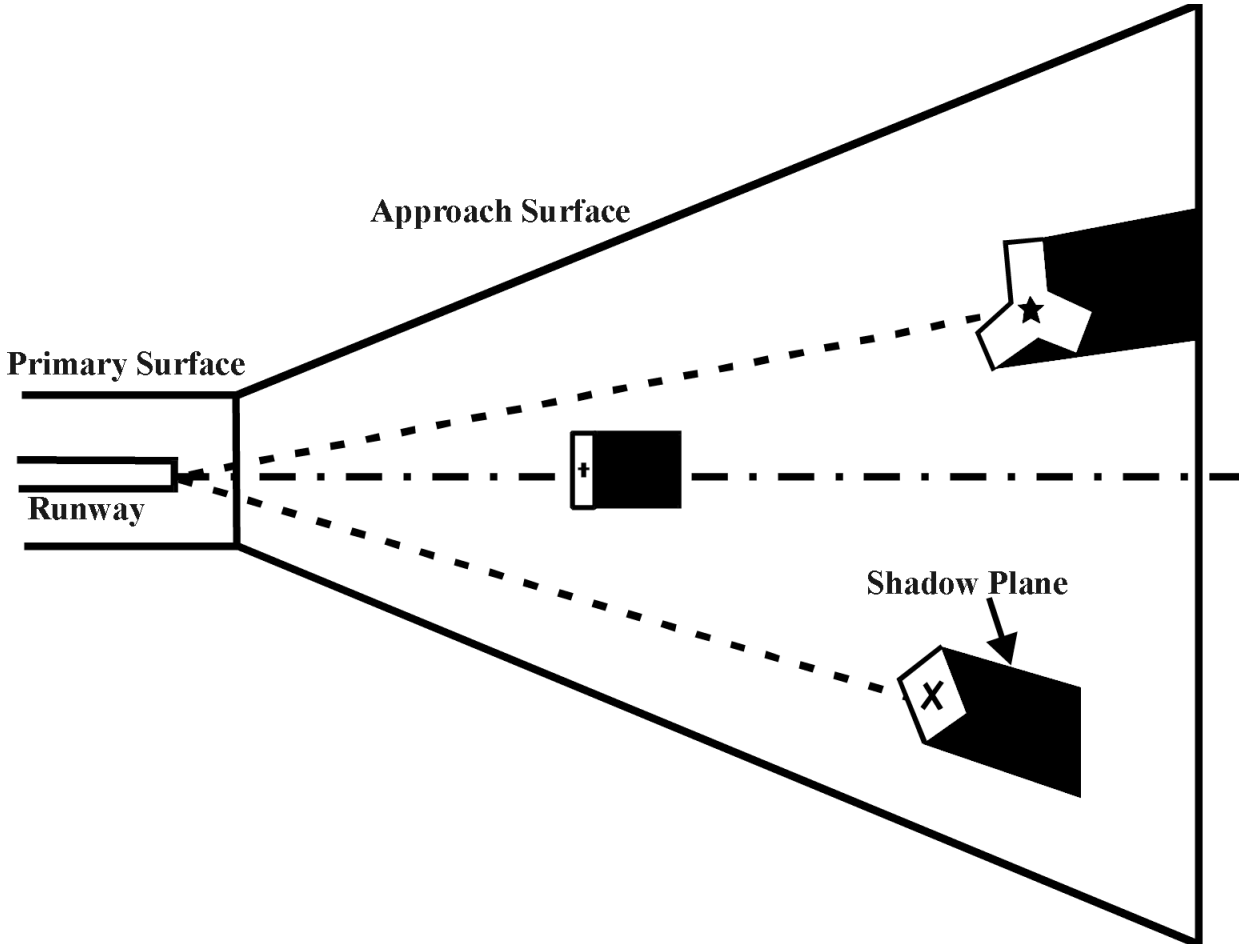


FIG 6–3–16

FREQUENCY PROTECTED SERVICE VOLUME FOR ILS FRONT COURSE

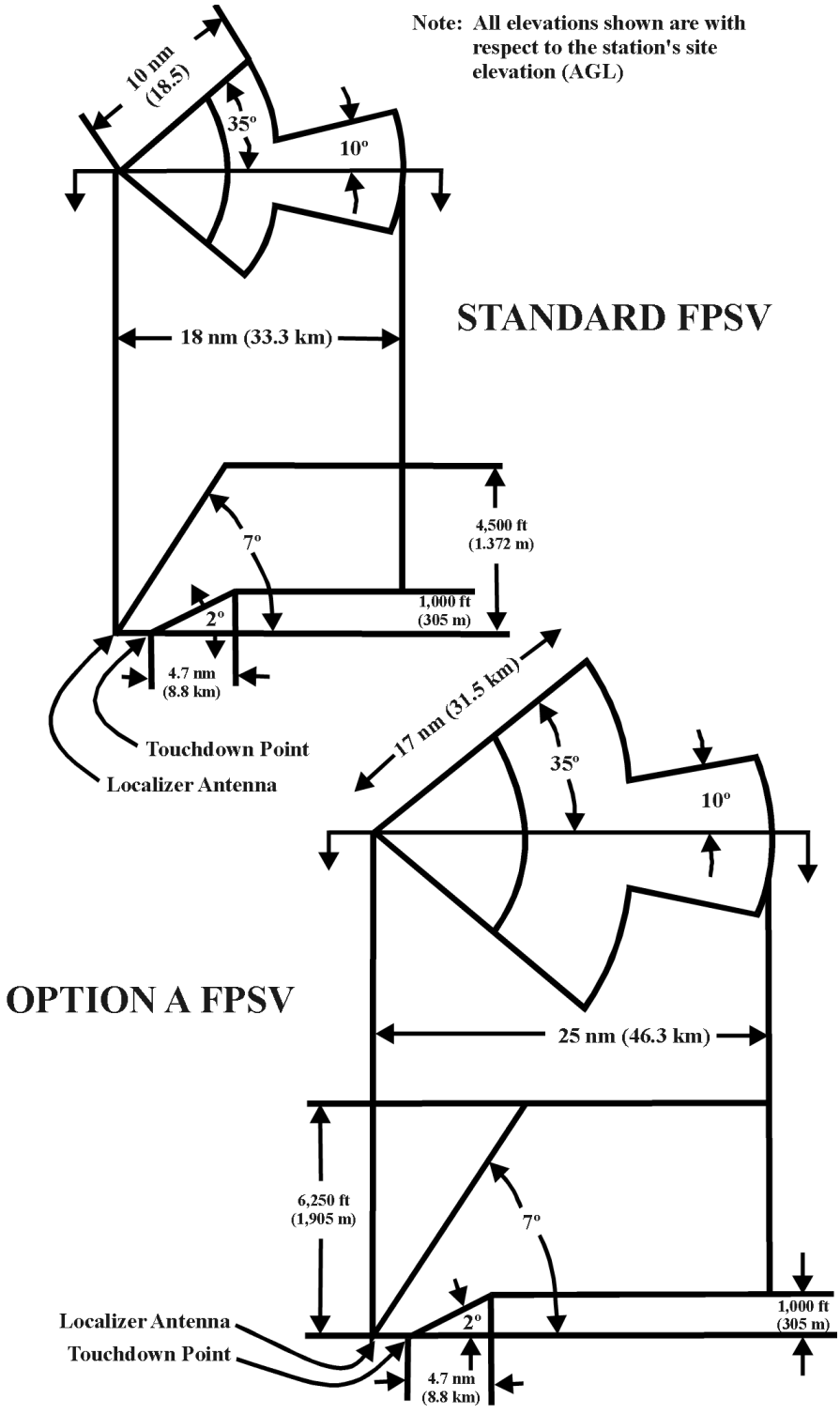


FIG 6–3–17

FREQUENCY PROTECTED SERVICE VOLUME FOR ILS BACK COURSE

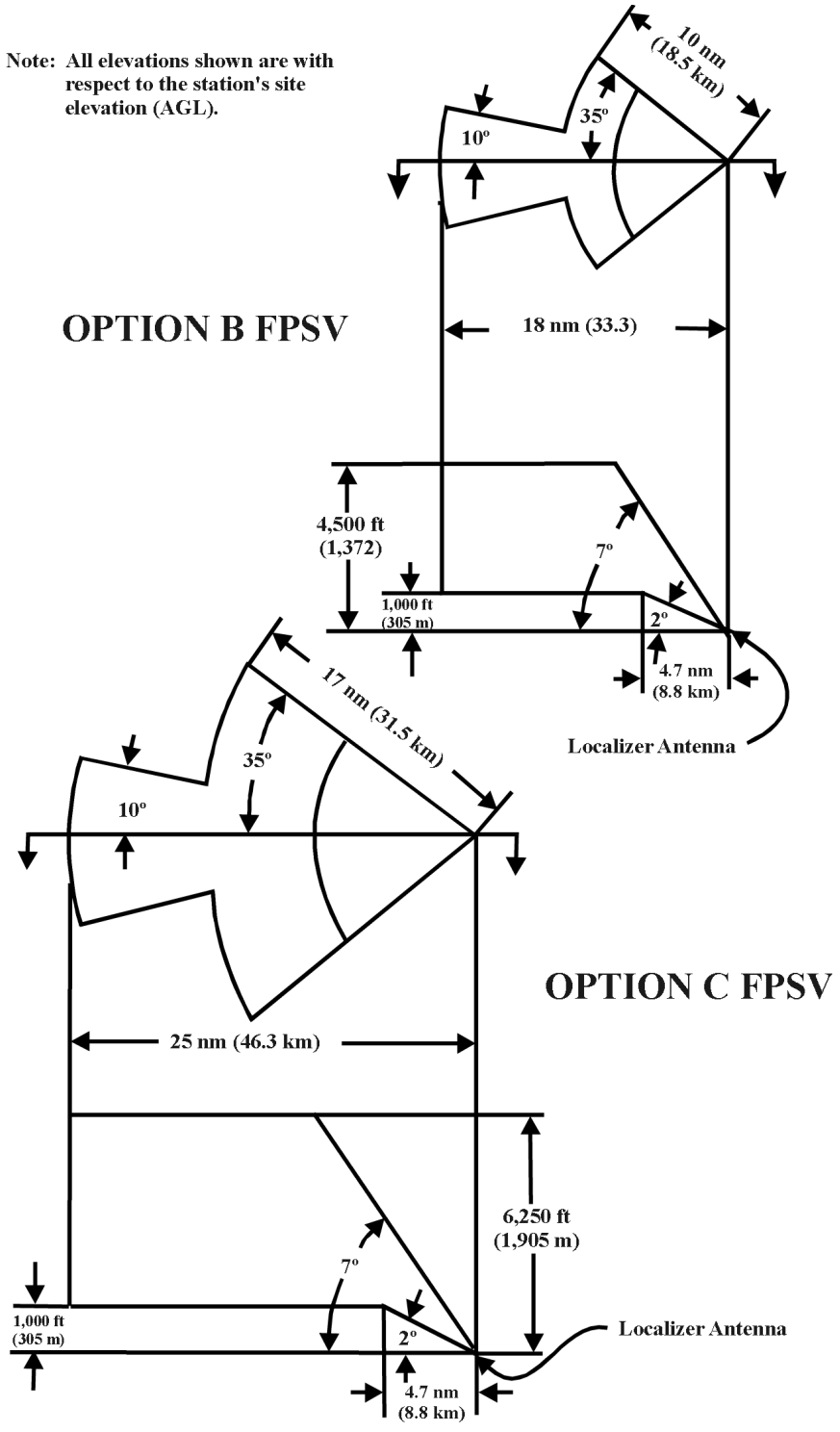
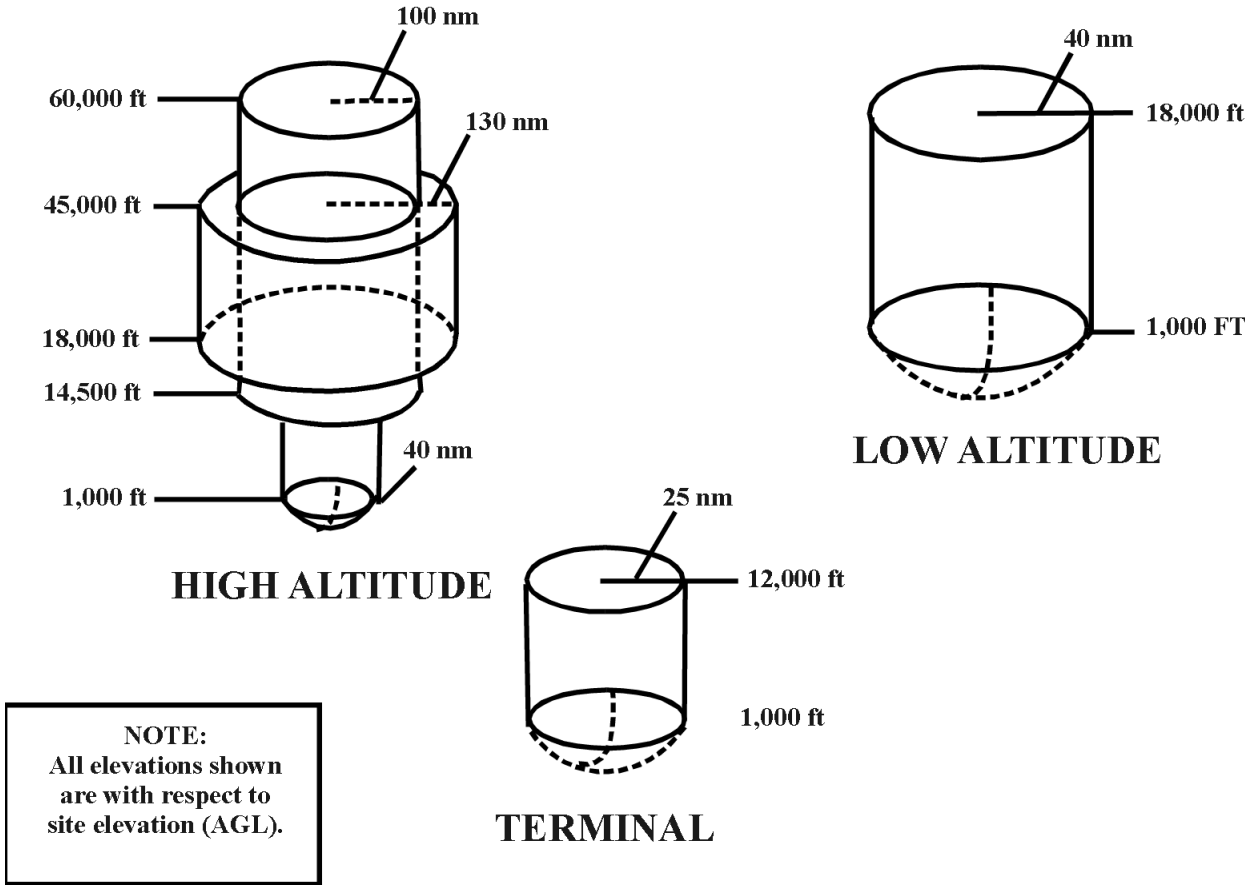


FIG 6–3–18
FREQUENCY PROTECTED SERVICE VOLUME FOR VOR



Chapter 7. Determinations

Section 1. Issuing Determinations

7–1–1. POLICY

All known aeronautical facts revealed during the obstruction evaluation must be considered when issuing an official FAA determination. The determination must be a composite of all comments and findings received from interested FAA offices. Should there be a disagreement in the findings, the disagreement must be resolved before issuance of a determination. The basis for all determinations must be on the aeronautical study findings as to the extent of adverse physical or electromagnetic interference effect upon navigable airspace or air navigation facilities. Evidence of adverse effect alone, either physical or electromagnetic, is not sufficient justification for a determination of hazard. However, a finding of a substantial physical or electromagnetic adverse effect normally requires issuance of a determination of hazard.

7–1–2. RESPONSIBILITY

a. OEG is responsible for issuing determinations.

b. If any division objects to a structure that does not exceed Part 77, and/or is not found to have a physical or electromagnetic radiation effect on the operation of air navigation facilities, an advisory statement may be submitted to OEG for inclusion in the determination. Examples would be:

1. Objections identifying potential airport hazards based on airport design criteria such as a structure within the runway protection zone (RPZ).

2. Objections identifying potential airport hazards such as structures which may not be above ground level (for example, landfills, retention ponds, and waste recycling areas) but may create an environment that attracts birds and other wildlife.

3. When the Airports Division or the Airports District Office (ADO) determines a Wildlife Hazard Assessment is required per Advisory Circular 150/5200–33, the Airports Division or ADO will provide the contact information for the appropriate US Department of Agriculture (USDA) or private biologist meeting the education and experience requirements set forth in the current Advisory Circular 150/5200–36 in the divisional response in the aeronautical study. This information will be incorporated by the OEG in the Notice of Preliminary Findings letter to the proponent.

7–1–3. DETERMINATIONS

Determinations issued by the FAA receive widespread public distribution and review. Therefore, it is essential that each determination issued is consistent in form and content to the extent practicable. To facilitate this and to achieve economy in clerical handling, automated correspondence through the OE/AAA automation program must be used in lieu of previously approved FAA forms. Determinations must be issued as follows:

a. Issue a "Does Not Exceed" (automated DNE letter) determination if the structure does not exceed obstruction standards, does not have substantial adverse physical or electromagnetic interference effect upon navigable airspace or air navigation facilities, and would not be a hazard to air navigation.

b. Issue an "Exceeds But Okay" (automated EBO letter) determination if the structure exceeds obstruction standards but does not result in a substantial adverse effect, circularization was not necessary, and meets one of the following conditions:

1. The structure is temporary;

2. The structure is existing; or

3. The structure involves an alteration with no physical increase in height or change of location such as a proposed decrease in height or proposed side mount.

NOTE–
The significant difference between an EBO determination and a "Determination of No Hazard to Air Navigation" (DNH) is that the EBO determination does not allow for petition rights.

c. Issue a "Notice of Preliminary Findings" (automated NPF letter) if the structure exceeds obstruction standards and/or has an adverse effect

upon navigable airspace or air navigation facilities and resolution or further study is necessary to fully determine the extent of the adverse effect. The NPF facilitates negotiation and is useful in preserving navigable airspace. Normally, the FAA should not automatically initiate further study (including circularization) without a request to do so by the sponsor. The intent of the NPF is to inform the sponsor of the initial findings and to attempt resolution. If the sponsor fails to contact the FAA after receiving the notice, terminate the case. No further action by the FAA is required unless the sponsor refiles. If negotiation is successful, and resolution is achieved, or further study is completed, an appropriate subsequent determination should be issued.

d. Issue a "Determination of No Hazard" (DNH) if the structure exceeds obstruction standards but does not result in a substantial adverse effect.

e. Issue a "Determination of Hazard" (DOH) if the structure would have or has a substantial adverse effect; negotiations with the sponsor have been unsuccessful in eliminating the substantial adverse effect; and the affected aeronautical operations and/or procedures cannot be adjusted to accommodate the structure without resulting in a substantial adverse effect. The obstruction evaluation may or may not have been circularized.

7–1–4. DETERMINATION CONTENT AND OPTIONS

Use the following items, as appropriate, to ensure that the necessary information is included in each determination:

a. All no hazard determinations must address or include:

1. FULL DESCRIPTION. A full description of the structure, project, etc., including all submitted frequencies and ERP must be included. Use exact information to clearly identify the nature of the project (for example, microwave antenna tower; FM, AM, or TV antenna tower; suspension bridge; four–stack power plant; etc.).

2. LATITUDE, LONGITUDE, AND HEIGHT. Specify the latitude, longitude, and height(s) of each structure. When an obstruction evaluation study concerns an array of antennas or other multiple–type structures, specific information on each structure should be included.

3. MARKING AND/OR LIGHTING. A marking and/or lighting recommendation must be a condition of the determination when aeronautical study discloses that the marking and/or lighting are necessary for aviation safety.

(a) If the OE notice was for an existing structure with no physical alteration to height or location (for example, a side mount or an editorial correction to coordinates and/or elevations due to more accurate data), and the structure was previously studied, the recommended marking and/or lighting may be in accordance with the prior study.

(b) If the notice is for a new structure, a physical alteration (height/location) to an existing structure, or an existing structure that did not involve a physical alteration but was not previously studied, the recommended marking and/or lighting must be in accordance with appropriate chapters of the current AC 70/7460–1, Obstruction Marking and Lighting.

(c) If the OE notice was for a change in marking and/or lighting of a prior study whether the structure exists or not yet built, the recommended marking and/or lighting must be in accordance with appropriate chapters of the current AC 70/7460–1.

(1) If it is an existing FCC–licensed structure, and the requested marking and/or lighting change is recommended, notify the sponsor to apply to the FCC for permission to make the change. Use the following specific language: "If the structure is subject to the authority of the Federal Communications Commission, a copy of this letter must be forwarded to them and application should be made to the FCC for permission to change the marking and/or lighting as requested." This language is available in the automated letters.

(2) If the marking and/or lighting change involves high intensity white obstruction lights on an FCC–licensed structure, the sponsor must be notified that the FCC requires an environmental assessment. Use the following specific language: "FCC licensees are required to file an environmental assessment with the Commission when seeking authorization for the use of the high intensity flashing white lighting system on structures located in residential neighborhoods, as defined by the applicable zoning law."

(3) If it is an existing structure and the requested marking and/or lighting change is

recommended, the sponsor must be required to notify Aeronautical Information Services (AJV−A) directly when the change has been accomplished. Use the following specific language: “So that aeronautical charts and records can be updated, please notify Aeronautical Information Services in writing when the new system is installed and operational. Notification should be addressed to: Aeronautical Information Services, AJV−A, 6500 South MacArthur Blvd, Oklahoma City, Oklahoma 73169. The sponsor may also indicate marking and/or lighting change with a Supplemental Notice, 7460−2 Actual Construction Notice, submitted electronically using the OEAAA website.

(d) If it is determined that marking and/or lighting are not necessary for aviation safety, marking and/or lighting may be accomplished on a voluntary basis. However, marking and/or lighting should not be a condition of the determination. Instead, it must be recommended that voluntary marking and/or lighting be installed and maintained in accordance with AC 70/7460−1. Use specific language as follows: “Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking and/or lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory Circular 70/7460−1.”

4. SUPPLEMENTAL NOTICE. FAA Form 7460−2, Notice of Actual Construction or Alteration, Part 2, is the authorized form for sponsors to report the start, completion, or abandonment of construction, and the dismantlement of structures. Furnish this form to each sponsor when supplemental notice is required. Each service area office must take action to ensure that their return address is correct before sending the form to the sponsor.

(a) When deemed necessary, request sponsors to complete and mail Part 1 of FAA Form 7460−2, to be received at least 10 days before the start of construction or alteration, when:

(1) An aeronautical procedure or minimum flight altitude will be affected (supplemental notice earlier than 10 days may be requested to permit adjustments).

(2) The construction will be in progress over an extended period of time.

(3) The structure will exceed 500 feet AGL and will be erected within a relatively short period of time, as in the case of a TV tower.

(b) In addition, submission by the sponsor of FAA Form 7460−2, must be required when the structure is a new construction or involves a proposed physical alteration, and:

(1) Is more than 200 feet above ground level (AGL).

(2) Is less than 200 feet AGL but exceeds obstruction standards, requires a change to an established FAA procedure or flight minimum, requires certified accuracy so as not to exceed minimums.

(3) The FAA deems it necessary for any other reason.

(c) The information submitted on FAA Form 7460−2 is used for:

(1) Charting obstructions to air navigation on aeronautical charts.

(2) Giving notice to air missions, when applicable, of the construction of obstructions.

(3) Changing affected aeronautical procedures and operations.

(4) Revising minimum flight altitudes.

(5) Updating the AeroNav Obstacle Digital File.

(d) Do not require supplemental notice for existing structures that do not involve a proposed physical alteration. Instead, directly communicate the known information to AeroNav and other relevant persons or organizations, as necessary.

5. EXPIRATION DATE. Include an expiration date, if applicable.

(a) Assign an expiration date to all determinations that involve new construction or alterations.

(1) Normally all determinations, whether FCC construction permit related or not, must be assigned an expiration date 18 months from the effective/issued date. In the case of determinations involving petition rights, the expiration must be 18 months from the final date of the determination.

(2) If circumstances warrant, an expiration date not to exceed 18 months should be assigned.

(b) The determination expires on the date prescribed unless:

(1) Extended, revised, or terminated by the issuing office.

(2) The construction is subject to the licensing authority of the FCC and an application for a construction permit has been filed as required by the FCC within six months of the date of the determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application. A request for extension must be postmarked or delivered at least 15 days prior to expiration.

(c) If the date of a final determination is changed because of a petition or review, a new expiration date will be specified as appropriate.

(d) Determinations involving existing structures that do not involve a proposed physical alteration must not contain an expiration date.

6. SPECIAL CONDITIONS. Any condition upon which a no hazard determination is based must be specified in the determination. When FAA Form 7460–2 is requested, a condition of the determination will be for the sponsor to keep the FAA informed of the project's status. Use the following specific language: "As a result of this structure being critical to flight safety, it is required that the FAA be kept informed as to the status of the project. Failure to respond to periodic FAA inquiries could invalidate this determination."

7. SPECIAL STATEMENTS. To help prevent potential problems, all determinations must include the following statements:

(a) "This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any change in coordinates, heights, frequency(ies) or use of greater power will void this determination. Any future construction or alteration, including increase in heights, power, or the addition of other transmitters, requires separate notice to the FAA."

(b) "This determination does include temporary construction equipment, such as cranes, derricks, etc., which may be used during the actual construction of the structure. However, this equipment must not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA."

(c) "This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, state, or local government body."

8. ADVISORIES. Determinations may require advisory statements (available in the automated letters) to notify sponsors of potential issues.

(a) Issues pertaining to noise can be addressed as a statement in the determination with the following language: "The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport."

(b) When requested by the military, issues pertaining to military training areas/routes can be addressed in a determination with the following language: "While the structure does not constitute a hazard to air navigation, it would be located within or near a military training area and/or route."

(c) Issues pertaining to a runway protection zone can be addressed in the determination as follows: "While the structure does not constitute a hazard to air navigation, it would be located within the Runway Protection Zone (RPZ) of the airport/runway. Structures, which will result in the congregation of people within an RPZ, are strongly discouraged in the interest of protecting people and property on the ground. In cases where the airport owner can control the use of the property, such structures are prohibited. In cases where the airport owner exercises no such control, advisory recommendations are issued to inform the sponsor of the inadvisability of the project from the standpoint of safety to personnel and property."

(d) Issues pertaining to municipal solid waste landfills can be addressed in the determination as follows:

"The FAA has identified the need for an analysis of potential wildlife hazards to aircraft as described in Advisory Circular 150/5200–33, Hazardous Wildlife Attractants on or Near Airports, to be accomplished for this proposal in accordance with 40 Code of Federal Regulation (CFR) 258 section 258.10.

Owners or operators of new, existing, and lateral expansions of Municipal Solid Waste Landfill (MSWLF) units that are located within 10,000 feet of any airport runway end used by turbojet aircraft, or within 5,000 feet of any airport runway end used by only piston–type aircraft, must demonstrate the MSWLF units design and operation do not pose a bird hazard to aircraft.

When the services of a wildlife damage management biologist are required, the FAA recommends that land use developers contact a consultant specializing in wildlife damage management or the appropriate United States Department of Agriculture (USDA) State Director of Wildlife Services. The USDA's state offices can be found on their website: (https://www.aphis.usda.gov)."

(e) Issues pertaining to other proposals that may create an environment that attracts birds and other wildlife can be addressed in the determination as follows:

"The proposal has the potential to attract hazardous wildlife on or near a public–use airport. The FAA recommends, and local code may require, adherence to guidance in Advisory Circular 150/5200–33, Hazardous Wildlife Attractants on or Near Airports. The FAA encourages the sponsor to coordinate with the local airport owner/operator prior to any construction at the site and to verify that no potential exists to attract hazardous wildlife on or near the public–use airport."

b. In addition to the above items, a DNH must also include or address:

1. Obstruction standards exceeded.

2. Effect on VFR/IFR aeronautical departure/arrival and en route operations, procedures, and minimum flight altitudes.

3. Effect on existing public–use airports and aeronautical facilities.

4. Effect on all planned public–use airports and aeronautical facilities.

5. Cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures.

6. Information and comments received as a result of circularization, informal airspace meetings, and negotiations.

7. Reasons and basis for the determination that the structure will not be a hazard to air navigation and any accommodations necessary by aeronautical users or sponsors.

8. Consideration given to any valid aeronautical comments received during the aeronautical study. The official FAA determination must be a composite of the comments and findings received from other interested FAA offices.

9. Conditions of the determination including recommendations for marking and/or lighting of a structure, changes in procedures and/or altitudes that are necessary to accommodate the structure. The "conditions" should include a statement that appropriate action will be taken to amend the effected procedure(s) and/or altitude(s) upon notification to the FAA by the sponsor prior to the start of construction or alteration.

10. Limitations, if any.

11. Petitioning information regardless of whether the structure is proposed or existing using the following specific language: "This determination is subject to review if an interested party files a petition that is received by the FAA (30 days from issued date). In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted to the Manager, Rules and Regulations Group, Federal Aviation Administration, 800 Independence Ave., SW., Washington, DC 20591. This determination becomes final on [40 days from issued date] unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review."

c. A DOH must include or address:

1. FULL DESCRIPTION. A full description of the structure, project, proposal, etc. including all submitted frequencies and ERP must be included. Use exact information to clearly identify the nature of the project. Use wording, such as microwave antenna tower, FM or AM antenna tower, suspension bridge, TV antenna tower, or four–stack power plant.

2. LATITUDE, LONGITUDE, AND HEIGHT. Specify the latitude, longitude, and height(s) of each

structure. When an obstruction evaluation study concerns an array of antennas or other multiple–type structures, specific information on each structure should be included.

3. BASIS FOR THE DETERMINATION. The reasons and basis for the determination must include the adverse effect of the proposal upon the safe and efficient use of the navigable airspace by aircraft and upon air navigation facilities. Also, state the reasons the affected aeronautical operations or the procedure cannot be adjusted to alleviate or eliminate the conflicting demands for the airspace. As a minimum, the determination must address the following:

(a) Obstruction standards exceeded.

(b) The effect on VFR/IFR aeronautical departure/arrival and en route operations, procedures, and the minimum flight altitudes effect on existing public–use airports and aeronautical facilities.

(c) The effect on all planned public–use airports and aeronautical facilities on file with the FAA or for which the FAA has received adequate notice.

(d) The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures.

(e) Information and comments received as a result of circularization, informal airspace meetings and negotiations.

(f) Reasons and basis for the determination as to why the structure would be a hazard to air navigation (for example, a clear showing of substantial adverse effect).

4. PETITIONING INFORMATION – Include petitioning information regardless of whether the structure is proposed or existing using the following specific language: "This determination is subject to review if an interested party files a petition on or before [30 days from issued date]. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted to the Manager, Rules and Regulations Group, Federal Aviation Administration, 800 Independence Ave., SW., Washington, DC 20591. This determination becomes final on [40 days from issued date] unless a petition is timely filed. The determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review."

7–1–5. DETERMINATION DATES

a. ISSUED DATE – The issuance date of a determination is the date the determination is distributed.

b. PETITION DEADLINE – For determinations that involve petition rights, the deadline for receipt of petition must be 30 days from the date of issuance.

c. EFFECTIVE DATE –

1. The effective date of determinations that do not involve petition rights must be the date of issuance.

2. The effective date of determinations that involve petition rights, whether for existing or proposed structures, must be 40 days from the date of issuance provided a petition for review is not filed. If a petition for review is filed, the determination will not become final pending disposition of the petition.

NOTE–
The effective date and the issued date may or may not be the same. The effective date may also be referred to as the final date.

7–1–6. EXISTING STRUCTURES

A determination issued as a result of the study of an existing structure may be written in the following forms:

a. As a DOH or DNH.

b. As a formal letter outlining the effects of the structure and perhaps recommending to the sponsor that the structure be marked and/or lighted, specifying that it be reduced in height, or specifying that it be removed.

c. As an informal letter or staff study making an internal FAA recommendation.

d. As a formal letter to the FCC recommending the dismantling of an abandoned tower.

7–1–7. DISTRIBUTION OF DETERMINATIONS

A record of the distribution for each determination whether original, revised, extended, or affirmed must be maintained in the aeronautical study file. When

appropriate, a reference to the distribution code, a mailing list, or any other evidence of distribution will be sufficient.

a. Copies of all determinations must be sent to the:

1. Sponsor (with FAA Form 7460–2 as necessary)

2. Sponsor's representative (if any).

3. FCC (if the structure is subject to its licensing authority).

4. AeroNav in lieu of FAA Form 7460–2 (if the structure is existing and does not involve a proposed physical alteration). Copies of the determination must always be accompanied by a copy of the submitted map and, if applicable, a copy of the survey; or if the determination involves a change to marking and/or lighting of an existing structure for which the sponsor has been requested to notify AeroNav directly of the change.

5. Copies of the determination must always be accompanied by a copy of the submitted map and, if applicable, a copy of the surveys.

6. Other persons, offices, or entities as deemed necessary or as requested.

b. In addition to the above distribution, copies of a DNH and DOH must also be sent to:

1. AeroNav.

2. Military representatives.

3. All other interested persons.

Section 2. Extension of Determinations

7–2–1. AUTHORITY

The FAA official issuing a determination has the delegated authority to grant an extension. Where a petition for an extension generates public interest or controversy, the OEG must inform the office of Mission Support, Policy.

7–2–2. CONDITIONS

An extension may be granted provided the request is timely (received by the FAA 15 days before the determination expires) and a review of aeronautical activity shows no significant adverse effect resulting from a change that has occurred since the determination was issued. In the event a request for extension to the expiration date cannot be granted based on new facts, a "Determination of Hazard to Air Navigation" should be issued effective on the day following the expiration date of the no hazard determination.

7–2–3. COORDINATION

Coordination with Rules and Regulations Group must be obtained before denying extensions that pertain to structures that are subject to FCC licensing authority.

7–2–4. EXTENSION PERIOD

Normally, one extension for a period of 18 months may be granted, unless the sponsor requests a shorter period.

7–2–5. REVIEW PROVISIONS FOR PETITION

If an extension is granted on a DNH, petition rights apply, and therefore, each such extension must contain a statement advising of the petition period, the effective date, and the new expiration date.

7–2–6. DISTRIBUTION

Distribution must be accomplished in accordance with paragraph 7–1–7.

Section 3. Revision, Correction, and Termination of Determination

7–3–1. REVISIONS AND TERMINATIONS BASED ON NEW FACTS

The FAA official responsible for issuing a no hazard determination has the delegated authority (Section 77.35) to revise or terminate the determination provided. The decision is based upon new facts that change the basis on which the original determination was made.

a. Revised determinations based on new aeronautical facts must be issued under a new aeronautical study number that would cancel and supersede the original determination.

b. A decision to terminate a no–hazard determination must be based on new facts that change the basis on which the determination was made. Normally in such a case, a subsequent "Determination of Hazard" would be issued under a new aeronautical study number.

c. If a proposed structure is relocated or there is a height change after a determination of no hazard is issued, a new filing must be submitted. When new filings are received, terminate any previous determinations before moving forward with the aeronautical studies. Multiple filings at the same location result in an administrative hardship and create a cumulative impact issue that could result in erroneous data analysis. Determinations must not be used as a basis for financial arrangements.

7–3–2. CORRECTION

The FAA official issuing a determination may also correct that determination as required. Editorial changes that do not involve a coordinate change (of one second or more in latitude or longitude) may be issued as corrections. Elevation changes that do not increase the height of the original proposal may also be issued as corrections. In this case, no change to dates would be necessary. Adjustments or corrections that involve a coordinate change of less than one second or reduced elevation must be issued as a correction under the original study. Adjustments or corrections to a proposal for a coordinate change of one second or more and/or an increase to the elevation must be refiled as a new study.

7–3–3. STANDARD FORMAT

a. A revised determination based on new aeronautical facts must follow the standard format of the appropriate determination. An explanation should be included addressing the reason for the revision. A statement indicating that the revised determination cancels and supersedes the determination originally issued, should also be included.

b. A determination addressing editorial changes that do not involve structure coordinates or elevations may be issued by duplicating the original determination, making the corrections, adding a statement explaining the correction, and adding "Correction" at the end of the title.

c. A determination addressing corrections to coordinates or elevations must follow the standard format of the appropriate determination. An explanation should be included addressing the correction. This may be done in the description section of the determination. A statement should also be included which indicates that the corrected determination cancels and supersedes the original determination.

7–3–4. DISTRIBUTION

Copies of revised or corrected determinations must be given the same distribution as the original determination and, if appropriate, be distributed to other known interested persons or parties.

Chapter 8. Post Determination Action

Section 1. Action

8–1–1. FOLLOW–UP ACTION

If a determination requires supplemental notice (Form 7460–2) and the expiration date has passed without its receipt, action must be taken to determine construction status. To assist in this process, the automated "Follow–up Report" is available to identify those cases that require action. To determine construction status, air traffic must forward an automated Project Status Request (PSR) letter to the sponsor. If the sponsor fails to complete and return the PSR within 37 days, air traffic may send an automated Termination Project Status (TERPSR) letter to terminate the case.

NOTE–
If a previous PSR has been received for the case indicating an FCC application has been made for a construction permit, the case must not be terminated. Consequently, additional attempts must be made to determine construction status.

8–1–2. RECEIPT OF COMPLETED PSR

When a completed PSR is received, air traffic must:

a. Ensure that a copy of the Construction Permit (CP) documentation is attached (if the completed PSR indicates "Subject to CP").

1. If improper documentation or no documentation is attached, the case may be terminated. Distribute the termination letter as appropriate including a copy to the FCC.

2. If proper documentation is attached:

(a) Retain the completed PSR.

(b) Make a manual update to the automated OE case file to reflect a follow–up date consistent with the expiration of the CP. If a CP has been applied for but has not been issued, indicate one year later for the new follow–up date.

b. If the completed PSR indicates "Not Subject to a CP":

1. Retain the completed PSR.

2. Terminate the case (send automated TEREXP letter).

3. Distribute the termination letter as appropriate including a copy to the FCC.

c. If the completed PSR indicates "Project Abandoned," refer to paragraph 8–1–4.

d. If the completed PSR indicates "Project Complete," take action that is consistent with receipt of a completed Form 7460–2.

8–1–3. RECEIPT OF COMPLETED FORM 7460–2

When a completed Form 7460–2 is received, air traffic must immediately:

a. Review the form.

1. If the form indicates "Project Abandoned," follow procedures outlined in paragraph 8–1–4.

2. If the form indicates "Construction Dismantled," follow procedures outlined in paragraph 8–1–5.

b. Compare the information on the form with the study file.

1. If information on the form differs from the study file, take appropriate action to verify and/or resolve any differences.

2. If it is verified that submitted information differs from the original evaluation, initiate a new aeronautical study to reevaluate the new information.

c. Make special distribution of completed Form 7460–2, part 1, as necessary. If minimum flight altitudes require change or the potential for EMI exists, notify the FPT, FS, Technical Operations Services, and/or FM by the quickest means possible.

d. Distribute the completed Form 7460–2, part 2, as follows:

1. Send one copy of completed Form 7460–2 to NOS along with a copy of the map and survey (if applicable).

2. Send a copy of completed Form 7460–2 to all interested offices including military, FSS, ARTCC

E–MSAW, ARTS IIA, III, IIIA, and Micro E ARTS facilities.

e. Make the necessary manual updates to the automated OE case file.

8–1–4. PROCESSING PROJECT ABANDONED NOTIFICATION

When notification of an abandonment is received, air traffic must:

a. Retain the correspondence or record of conversation notifying that the project has been abandoned.

b. Terminate the case (send an automated TERABA letter).

c. Distribute the termination letter, as appropriate. If the termination is for an FCC involved structure, send a copy to the FCC.

8–1–5. PROCESSING DISMANTLEMENT NOTIFICATION

When notification of a dismantled structure is received, air traffic must:

a. Retain the correspondence notifying that the project has been dismantled.

b. Make a manual update to the automated OE case file if available.

c. Notify AeroNav, FCC (if it is involved), and FPT of the dismantled structure by sending a copy of the received correspondence.

Chapter 9. Discretionary Review Process

Section 1. General

9–1–1. AUTHORITY

The Director of Mission Support, Policy is delegated the authority to:

a. Grant or deny a petition for discretionary review;

b. Decide the procedural basis upon which a review will be made;

c. Affirm, revise, or reverse a determination issued in accordance with Part 77, section 77.31 or 77.35; and

d. Remand the case to OEG for termination, re–study or other action as necessary.

9–1–2. OEG RESPONSIBILITY

a. Any written communication that contains an objection to a determination issued under Part 77, sections 77.31 or 77.35, and which may be considered a petition under section 77.37, must be treated as a petition.

b. Any FAA office receiving a petition for discretionary review must immediately forward the document to the Rules and Regulations Group.

c. If a petition regarding a "Determination of No Hazard" is received toward the end of the 30–day petition–filing period, the receiving office must notify the Rules and Regulations Group as soon as possible.

d. The OEG must assist, as requested, and provide information in a timely manner.

9–1–3. JURISDICTION

Upon receipt of a petition, jurisdiction of the case immediately transfers to the Rules and Regulations Group, and any further coordination with the petitioner, the sponsor, or designated representative must be conducted by the Rules and Regulations Group.

Section 2. Petition Processing

9–2–1. ADMINISTRATIVE PROCESSING

Upon receiving a petition, the FAA will:

a. Assign an OE case number to the petition composed of the last two digits of the calendar year in which the assignment is made, the symbol "AWA" to indicate Washington headquarters, the symbol "OE" to indicate obstruction evaluation, and a serial number. Serial numbers run consecutively within each calendar year.

b. If the petition does not meet the criteria in Part 77, notify the petitioner in writing.

c. If the petition meets the criteria in Part 77, notify the sponsor, the petitioner (or designated representative), the OEG, and, if appropriate, the FCC that the determination is not and will not become final pending disposition of the petition.

d. Distribute a copy of a valid petition and the associated determination to the Spectrum Assignment and Engineering Services, NAS Support Group, Flight Procedures Standards Branch, AFS–420, Airport Engineering Division, AAS–100; and the Terminal Procedures and Charting Group for their examination.

e. Coordination and consultation with the Office of the Chief Counsel (AGC) is required for high interest or controversial cases.

f. There are no regulatory time frames for completion of the response to a petition of discretionary review. However, every effort should be made to complete the examination, or review, within six months of receipt of the petition.

9–2–2. RECOMMENDATIONS

Based upon the results of the examination of the petition and further coordination with Spectrum Assignment and Engineering Services, AFS–420, AAS–100, Terminal Procedures and Charting Group, and, as appropriate, AGC, the Rules and Regulations Group must recommend to the Director of Mission Support, Policy whether to grant or deny the review, and whether the review should include a public comment period.

9–2–3. DISTRIBUTION OF NOTICES TO GRANT DISCRETIONARY REVIEW

The Rules and Regulations Group will distribute the notice to grant discretionary review in writing to the petitioner, the sponsor (or designated representative), interested parties of record, and the FCC, if appropriate. The notice will include, but is not limited to: a statement of the specific issues to be considered; the aeronautical study number; a description of the proposal's location and height; the obstruction standards that are exceeded; the date the comment period closes (no less than 45 days from issuance of the grant); where to send comments; and a person to contact for more information.

9–2–4. OEG PARTICIPATION

When a discretionary review is granted, the Rules and Regulations Group must request the OEG submit written documentation verifying that the electronic case file is complete.

9–2–5. FINAL DECISION

Based on the review of the aeronautical study, the petition, current directives and orders, and comments received, the Rules and Regulations Group must draft and coordinate a document for the Director of Mission Support, Policy signature that affirms, reverses, or revises the initial determination, or remands the case to OEG for termination, re–study or other action as necessary.

9–2–6. DISTRIBUTION OF DECISION

Copies of the final decision must be distributed by the Rules and Regulations Group to the petitioner(s), sponsor (or designated representative), interested parties of record, OEG, and FCC, if appropriate.

Part 3. Airport Airspace Analysis

Chapter 10. Basic

Section 1. Policy

10–1–1. PURPOSE

a. This part provides guidelines, procedures, and standards that supplement those contained in 14 CFR Part 157, Notice of Construction, Alteration, Activation, and Deactivation of Airports.

b. These guidelines, procedures, and standards must be used in determining the effect construction, alteration, activation, or deactivation of an airport will have on the safe and efficient use of the navigable airspace by aircraft.

10–1–2. AUTHORITY

The authority for managing the Airports Program is delegated to the regional Airports Division manager and may be re–delegated to the Airports District Offices (ADO). Airport personnel must administer the Airports Program with the coordinated assistance of air traffic, Technical Operations Services, Flight Procedures Team, and Flight Procedures personnel.

10–1–3. AIRPORT PROGRAMS

a. Airport development/improvement projects are initiated under the authority of several laws relating to Federal airport financial assistance programs. There are certain similarities in processing federally assisted and non–federally–assisted airport development improvement projects, including airport layout plan reviews. However, a significant difference is that on a federally assisted project the FAA must formally approve the airspace for the projects that receive federal assistance.

b. Airport Improvement Program (AIP) – AIP projects, including airport layout plans, are processed similarly to non–AIP projects, except that the airspace for the airport study results in either an agency approval or disapproval of the project.

c. Disposal or Conveyance of Federal Surplus Real Property for Public Airport Purposes – The FAA is required to officially endorse the site before property interest in land owned and controlled by the United States is conveyed to a public agency for public airport purposes. Airspace cases are handled in the same manner as proposals for other federally assisted airports.

d. Military/National Aeronautics and Space Administration (NASA) Airport Programs – 49 U.S.C, Section 44502(c) provides that the DOD and NASA must not acquire, establish, or construct any military airport, military landing area, or missile or rocket site, or substantially alter any runway layout unless reasonable prior notice is given to the FAA. This permits the FAA to "...advise the appropriate committees of Congress and other interested departments, agencies, and instrumentalities of the government on the effects" of such projects "upon the use of airspace by aircraft."

NOTE–
See Chapter 13 for the procedures for processing these proposals.

e. Part 157 Proposals–Pursuant to appropriate sections of the Federal Aviation Act of 1958, as amended, Part 157 was adopted to require notice to the Administrator by persons proposing to construct, alter, activate, or deactivate a civil or joint–use (civil/military) airport for which Federal funds have not been requested. Such notice is required so that a study can be made and the proponent can be advised as to the proposal's effect on the use of the navigable airspace by aircraft.

f. All airport proposals on public–use airports not requiring notice under Part 157 that may require notice under Part 77.

g. Passenger Facility Charge (PFC) – Part 158 program projects are required to be on an approved ALP and are processed similarly to AIP projects.

10–1–4. FUNDING RESPONSIBILITY

Each participating office must note airport projects or airport layout plan changes which would, if accomplished, lead to the relocation, replacement, or modification of air traffic control, or air navigation and communications facilities. Such conditions must be identified in the review process and appropriate recommendations made regarding funding responsibilities as related to current FAA policy on facility relocation associated with airport improvements or changes (see FAAO 6030.1 and AC 150/5300–7, FAA Policy On Facility Relocations Occasioned By Airport Improvements Or Changes).

10–1–5. RESPONSIBILITY

a. The Airports Division, or designated representative, is responsible for the overall Airports Program, initiating the coordination of airspace studies of airport proposals; conducting the necessary circularization; consolidating and resolving comments; and developing and forwarding the FAA determination to the airport sponsor/proponent. Where applicable, the airports division personnel must forward documents regarding potential noise problems to the airport proponent/sponsor for resolution.

b. The service area office is responsible for evaluating the proposal from the standpoint of safe and efficient use of airspace by aircraft. In addition, based on existing and/or contemplated traffic patterns and procedures, the service area office director must be responsible for identifying potential noise problems and advising the Airports Office accordingly.

c. The FPT is responsible for evaluating proposals to determine impacts on instrument procedures and whether aircraft instrument operations can be conducted safely.

d. The Flight Standards Division is responsible for reviewing proposals to determine the safety of aeronautical operations, and of persons and property on the ground.

e. The flight standards district office (FSDO) is responsible for reviewing Part 157 proposals for seaplane bases and heliports.

f. The Technical Operations Services area office is responsible for:

1. Reviewing engineering studies on airport proposals to evaluate their effects upon commissioned and/or proposed NAVAIDs.

2. Conducting electromagnetic studies to evaluate the effect existing and/or proposed objects will have upon air navigation and communications facilities.

3. Reviewing and evaluating line–of–site (shadow) studies on existing and/or proposed objects to determine impact on control tower visibility.

4. Highlighting frequency management problems and reserving frequencies.

Section 2. Airport Study

10–2–1. PURPOSE

a. The purpose of an aeronautical study is to determine what effect the proposal may have on compliance with Airports Programs, the safe and efficient utilization of the navigable airspace by aircraft, and the safety of persons and property on the ground.

b. A complete study consists of an airspace analysis, a flight safety review, and a review of the proposal's potential effect on air traffic control operations and air navigation facilities.

c. Each phase of the airport aeronautical study requires complete and accurate data to enable the FAA to provide the best possible advice regarding the merits of the proposal on the NAS.

10–2–2. STUDY NUMBER ASSIGNMENT

Regional Airports Division personnel must assign a nonrule airports (NRA) aeronautical study number to each airport case in accordance with paragraph 2–5–2. Construction or alteration of navigation and communication aids may either be handled by the specific Technical Operations Services area office as a nonrule (NR) aeronautical study or by the specific Airports Division personnel as a NRA case.

10–2–3. PROPOSALS SUBJECT TO AERONAUTICAL STUDY

To the extent required, conduct an aeronautical study of the following:

a. Airport proposals submitted under the provisions of Part 157. Airport proposals on public–use airports, not requiring notice under Part 157, may require notice under Part 77.

b. Construction safety plans as appropriate for Airport Improvement Program requests for aid and the Airports Regional Capital Improvement Program.

c. Notices of existing airports where prior notice of the airport construction or alteration was not provided as required by Part 157.

d. Disposal and Conveyance of Federal surplus and non–surplus real property for public airport purposes.

e. Airport layout plans, including consideration of the effect of structures which may restrict control tower line–of–sight capability and effects upon electronic and visual aids to air navigation.

f. Military proposals for military airports used only by the armed forces.

g. Military proposals on joint–use (civil/military) airports.

h. Proposed designation of instrument runways.

i. Airport site selection feasibility studies and recommendations.

j. Modification of airport design standards.

k. Any other airport case when deemed necessary to assess the safe and efficient use of the navigable airspace by aircraft and/or the safety of persons and property on the ground.

Section 3. Airport Standards

10–3–1. DESIGN STANDARDS

a. For Federally obligated airports, it is the responsibility of the airport proponent/sponsor/planner to comply with FAA airport design standards.

b. For non–Federally obligated airports or National Plan of Integrated Airport Systems (NPIAS) airports, it should be encouraged that the airport proponent/sponsor/planner comply with FAA airport design standards.

c. It should be noted when airport design standards are combined with appropriate state and local zoning ordinances, the resultant effect should:

1. Assure the lowest possible operational altitudes for aircraft;

2. Protect the economic investment in the airport; and

3. Promote safety in the areas affected by the airport by assuring, through proper development, compatible land use.

10–3–2. AIRPORT SPACING GUIDELINES AND TRAFFIC PATTERN AIRSPACE AREAS

a. The following guidelines are to be used as aids when evaluating airport proposals. The guidelines may also be used to determine airspace requirements to accommodate a given operation under a given condition, areas of potential air traffic conflict for aircraft having certain operational and performance characteristics, and the degree of aircraft operational flight compatibility with other airports in a given area. These guidelines are not to be construed as authorizations for aircraft operations contrary to any Code of Federal Regulations, nor are the dimensions to be construed as air traffic separation standards.

b. Aircraft Approach Categories – The factor used to categorize the following aircraft was taken from Part 97. This factor is based on 1.3 times the stall speed with aircraft in landing configuration at maximum certificate landing weight.

1. Category A – Speed less than 91 knots. This category includes civil single–engine aircraft, light twins, and some of the heavier twins.

2. Category B – Speed 91 knots or greater but less than 121 knots.

3. Category C – Speed 121 knots or greater but less than 141 knots.

4. Category D – Speed 141 knots or greater but less than 166 knots.

5. Category E – Speed 166 knots or greater. This category includes, for the most part, those military, experimental, and some civil aircraft having extremely high speeds and critical performance characteristics.

c. IFR Radar Airspace.

1. Air traffic control airspace requirements for a specific runway or airport are generally dictated by the approach category of the aircraft that will use the airport and the direction of the associated instrument approaches and departures. Based on these factors, the following rectangular airspace areas were developed as general guides for the planning or siting of new airports and the designation of instrument runways when IFR radar control procedures are contemplated or programmed for a single airport operation, or under certain conditions, multiple airport operations. No provisions are made for holding or for procedure turns within the airspace areas.

(a) Airports that are regularly used by Category C aircraft or larger: 10 miles in the departure direction, 15 miles in the direction from which approaches will be made, and 5 miles either side of the extended runway centerline.

(b) Airports which are regularly used by Category B and smaller aircraft: 5 miles in the departure direction, 10 miles in the direction from which approaches will be made, and 4 miles either side of the extended runway centerline.

(c) In metropolitan areas requiring more than one airport: the primary instrument runways at all airports should be aligned in the same general direction to allow maximum spacing between airspace areas.

(d) At airports having parallel approaches: the rectangular airspace areas should be applied to each runway. Should the instrument runways at an

airport have bi–directional instrument approach capabilities, the total length of the larger airspace areas should be increased to 30 miles for Category C and D aircraft, and to 20 miles for Category A and B aircraft in the smaller airspace areas.

2. These airspace dimensions will not, nor are they intended to, contain sufficient airspace to provide for completely independent IFR operations. Normally, these areas will provide for reasonable operational efficiency if the traffic pattern airspace areas of adjacent airports do not overlap. However, in large metropolitan areas where there is an extremely heavy mix of en route and terminal traffic, reasonable operational efficiency may not result even though the airspace areas do not overlap. Such situations require a thorough review of the procedural potential of the area, as well as alternate site considerations. In conducting studies where complete radar environments call for the larger airspace areas, and such areas abut each other but do not overlap, there is adequate space for:

(a) Approach and departure on the runway centerline.

(b) Two additional tracks offset from and parallel to the runway centerline. A minimum of four miles is provided between adjacent tracks of different areas (see FIG 10–3–1).

3. Where two smaller areas are adjacent but do not overlap, an additional 1–mile spacing is required on two of the longitudinal sides (see FIG 10–3–2).

4. When the anticipated traffic volume at an existing or proposed airport requires additional airspace for greater airspace–use efficiency and operational flexibility, expand the airspace, where available, by providing a 5–mile buffer area between the adjacent airports involved. This additional airspace will provide two additional tracks offset from and parallel to the runway centerlines within the airspace areas of the adjacent airports and one additional track for each airport within the 5–mile buffer area. A minimum of 3 miles is provided between each track paralleling the runway centerline and each additional track in the buffer area. A 3–mile no transgression area is also provided between the two airports (see FIG 10–3–3).

5. If additional airspace is required in the smaller areas for greater airspace–use efficiency and flexible operation, the procedures for determining the additional airspace are identical to those used for the larger areas, except that the smaller airspace should be used in lieu of the larger airspace areas. The 1–mile additional spacing should also be applied, as outlined in subparagraph b.3. above, in addition to the 5–mile buffer area, as outlined in subparagraph b.4. above (see FIG 10–3–4).

d. IFR Nonradar Airspace – A wide range of procedures is available for airspace requirements associated with instrument approach procedures at IFR airports without radar services. Therefore, no attempt has been made to describe these requirements in detail. However, should it become necessary to determine the airspace requirements at such airports, apply the appropriate primary airspace areas and "aircraft approach categories" discussed in subparagraph a. above. Additional information is contained in AC 150/5300–13, Airport Design.

e. VFR Airspace – A primary objective in an airport/airspace study is to determine whether compatible VFR traffic patterns may be developed for a new airport or when to alter a runway layout at an existing airport located in proximity to other airports. Because flight tracks and climb/descent profiles vary when operating in a VFR traffic pattern, the following guidelines are offered for use in these studies:

1. Traffic pattern airspace (see paragraph 6–3–8) of one airport may touch but should not overlap the traffic pattern airspace of another airport;

2. Traffic pattern airspace should be enlarged as described in paragraph 6–3–11 when more than four aircraft of the same category operate in a VFR traffic pattern at the same time.

10–3–3. DESIGNATION OF INSTRUMENT RUNWAYS, CHANGES OF AIRPORT STATUS VFR TO IFR AND LOWERING MINIMUMS

Requests for designation of instrument runways, which relate to installation or qualification for precision landing aids, and proposals for a change in airport status from VFR to IFR, or lowering instrument approach minimums usually take one of the following forms:

a. In cases involving Federally obligated airports, the Airports Division must be responsible for

coordinating, corresponding directly with the proponents, and formulating the official determination.

b. In cases requesting an instrument procedure not involving a Federally obligated airport, the FPT must coordinate directly with the proponent.

c. In cases requesting the installation of a NAVAID not involving a Federally obligated airport, the Technical Operations Services area office is responsible for coordinating, corresponding directly with the proponent, and formulating the official determination.

d. A proposal submitted under Part 157 (FAA Form 7480–1) not involving a request for an instrument procedure or an installation of a NAVAID, the appropriate Airports Division must be responsible for coordinating, corresponding directly with the proponent, and formulating the official determination, regardless of which division receives the proposal.

e. A change to the Airport Layout Plan (ALP). The Flight Procedures Team must be responsible for coordinating the requests for instrument procedures not involving a Federally obligated airport. Coordination of requests for installation of NAVAIDs must be in accordance with Part 4 of this Order. The Airports Office must be responsible for coordinating submittals under Part 157 and all other construction on a public–use airport, and changes to approved ALPs. Designation of instrument runways on all Federally obligated airports must be the responsibility of the Airports Division and will be treated in the same manner as a revision to the ALP. Regardless of where the coordination begins, air traffic, Technical Operations Services, Flight Standards, Airports, and Flight Procedures Team must have an opportunity to review and comment on the proposal. No division/service area office must require dual reporting of such a proposal. The responsible coordinating division/service area office must correspond directly with the proponent and formulate the official determination.

10–3–4. AIRSPACE FEASIBILITY STUDY

Before expending funds for acquisition of real property, development of the ALP, or plans and specifications for new airports and major airfield improvements, feasibility studies or preliminary airport site analyses are encouraged. Normally, preliminary airport site analyses are made on all Federal agreement projects involving airport site selections. Analyses of this nature allow the agency to evaluate the proposals and advise the proponents as to their feasibility from a safety and airspace use standpoint in addition to other related matters. Guidance for conducting these airport studies is contained in AC 150/5070–6A, Airport Master Plans. That AC describes the major considerations when selecting a site for a new airport for which Federal aid is anticipated. Airport studies of this nature are coordinated in the same manner as Federal agreement proposals, except that the proposals are not circularized to the public unless specifically requested by the proponent.

10–3–5. ONSITE EVALUATION

The intent of the FAA is to achieve safe airport operations and to fulfill its responsibilities of assuring that unsafe conditions will not exist. Therefore, if there is an indication of unsafe conditions or information to evaluate the proposal cannot be obtained from the proponent, an onsite evaluation of the proposal must be considered before issuing a determination. Such an evaluation may be necessary if the proposal would be located in a congested area or the study indicates the presence of obstructions that may affect the safe and efficient use of the airspace. An onsite evaluation may also be necessary if information pertaining to the proposal is insufficient for arriving at a determination. Airports, air traffic, Flight Procedures Team, Technical Operations Services, and Flight Standards personnel must assist in the evaluation as necessitated by the situation requiring evaluation.

10–3–6. FORMULATION OF FAA DETERMINATION

The FAA determination must be a composite of the airspace review and the comments and findings received from other interested FAA offices. Should there be a disagreement in the airspace findings or between other comments received, the disagreement must be resolved before formulating the FAA determination.

FIG 10–3–1

IFR–RADAR AIRPORT AIRSPACE REQUIREMENTS FOR CATEGORY C AND D AIRCRAFT (ADJACENT LARGER AREAS)

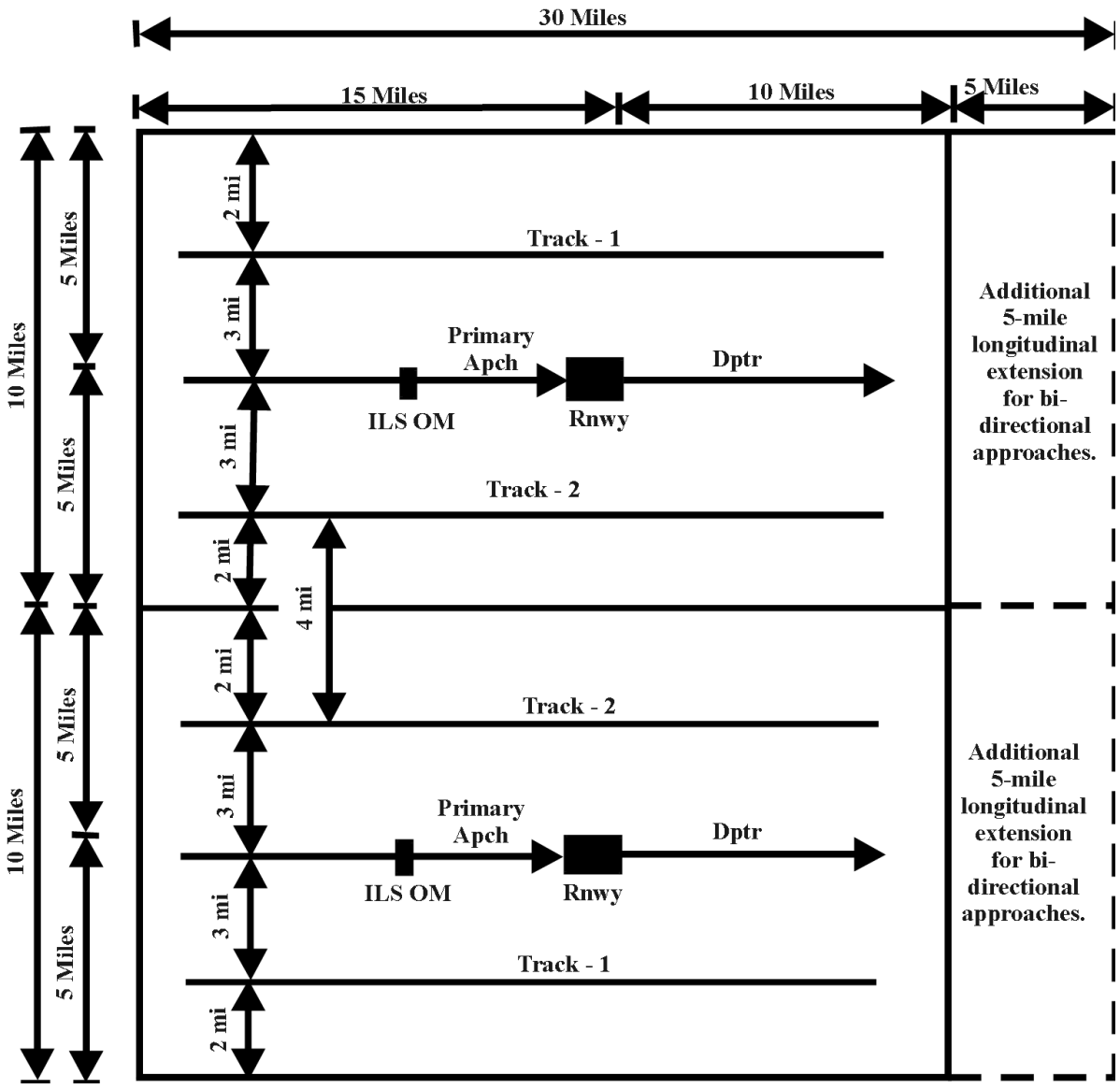


FIG 10–3–2

IFR–RADAR AIRPORT AIRSPACE REQUIREMENTS FOR CATEGORY A AND B AIRCRAFT (ADJACENT LARGER AREAS)

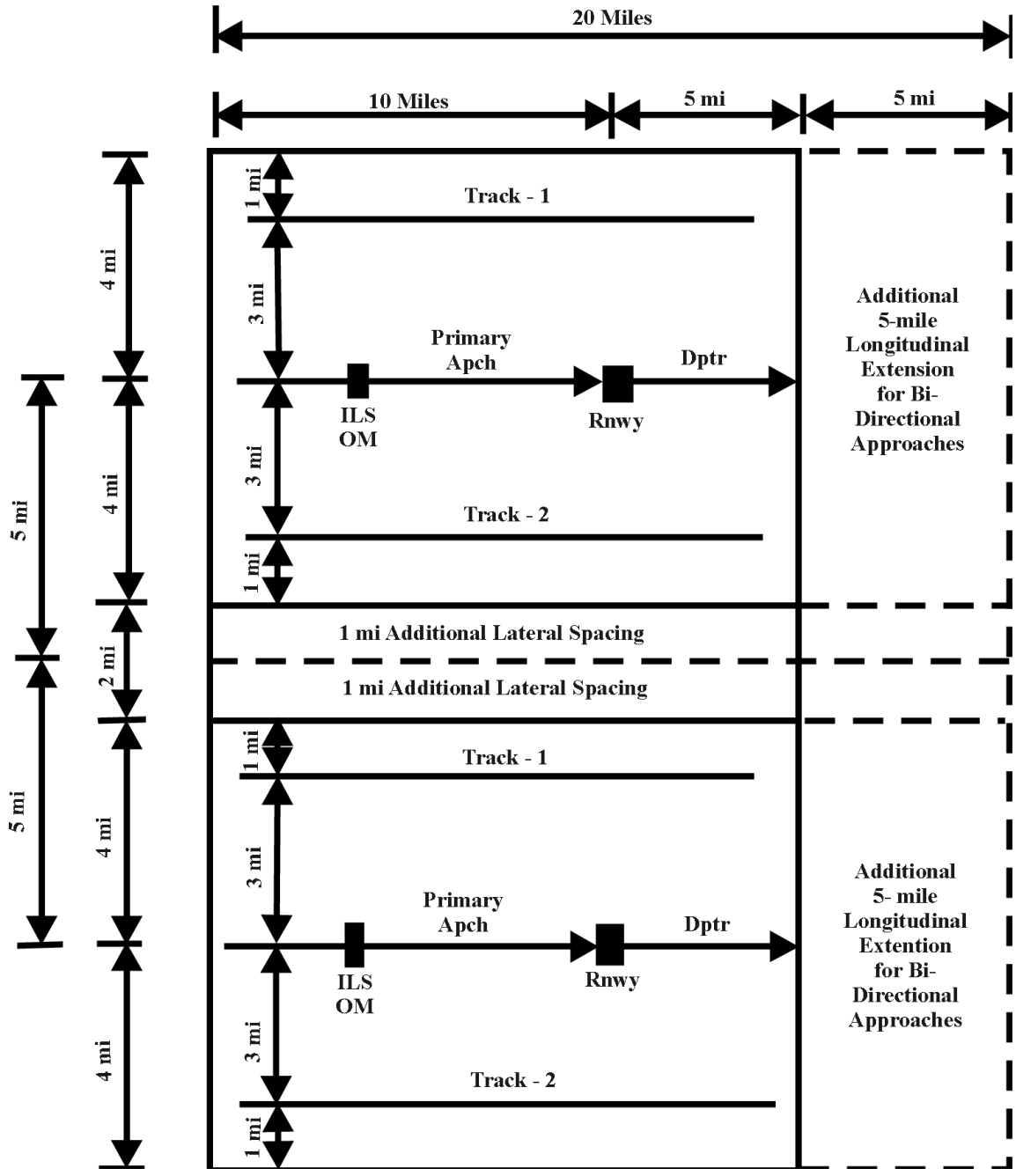


FIG 10–3–3

IFR–RADAR AIRPORT AIRSPACE REQUIREMENTS FOR CATEGORY A AND B AIRCRAFT (HIGH VOLUME ADDITIONAL AIRSPACE, SMALLER AREAS)

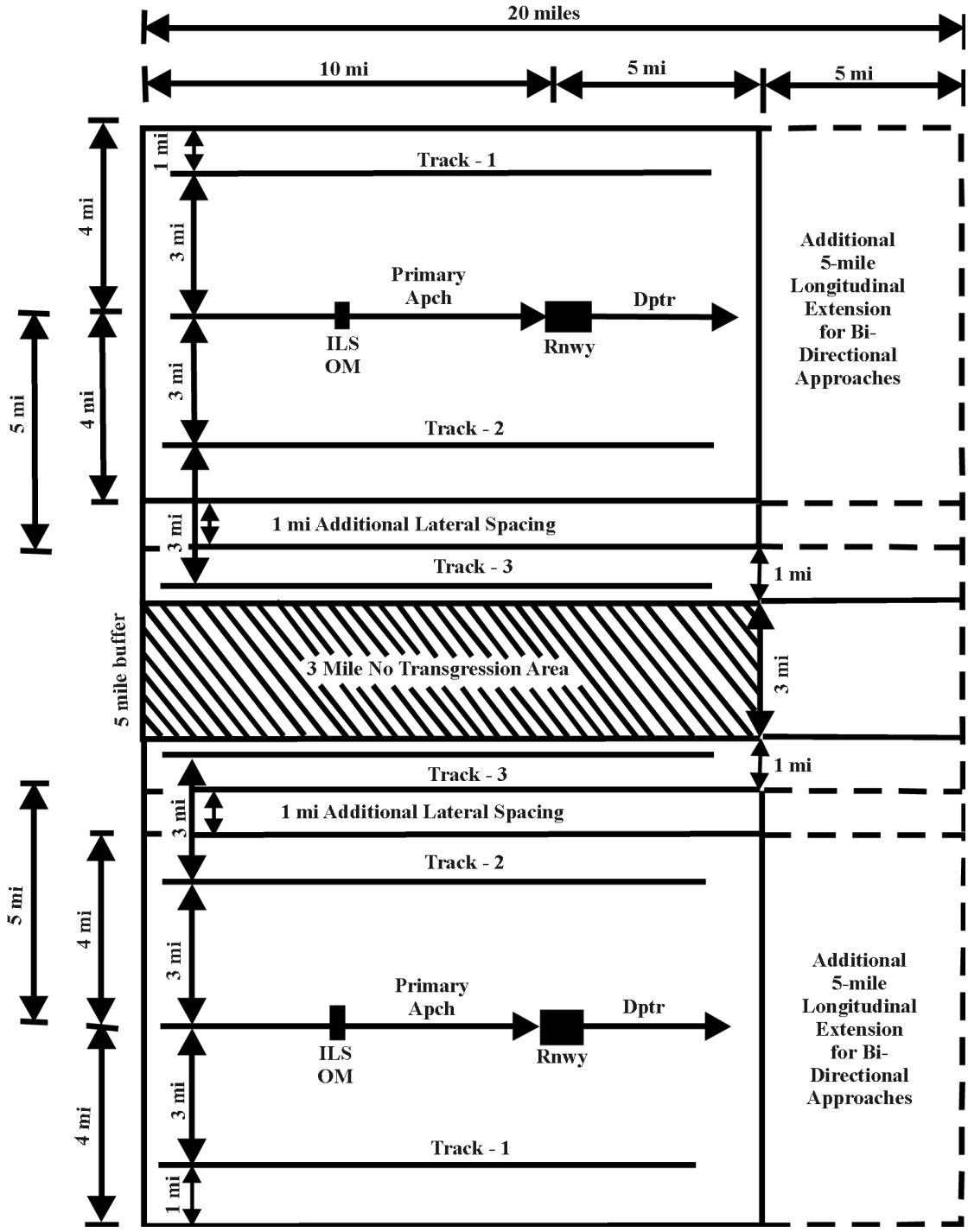


FIG 10–3–4

IFR–RADAR AIRPORT AIRSPACE REQUIREMENTS FOR CATEGORY C AND D AIRCRAFT (HIGH VOLUME ADDITIONAL AIRSPACE, LARGER AREAS)

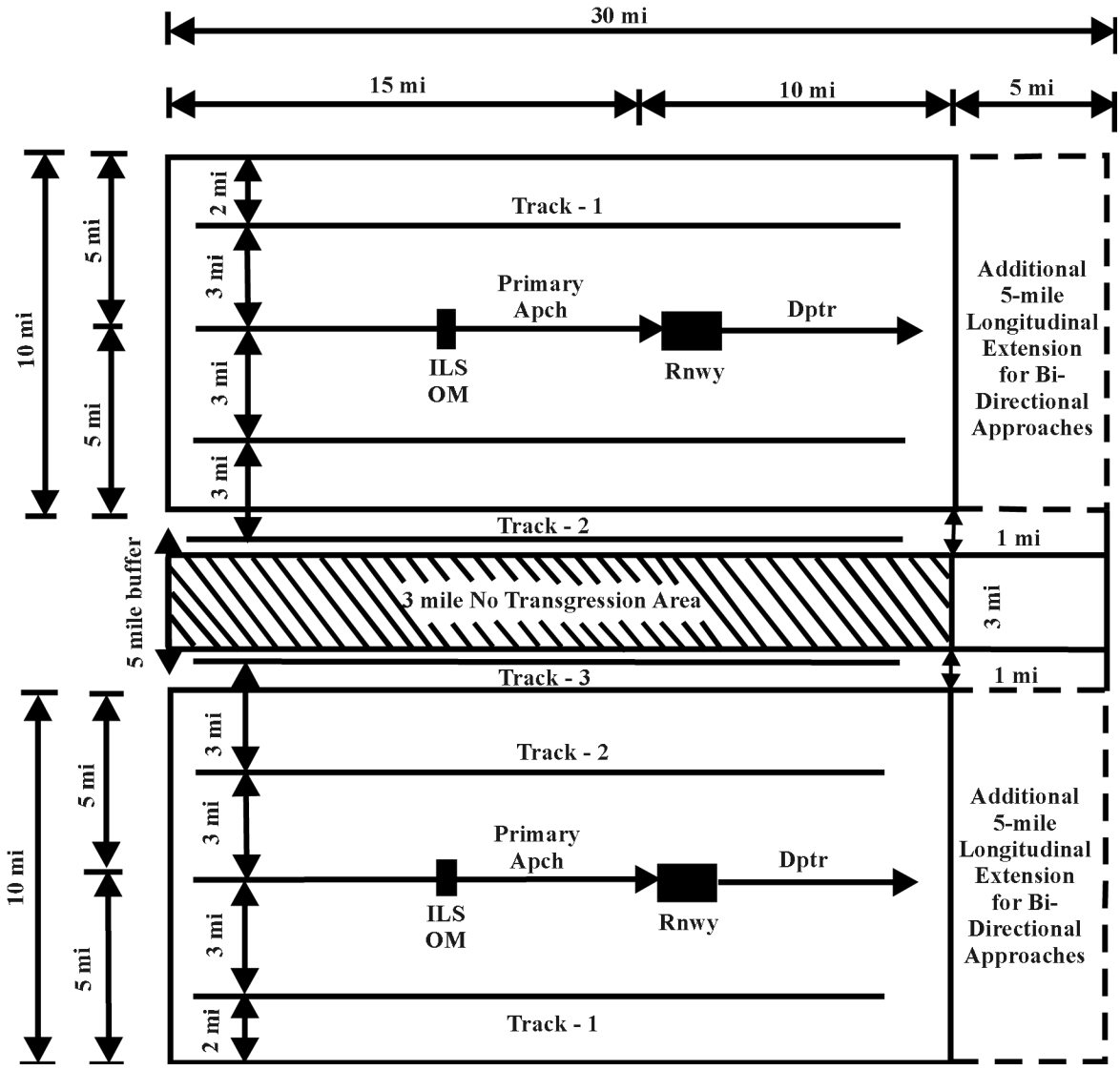
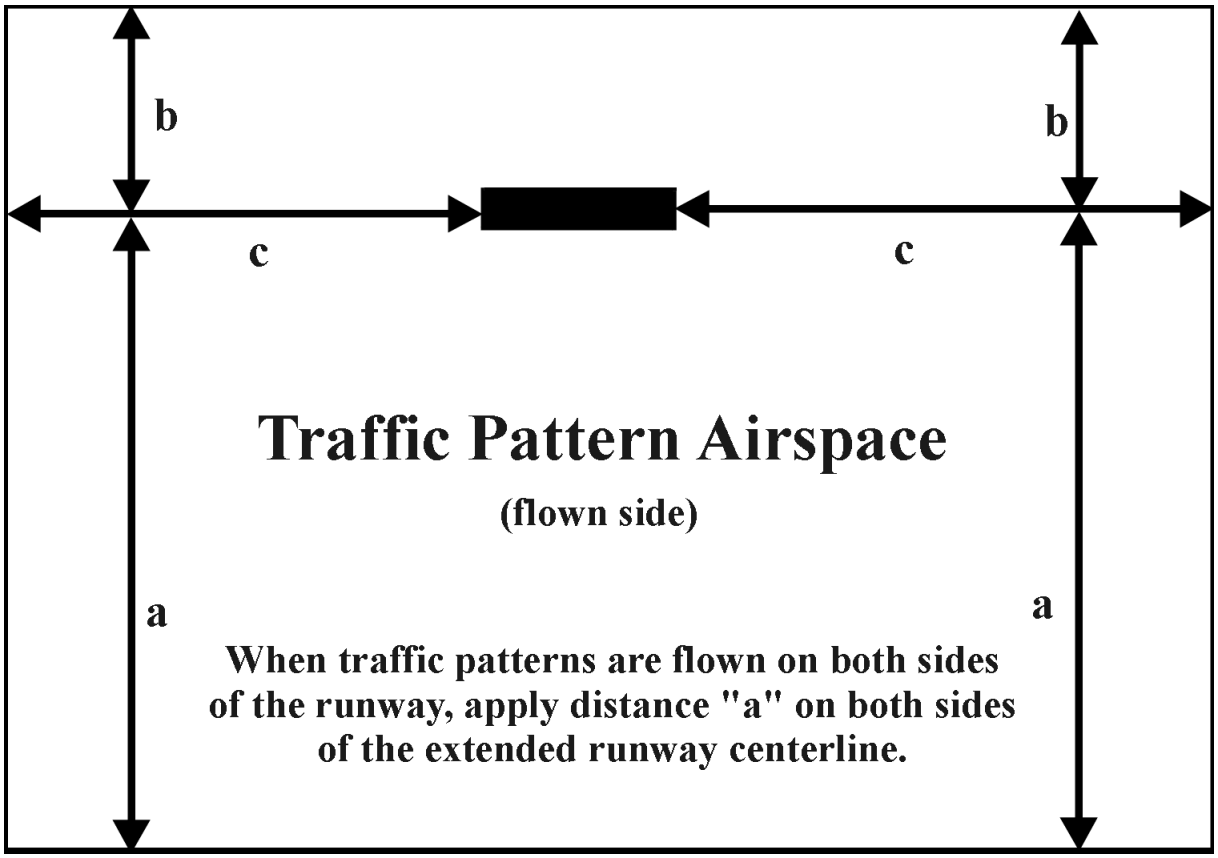


FIG 10–3–5
TRAFFIC PATTERN AIRSPACE



Section 4. Airport Charting and Publication of Airport Data

10–4–1. POLICY

a. All landing facilities which have received airspace determinations or those not analyzed, must be properly documented and processed in accordance with procedures contained in FAA Order 5010.4, Airport Safety Data Program.

b. Landing facilities that have received objectionable airspace determinations must be published in the NFDD as "objectionable." They must be depicted on VFR aeronautical charts only and without identifying text other than to designate objectionable status. They must not be published in the Chart Supplement U.S.

10–4–2. RESPONSIBILITY

As part of Mission Support, Aeronautical Information Services (AIS) AJV–A is responsible for the collection, validation, and dissemination of aeronautical information. This office is designated as the focal point for providing aeronautical information/requirements to the aviation industry, the producers of aeronautical charts and publications, and other government agencies and users.

10–4–3. AIRPORT CHARTING

a. Airports meeting the criteria below may be charted, provided the data has been processed in accordance with the policy set forth in paragraph 10–4–1.

1. Public use airports (including stolports and gliderports.)

2. Military airports without charting restrictions.

3. Abandoned airports having landmark value.

4. Private–use airports having emergency landing or landmark values.

5. Public use heliports not associated with an existing airport, private use heliports that have controlled airspace predicted on them, and selected U.S. Forest Service Heliports.

6. Ultralight flightparks when of landmark value.

NOTE–
Airports of lesser aeronautical importance may be omitted in congested areas where other airports with adequate and better facilities are available nearby.

7. Seaplane bases.

b. Airports will be plotted to true geographic positions on charts unless they are in conflict with a navigation aid at the same location. In such cases, the airport will be displaced from, or superimposed upon the navigation aid. However, in displacing for cartographic purposes, the relationship between the airport and navigation aid must be retained.

c. Airports will be depicted on aeronautical charts by using the symbols located in the chart's legend. Airports having an ATCT are shown in blue, and all other airports are shown in magenta. Airport names and associated data must be shown in the same color as the airport symbol.

Chapter 11. Evaluating Aeronautical Effect

Section 1. General

11–1–1. EXISTING AND PROPOSED OBJECTS

Use the guidelines in Chapter 10 to evaluate the effects of objects on the airport proposal.

11–1–2. AIRPORT TRAFFIC PATTERNS

Traffic patterns must be established by the FAA only at those airports where the provisions of Part 91 do not meet aircraft airspace requirements. When the airspace review indicates the need, traffic patterns may be established by special rule in Part 93, or as outlined in this order when necessary to ensure compatibility of aircraft operations with adjacent airports, or for reasons of obstructions, terrain, traffic separation, or noise abatement. Use the guidelines in paragraph 10–3–2 to evaluate whether the traffic pattern associated with an airport proposal would conflict with operations at any other airport. Also, evaluate the traffic pattern effect on instrument approach procedures and the need for establishment of traffic pattern altitudes for aircraft separation. The service area office normally reviews proposals for traffic pattern conflicts.

11–1–3. INSTRUMENT FLIGHT PROCEDURES

a. Existing and proposed structures or objects must be evaluated for their effect on the airport proposal in reference to instrument procedures. FPTs normally conduct this by applying the standards and criteria contained in the 8260 Order series to ascertain if the airport proposal would adversely affect existing or planned instrument approach procedures. Use the same guidelines to evaluate the compatibility of any existing or proposed instrument approach procedure with the airport proposal.

b. Air traffic and Flight Procedures Team personnel must be especially alert to ensure aircraft separation when the traffic pattern associated with an airport proposal would overlap the airspace encompassed by a standard instrument approach procedure (IAP) for an adjacent airport. When this occurs, air traffic will recommend actions to ensure that there is at least 500 feet vertical separation between the traffic pattern altitude and the altitude associated with the affected portion of the adjacent instrument approach procedure. If heavy jets are involved, ensure at least 1,000 feet vertical separation. These same vertical separation guidelines must be applied when evaluating a proposed IAP when the airspace required would overlap the traffic pattern airspace at an adjacent airport.

11–1–4. AIR TRAFFIC CONTROL PROCEDURES

The extent that an airport proposal or proposed instrument approach procedure may adversely affect air traffic control (ATC) procedures may be a sufficient reason to object to or disapprove a proposal. The proposal must be thoroughly examined to determine if it would adversely affect ATC procedures by requiring a restriction on the air traffic flow, or the proposal may limit the flexibility of entry or exit to or from affected traffic patterns or airport areas. The need for establishment of, or existing noise abatement procedures may amplify such problems. When a proposed instrument approach procedure would be adjacent to the area of an instrument approach procedure to another airport, determine whether simultaneous approaches would have an adverse effect on new IAP or ATC procedures and on the requirement for instrument approaches to the adjacent airport. Should a proposed instrument approach procedure be located in a radar environment, determine the radar coverage and ATC capability to provide radar air traffic control service.

11–1–5. SAFETY OF PERSONS AND PROPERTY ON THE GROUND

In accordance with 40103(b)(2)(B), FAA personnel must evaluate the effect of a proposal on the safety of persons and property on the ground. Consideration must be given to the proximity of cities and towns, as well as flight patterns over heavily populated areas, schools, homes, hospitals, sports stadiums, outdoor

theaters, and shopping centers. The evaluation must also include the effect of changes in flight operations required by the proposal and the need for special air traffic rules. In evaluating the compatibility of proposed airports and the surrounding terrain, consider the type of aircraft anticipated to use the airport, their operational performance capability, the effective runway lengths, and whether a reasonable level of safety of persons and property on the ground can be expected. Flight Standards and Airports normally conduct reviews to determine that the safety of persons and property on the ground are protected.

11–1–6. NOISE CONSIDERATION

Part 157 does not specify that noise factors be considered, however, the FAA policy to evaluate noise factors in airport airspace analysis studies should be preserved where necessary in the public interest as part of the overall FAA noise abatement program.

a. The air traffic office must identify potential noise problem areas based on existing and/or contemplated traffic patterns and procedures. When a noise problem is anticipated, advise the airports office accordingly with recommendations and/or alternatives, such as nonstandard traffic patterns or special departure and arrival procedures, etc.

b. When an airport proposal is circularized, the Airports Office may receive comments concerning potential noise, environmental, or ecological problems.

11–1–7. AERONAUTICAL ACTIVITY

The type of aeronautical activity expected at an airport is an important consideration in the airport analysis process. The following types of activity should be considered:

a. Will the proposed operations be conducted in accordance with visual or instrument flight rules?

b. What is the expected volume of operations?

c. How many and what type aircraft will be based on the proposed airport? Be aware that a large number of aircraft may be based at a private–use airport that could generate a significant amount of traffic.

d. What is the most demanding aircraft the airport will accommodate?

11–1–8. WIND ROSE DATA

a. Visual Flight Rules. Wind conditions affect aircraft in varying degrees. In landing and takeoff, the smaller aircraft are more affected by wind, particularly crosswind components. Therefore, when studying a runway proposal, evaluate the consistency between the proposed runway alignment and the wind rose data to determine whether operations can be conducted safely.

b. Instrument Flight Rules. When evaluating a proposal to designate a single instrument landing runway at an airport, consider the consistency between this designation and the low visibility wind rose.

11–1–9. HELICOPTER INGRESS–EGRESS ROUTES

Proposed heliports require evaluation of ingress and egress information by Flight Standards. Information supplied by Technical Operations Aviation System Standards may be used for determining whether specific ingress–egress routes to and from heliports and helipads may be necessary to assure an adequate level of safety with respect to obstructions and/or congested areas.

Additionally, consider existing air traffic operations in proximity to a proposed heliport site and the need for specific ingress–egress routes.

11–1–10. DISPLACED THRESHOLDS AND CHANGING THE RUNWAY END

Consideration should be given to displacing a proposed runway threshold when proposed and existing objects, and/or terrain obstruct the airspace necessary for landing on or taking off from the runway. Consider changing the location of the proposed runway end only when no feasible alternatives exist (see AC 150/5300–13, Appendix 2).

11–1–11. EXISTING AIRPORTS

Evaluation on the effect of existing airports must be made in the same manner as for other non–Federally assisted airport proposals under the provisions of 49 U.S.C. § 44718. Such studies may be conducted on those airports for which there is no record of a previous aeronautical study, or on any airport when deemed necessary or appropriate.

Section 2. Processing of Airport Proposals By Regional Airports Offices

11–2–1. PROPOSALS

Airport proposals received by any FAA office must be forwarded to the appropriate Airports Office for initial processing and study.

NOTE–
Notification under Part 157 is not required for projects on Federally–assisted airports.

a. General. The Airports Office, after receipt of a proposal, will check the information submitted for correctness, clarity, completeness, and proper detail. The Airports office will verify critical data or require proponents to verify any data deemed critical. The proponent may need to be contacted if insufficient information is submitted or if significant errors appear in the submission. The Airports Office must maintain a record by list, map, or other method so that the status of new proposals may be easily correlated with existing airports, airports under construction, or other airport proposals.

b. Establishment of New Airports. Initial review concerning the proposed construction of new airports must include but is not limited to the following:

1. Determining conformance of the proposal with agency design criteria.

2. Identifying the objects that exceed the obstruction criteria of Part 77.

3. Anticipating the operational use of the airport, including the number and type of aeronautical operations and the number of based aircraft.

4. Ascertaining whether the airport is for private or public use.

5. Identifying runway and taxiway layout in relation to compass rose data, existing or proposed obstructions, or other airports.

6. Identifying known or anticipated controversial aspects of the proposal.

7. Identifying potential noise aspects.

8. Identifying possible conflict with airport improvement and/or development or other agency plans. The Airports Division, in the NRA proposal processing, will identify all seaplane bases that may be impacted by Part 157 proposals or other development on public use airports. If the airspace study reveals that a seaplane base is adversely impacted, the Airports Division will notify the seaplane base owner of the NRA proposal and the potential conflict.

9. Obtaining runway threshold coordinates and elevations.

c. Alteration of Existing Airports – The nature and magnitude of an existing airport alteration will determine the extent of processing and analysis required. Alteration, such as new runway construction, runway realignment projects, runway extension; runway upgrading, change in status, such as VFR to IFR use, and widening of runways or taxiway/ramp areas normally require the same type of processing and study as that required for new airport construction proposals.

d. Deactivation and Abandonment of Airports:

1. Airport owners/sponsors are required to notify the FAA concerning the deactivation, discontinued use, or abandonment of an airport, runway, landing strip, or associated taxiway. On partial or specific runway deactivation proposals, a description with a sketch or layout plan and the anticipated operational changes should be forwarded together with any other pertinent information needed to update agency records.

2. When it is believed that an airport is abandoned or unreported and appropriate notification has not been received, the Airports Office, after making a reasonable effort to obtain such notification, must advise the air traffic office of the situation by memorandum. The memorandum should contain a statement that the airport is considered either abandoned or unreported. Forward a copy of the memorandum to the airport owner or sponsor, to AIS and to the Airport Safety Data Branch, AAS–330.

e. Construction safety plans are received as appropriate for Airport Improvement Program requests for aid and the Airports Regional Capital Improvement Program.

f. Other Airport Notices – Occasionally, an airport owner/sponsor will make alterations or changes to

the airport without filling notice in accordance with Part 157. Generally, this information will be obtained through the airport safety data program (FAA Form 5010) and after–the–fact. From a legal standpoint, this constitutes notice to the FAA and appropriate action is necessary. The Airports Office must initiate a study of such information received in the same manner as if the notice had been received under Part 157 requirements.

11–2–2. AIRPORT LAYOUT PLANS (ALP)

ALPs generally show the location, character, dimensions, details of the airport, and the work to be done. The extent of information needed for any specific airport development will vary depending on the scope and character of the project, plus the anticipated role and category of the airport. Detailed information on the development of ALPs is contained in AC 150/5070–6, Airport Master Plans, and AC 150/5300–13, Airport Design.

a. Non–Federally Assisted Airports. Airports personnel will take into consideration an ALP or plan on file in developing a determination with reference to the safe and efficient use of airspace.

b. Federally Assisted Airports. Projects at Federally assisted airports require review based on considerations relating to the safe and efficient utilization of airspace, factors affecting the control of air traffic, conformance with FAA design criteria, and Federal grant assurances or conditions of a Federal property conveyance. The product of this review is derived from analysis of information supplied in the ALP. A formal or tentative determination may be given depending on the complexity of the proposal or the timing of the request. The review and subsequent determination must be made as expeditiously as possible to facilitate processing of the project request. Normally a project is not placed under grant nor Federal property conveyed until a favorable determination is made and the ALP approved.

c. Extent of Review. A review is normally required for all proposals involving new construction or relocation of runways, taxiways, ramp areas, holding or run–up apron projects, airport and runway lighting and marking, fire and rescue building locations, and other projects affecting, or potentially affecting, the movement of aircraft. At all public–use airports, projects which conform to a previously approved non–objectionable airport layout plan for the construction or resurfacing of existing airport paving, site preparation work, or paving to overlie existing unpaved landing strips may be omitted from the normal review process. For an airport that has a construction safety plan, the plan needs to undergo the review process with appropriate FAA offices (see AC 150/5370–2, Operational Safety On Airports During Construction).

11–2–3. NON–PART 157 PROPOSED CONSTRUCTION OR ALTERATION ON NON–OBLIGATED PUBLIC–USE AIRPORTS

Sponsors/proponents of non–Part 157 proposals for construction or alteration on public–use airports are required to file notice with the FAA in accordance with Part 77.13 (a)(5). The appropriate Airports Office will process these proposals in accordance with procedures established for Part 157 proposals. Generally, these proposals will be submitted on FAA Form 7460–1 along with appropriate drawings and necessary supporting documentation. The procedures contained in Part 2. of this order are not applicable to such proposals. However the information contained in Part 2. may be helpful to airports personnel in applying the obstructions standards of Sections 77.17, 77.19, 77.21, and 77.23.

11–2–4. FAA COORDINATION

Upon receipt of a Part 157 proposal or a change to an ALP, the appropriate Airports Office must assign an aeronautical study number, ensure that the proposal is complete and correct, review the proposal from an airport's planning viewpoint and the effect on airport programs, enter the proposal into the OE/AAA automation program, and forward a proposal package with comments to the appropriate FAA offices (e.g., air traffic, Flight Procedures Team, Flight Standards, and technical operations services offices) for processing. Other organizations to consider in the review process are (if applicable) the Airport Traffic Control Tower (ATCT), System Management Office (SMO), Security and Hazardous Materials Division, Military representative and Airports Certification Branch. Flight Standards or the Flight Standards District Office (FSDO) will be sent all Part 157 proposals for seaplane bases and heliports depending on regional preference. Comments will be provided either to the originating Airports Office or to its respective divisional offices depending on regional

procedures. Additional internal coordination must be accomplished, as appropriate, by the responsible division offices.

a. Part 157. Include a copy of the FAA Form 7480−1 and comments on the effect of existing or proposed man−made objects on file with the FAA, plus the effect of natural growth and terrain. Direct particular attention to, and comment on object proposals that would exceed the obstruction standards of Part 77. Also, comment if the review indicated a potential noise problem and, if applicable, the effect of the proposal on the safety of persons and property on the ground. Also, enclose, as appropriate, sketches and other data required for the aeronautical study and determination. Include a plot of the proposed runway alignments, associated taxiways or seaplane alignments, and any obstructions on U.S. Geological Survey quadrangle map or equivalent.

b. ALPs. Forward a copy of the ALP and include, when appropriate, an analysis of and rationale for the plan, as well as the various stages of construction, if applicable. Include information on the location of structures that may adversely affect the flight or movement of aircraft, cause electromagnetic interference to NAVAIDs, communication facilities, or derogate the line−of−sight visibility from a control tower. Should review of the plan reveal a potential noise problem, comment to this effect. Comment, as applicable, on the proximity of urban congestion and any potential problem related to the safety of persons and property on the ground. If the layout plan is a revision of one previously approved, summarize the changes for which an airspace determination is required. Also, include comments on objects that would exceed the obstruction standards of Part 77 and any other Airports comments that may be appropriate.

c. Federally Assisted Airport Proposals. Transmit by letter a description of the work to be done in the proposed project. If the project is in conformance with an approved ALP, comment to this effect. If the project is at variance with the ALP, comment accordingly and forward a proposed revision to the ALP or an appropriate programming sketch that depicts the location and nature of the proposed work. Also, in the latter event, or if it is a new proposal, forward information on the appropriate items set forth in subparagraph b. above.

d. Disposal or Conveyance of Federal Surplus or Non Surplus Property. Process proposals by public agencies to acquire property interest in land owned and controlled by the United States for public airport purposes as set forth in subparagraph c.

NOTE−
Military representative notification − The military representative may review all new landing area proposals (airports/heliports/seaplane bases), all proposals that have changes to existing landing areas, and all ALPs. Normally, the notification will be through the OE/AAA computer program, unless the military representative requests a hard copy. The military will review proposals, indicated by Airports for review, to determine impacts on military training routes (MTR), MOAs, and restricted areas.

11−2−5. NEGOTIATION WITH SPONSOR

a. During the course of a study, the Airports Office may find it necessary to negotiate with the sponsor to change a proposal. This may be due to a safety problem, efficient use of the airport, etc. After coordination by and agreement with the interested FAA offices (for example, air traffic, Flight Procedures Team, Flight Standards, and technical operations services), military representatives negotiate with the sponsor for changes to the proposal as necessary. Advise interested FAA offices of the results of the negotiation.

b. When an airport proposal poses a problem with respect to the safe and efficient use of airspace by aircraft or with respect to the safety of persons and property on the ground, negotiate with the sponsor to revise the proposal, if feasible, so as to resolve the problem. Should a case involve a proposal for a new airport that would create problems not resolved by revisions to the proposal, negotiate with the sponsor for a relocation of the proposal to a new site to resolve the problem.

11−2−6. CIRCULARIZATION

The Airports Office should circularize airport proposals in accordance with nonrulemaking procedures as necessary to obtain comments from aeronautical interests, municipal, county and state groups, civic groups, military representatives, and FAA facilities and offices on proposals located within their areas of responsibility. All controversial proposals and those that have a potential adverse effect on the users of the airspace should be included

in the circularization process. However, do not circularize a proposal that may compromise the sponsor's position in land acquisition negotiations.

11–2–7. EVALUATE COMMENTS AND AERONAUTICAL EFFECT

The Airports Office must examine comments received in response to coordination and evaluate their validity as related to the safe and efficient use of airspace and to the safety of persons or property on the ground. If the Airports Office's determination contains additional items and/or alterations of the responses previously received from the other FAA offices, request the appropriate air traffic, Flight Procedures Team, Flight Standards, and technical operations services offices to assist in evaluating the validity of the determination. The guidelines in Chapter 12 will assist in evaluating the aeronautical effect of airport proposals.

11–2–8. INFORMAL AIRSPACE MEETINGS

The appropriate Airports Office, with the assistance of the air traffic office, may convene an informal airspace meeting with interested parties as set forth in Part 1. of this order. The informal airspace meeting provides the opportunity to gather additional facts relevant to the aeronautical effect of the proposal, provides interested persons an opportunity to discuss aeronautical objections to the proposal, and provides the FAA with the opportunity to negotiate a resolution to objectionable aspects of the proposal.

11–2–9. ISSUE DETERMINATION

Upon completion of the airspace study, the Airports Office must develop and issue the FAA determination by letter to the airport sponsor in accordance with the guidelines in Chapter 12. Disapprove the request if a previous airport study determination was objectionable and remains uncorrected, or if the determination listed provisions that have not been complied with by the airport owner or sponsor. The FAA determination does not constitute a commitment to provide Federal financial assistance to implement any development contained in the proposal. Also, if the proposal is not objectionable but would exceed Part 77 obstruction standards, notify the sponsor of what obstruction marking and lighting would be required or recommended. Additionally, advise the sponsor that a separate notice will be required for any construction equipment, such as temporary cranes, whose working limits would exceed the height and lateral dimensions of the proposed object.

Section 3. Processing of Airport Proposals By Regional Flight Standards Offices

11–3–1. EFFECT ON SAFETY OF FLIGHT

The appropriate Flight Standards Office must perform a flight safety review of airport, heliport, and seaplane base proposals to determine whether aircraft operations can be conducted safely. This review will include an assessment of Visual Flight Rules (VFR) traffic patterns and a review of on airport proposals that affect Instrument Flight Rules (IFR) procedures. The Flight Standards Office will review any proposal with runways, taxiways, and/or ramp surfaces underlying threshold–siting surfaces and proposals for declared distance concepts. Upon completion of the review, the appropriate Flight Standards Office must submit its report to the responsible Airports Office. The report must state whether or not safe operations can be conducted or what conditions are needed to ensure safe operations. Information provided by Technical Operations Aviation System Standards may be used when conducting these reviews.

11–3–2. EFFECT ON SAFETY OF PERSONS AND PROPERTY ON THE GROUND

FAA Order 1000.1, Policy Statement of the FAA, states that the agency will pursue a regulatory policy that recognizes the primary right of the individual to accept personal risk. However, the agency balances this right against society's interest in the safety of the individual, and limits the individual's right to incur risk when the exercise of that right creates a risk for others. Therefore, airport aeronautical studies must consider, for example, the proposal's proximity to cities or towns, and its runway alignment with reference to heavily populated areas, schools, hospitals, sports stadiums, and shopping centers, etc.

11–3–3. ONSITE EVALUATIONS

a. Heliports. All proposals for the establishment of heliports must be given an onsite operational evaluation by operations specialists or inspectors, preferably those who are qualified on helicopters. Proposed heliports to be located in congested areas, and/or on a roof–top, should be evaluated by helicopter–qualified operations inspectors. Included in the process is the development of recommendations for assignment of ingress and egress routes, where necessary.

b. Non–Federal Agreement Airport Proposal. The Flight Standards Office performing a flight safety review will use information submitted with the FAA Form 7480–1 and any other information as may be available, such as charts, aerial photographs, etc. A flight check or an onsite inspection may be advantageous if the proposal is controversial or additional information is needed.

c. Federally Assisted Airport Proposal. The Flight Standards Office should:

1. Review the proposal from the standpoint of safety of flight operations.

2. Conduct an on–site evaluation.

3. Advise the air traffic office when obstructions and/or terrain that prove to cause significant safety problems are identified.

d. The FSDO reviews Part 157 seaplane base and heliport proposals.

Section 4. Processing of Airport Proposals By Operations Support Group Flight Procedures Teams

11–4–1. EFFECT ON INSTRUMENT PROCEDURES

a. The appropriate FPT must determine the feasibility of instrument approach procedures, ensure that required instrument procedures are formulated, flight inspected, and published to coincide with the appropriate aeronautical charting date.

b. The appropriate FPT must review proposals to determine any impact to existing and proposed instrument approach procedures. When the proposed airport underlies an existing or proposed instrument approach procedure the FPT will notify the appropriate air traffic office.

11–4–2. CHANGE OF AIRPORT STATUS FROM VFR TO IFR

a. Establishment of Instrument Procedures. Requests for instrument approach procedures must be forwarded to the appropriate FPT. The FPT must effect coordination with the appropriate air traffic, Airports, and technical operations services offices, as well as other offices of interest. The request for instrument approach procedures should normally be disapproved if the change in the airport status study indicates a safety problem.

b. Establishment of NAVAID. When an airport status is to be changed from VFR to IFR, notify the public by means of the nonrulemaking circular associated with the establishment of the NAVAID being installed to support the procedure.

c. Existing NAVAID. If the flight procedure is to be based upon an existing NAVAID, the public notification may be accomplished in the NPRM associated with changes to controlled airspace. If no change in airspace is required, it is recommended that the public be notified through the non–rulemaking circularization process.

d. No NAVAID Required. Public notification will be accomplished with the rulemaking action for controlled airspace.

11–4–3. EVALUATION OF INSTRUMENT RUNWAY DESIGNATIONS

The appropriate FPT must evaluate the runway or runways to be used in the proposed instrument procedure. Consideration should be given to airport data, expected users, conflicts with IFR traffic, location of existing and proposed NAVAIDs, availability of weather information, and probable minimums.

Section 5. Processing of Airport Proposals By Technical Operations Services Area Offices

11–5–1. ELECTROMAGNETIC OR LINE–OF–SIGHT INTERFERENCE

The technical operations services office must study airport proposals to determine if there is a possibility of electromagnetic or line–of–sight interference. Use the guidance in paragraph 6–3–3 to determine the extent of any adverse effect. At locations with an ATCT, a shadow study is required to determine if part of the aircraft operating area would be shielded from view by the control tower. In either case, when a potential problem exists, request the Airports Office to negotiate a resolution with the sponsor. If this is not possible, then proceed with the study and submit findings to the Airports Office.

11–5–2. EVALUATION OF INSTRUMENT RUNWAY DESIGNATION

The designation of an instrument landing runway may be associated with a precision type landing aid. Conduct a study of a proposal to designate an instrument landing runway to determine the feasibility of siting various components in accordance with established siting criteria. Forward comments and recommendations to Airports. Should program approval be received for the installation of an instrument landing system to serve a runway which has not been designated as an instrument landing runway, send a letter to the Airports Office requesting a study for the runway to be so designated. Include data in the letter concerning the siting of the various components, their heights, and any other comments that may be appropriate.

11–5–3. CHANGE IN AIRPORT STATUS FROM VFR TO IFR

The technical operations services office must review all proposed airport status changes to ensure that there is no effect on its functional responsibilities. Forward the study results to the FPT or Airports Division Offices, as appropriate.

11–5–4. AIRPORT PROPOSALS

Proposals vary in complexity from a single runway airport to a major air carrier airport. When NAVAID facilities are part of the ALP, the technical operations services office must conduct a study to evaluate the feasibility of siting and installing the proposed facilities as well as to evaluate the effect of the proposal on existing NAVAIDs. Conduct a shadow study, based on necessary data provided by the airport owner to ensure that existing or proposed structures, or natural objects, do not derogate the airport traffic control tower line–of–sight visibility of the proposed runway or taxiway. Forward the results of the study to the Airports Office.

Section 6. Processing of Airport Proposals By Service Area Offices

11–6–1. EFFECT ON AIR TRAFFIC CONTROL OPERATIONS

The air traffic office must conduct an airspace review to evaluate the effect on the safe and efficient utilization of airspace by aircraft and the effect that such proposals may have on the movement and control of air traffic, associated resources (personnel, facilities and equipment), and ATC program planning.

a. The depth of the review must commensurate with the location, complexity, and timing of the proposed development. The range of the study may vary from no need to review (for example, the closing of an airport reported for record purposes) to a large effort required to process and study a proposal for a new major air carrier airport to serve a high density terminal area.

b. An airspace review must be conducted for activation, deactivation or alteration of any landing area, reported in compliance with Part 157 or an airport owner's federal obligations, for military construction projects, and at any other time deemed necessary for assessing the utilization of airspace. Include studies associated with existing airports and with disposal or conveyance of Federal property for public airport purposes, as appropriate.

c. Upon completion of the airspace review, forward the response (via the OE/AAA automation program, electronic mail, or memorandum) to the responsible Airports Office. The airspace response must recommend approval or disapproval of the use of the airspace associated with the proposal. This response must be in the form of no objection without conditions, no objection provided certain conditions are met, or objectionable. If the recommendation of the finding to the proposed use of the associated airspace is objectionable or to disapprove the proposal, clearly state the reasons why. If the finding is conditional, also clearly state the conditions. Care must be exercised when issuing conditional findings. When the conditions are such that a substantial adverse effect would result if not corrected (such as the blocked view to a portion of the movement area from the airport traffic control tower), then an objectionable or disapproval finding should be recommended. Include a statement that the FAA will reconsider the proposal after provisions are made to resolve the objectionable conditions.

11–6–2. COORDINATION

The reviewing air traffic office must coordinate airport proposals with other air traffic offices and facilities as appropriate.

a. Projects contemplated at airports served by an ATCT or flight service station must be coordinated with the facility manager or his/her representative prior to arriving at a finding. Documentation of the coordination performed must be entered in the case file. The ATCT responds on the proposal to the service area office in accordance with local procedures.

b. Military Airport Proposals which are not part of the Military Construction Program (MCP) are normally submitted to service area offices through the regional military representatives. Those proposals must be processed in the same manner as civil proposals except that the air traffic office is responsible for coordinating the proposals with the Airports, Flight Standards, and technical operations services offices. The air traffic office is also responsible for any coordination necessary with the military regarding the proposal and issuance of the regional determination.

c. The Airports Office will coordinate and negotiate with the airport owner/sponsor to resolve problems with proposals on civil, public use airports. The Airports Office may request the air traffic office to assist in the negotiation if the problem relates to the safe and efficient utilization of the airspace.

11–6–3. AIRPORT TRAFFIC PATTERNS

a. If the appropriate VFR or IFR traffic pattern airspace area requirements overlap or if airspace requirements cannot be developed to accommodate the category and volume of aircraft anticipated at an existing or planned airport, the airport, in all cases, need not be found objectionable from an airspace utilization standpoint if adjustments to traffic

patterns (such as establishing non–standard traffic patterns, assigning specific traffic pattern altitudes, and/or developing special operational procedures) would mitigate the conflict. Such action may reduce the capacity, operational flexibility, and compatibility of the airports involved. The air traffic office must determine if airspace areas overlap. If the airport proposal's traffic pattern conflicts with the pattern of an adjacent airport and the conflict could be eliminated by adjusting only the proposal's pattern, the air traffic office will specify the traffic pattern to be used as a condition of the proposal's determination.

b. If an adjacent traffic pattern needs to be adjusted to solve a conflict and the pattern adjustment can be made safely, the Airports Office will request assistance from the air traffic office in negotiating with the adjacent airport owner/manager for agreement in writing to the traffic pattern adjustment. If a non–standard traffic pattern adjustment is made at a public–use airport with other than a full–time control tower, then visual indicators at the airport are required, in accordance with AC 150/5340–5, Segmented Circle Airport Marker System. If night operations are conducted or planned at the airport, then floodlighting of the segmented circle is necessary.

c. The traffic pattern airspace associated with an airport proposal may not overlap the traffic pattern of an adjacent airport.

11–6–4. PART 77 REVIEW

Review proposed structures and existing terrain or objects that exceed Part 77 obstruction standards to determine the extent of adverse effect and recommend marking/lighting if needed. If the review indicates obstructions that are potential hazards to the airport proposal, forward the airspace finding to the Airports Office. The airspace use associated with a new airport or airport alteration proposal should normally be considered as objectionable (or disapproved for AIP) if the study discloses an adverse effect that cannot be mitigated.

11–6–5. DESIGNATION OF INSTRUMENT RUNWAY/CHANGE IN AIRPORT STATUS VFR TO IFR

The processing required by air traffic offices depends upon the action necessary for establishment of the instrument approach procedure. This can involve the establishment of NAVAIDs, nonrule or rulemaking circularization and associated actions, the need for communications, weather reporting, and the capability of providing air traffic control service. In conducting the airspace review, determine the viability of establishing a reasonable instrument approach procedure and the acceptability of the airport environment for the proposed procedure. Also, evaluate the effect of the proposed procedure on existing or proposed IFR or VFR aeronautical operations at the airport in question and/or adjacent airports. Be particularly alert to previously issued "no objection" determinations which include a provision/condition for VFR only operations. Forward the finding to the responsible office. Airports must coordinate and circularize all VFR to IFR changes for all Part 157 proposals and airport layout plans (see paragraph 11–2–9).

11–6–6. ONSITE EVALUATION

The need for onsite evaluations will be determined by the airspace review results. Onsite evaluations may be especially necessary when the review indicates the presence of unsafe conditions. The air traffic office should assist the Airports, Flight Standards, and FPTs in the onsite evaluation, as appropriate.

NOTE–
Noise consideration, see paragraph 11–1–6.

Chapter 12. Airport Determinations

Section 1. General

12–1–1. RESPONSIBILITY

The Airports Office is responsible for formulating and issuing the official determination. That determination must incorporate the division's responses and other pertinent issues. If the official determination differs from the responses as a result of the airspace coordination, the Airports Office must obtain a concurrence from the appropriate, responsible FPT, air traffic, technical operations services, and Flight Standards offices. The Airports Office must also assure that each determination issued conforms to established policy, procedures, and guidelines. Controversial proposals may require special handling, but no determination must be issued which would be contrary to agency policy until the matter has been coordinated with and approved by the Associate Administrator for Airports, and the Vice President, Mission Support Services.

12–1–2. TERMINOLOGY

The following terminology must be used in FAA determinations:

a. Part 157 Airports.

1. "No Objection" to the proposal – A "no objection" determination concludes that the proposal will not adversely affect the safe and efficient use of airspace by aircraft and will not adversely affect the people or property on the ground.

2. "Conditional No Objection" to the proposal – A "conditional no objection" determination concludes the proposal will not adversely affect the safe and efficient use of navigable airspace by aircraft provided certain conditions are met (specify the conditions).

3. "Objection" to the proposal – An "objection" determination will specify the FAA's reasons for issuing such a determination.

b. ALP. An ALP is a graphic depiction of the existing and future airport facilities showing the clearance and dimensional requirements to meet applicable standards. The ALP serves as a record of aeronautical requirements and is used by the FAA in its review of proposals that may affect the navigable airspace or other missions of the FAA.

1. Approved. An approved ALP is one that has met all the applicable requirements as set forth in the appropriate FAA documents. In order for an ALP to be unconditionally approved, the appropriate FAA offices must have reviewed and approved the location, type, and dimension of all proposed development. In addition, all proposed development must have been subject to the appropriate environmental processing and have written approval by the FAA.

2. Conditional Approval. The conditional approval of an ALP is one that has met all the applicable requirements. An ALP that has been conditionally approved is one where the proposed development has received conceptual approval by the appropriate FAA office. The proposed development has not received approval as to the final location, type, and dimension of all proposed development. New structures would require the submission of FAA Form 7460–1. In addition, where the appropriate environmental processing has not occurred, a conditional ALP approval would be required.

12–1–3. CONDITIONAL DETERMINATIONS

When the airport study results in a conditional determination, then clearly set forth the conditions in the determinations to avoid any misunderstanding.

a. IFR/VFR Status. If the intent of a conditional determination is to restrict or defer the establishment of an instrument approach procedure because of conflict with other IFR procedures in a particular area or to restrict aircraft operations to VFR weather conditions, then these conditions should be clearly defined in the determination to avoid possible misunderstanding. For example, the phrase "VFR operations only" should not be used when the intent is to restrict the establishment of an instrument approach procedure but not necessarily restrict IFR departures. If the intent is to restrict all

IFR operations, the determination should identify specific weather conditions rather than relate to VFR operations, or it should be written to specifically prohibit IFR operations.

b. Traffic Patterns. If there is a need to establish specific airport traffic patterns to ensure compatibility of aircraft operations with adjacent airports, or for other reasons, set forth the specific traffic pattern requirement as a condition.

c. Runway Thresholds. When the determination concerns a proposed runway construction, and existing objects will obstruct the airspace needed for arrivals or departures, and if the obstructions cannot be removed or mitigated due to lack of control by the airport sponsor or other compelling reasons, the conditions can stipulate displacement of the runway threshold or changing the location of the runway end to provide clearance over the obstructions. If you use this condition, ensure that the remaining runway length is sufficient to safely accommodate the most critical aircraft expected to use the runway. Perhaps it may be feasible, or more desirable, for the obstructions to be removed rather than shorten the runway. If so, you may give the airport sponsor this option. However, when the study indicates the runway threshold can safely be displaced or the runway end changed, use the following wording in the determination's conditions:

1. "The runway threshold is displaced and properly marked and lighted so as to provide obstacle clearance in accordance with appropriate airport design standards."

2. "The runway end is changed and properly marked and lighted so as to clearly indicate that portion of runway which is closed to pilots for takeoff and landing."

d. Ingress–Egress Routes. When the determination concerns a heliport, it may be necessary to specify ingress–egress routes in the conditions placed on the determination (see paragraph 11–1–9).

e. Other Conditions. Specify in the determination any other items which are feasible and necessary to assure the safe and efficient use of the airspace by aircraft and the safety of persons and property on the ground.

12–1–4. EXPIRATION DATES

a. The establishment of a expiration date must be included in the determinations as appropriate. Expiration dates (normally 18 months) allow for the orderly planning of airports by providing realistic time limitations for the completion of airport projects. The expiration date may be extended if a proponent's reason for not completing the project by the specified time is valid. When establishing expiration dates on determinations issued under Part 157, include the following statement: "In order to avoid placing any unfair restrictions on users of the navigable airspace, this determination is valid until [date]. Should the facility not be operational by this date, an extension of the determination must be obtained."

b. Expiration dates generally are not appropriate for ALP approvals and airspace approvals of other planning projects.

12–1–5. STATEMENT IN DETERMINATIONS

a. No Objections or Conditional. Include the following statement in the determination forwarded to the proponent:

1. "This determination does not constitute FAA approval or disapproval of the physical development involved in the proposal. It is a determination with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground."

2. "In making this determination, the FAA has considered matters such as the effects the proposal would have on existing or planned traffic patterns of neighboring airports, the effects it would have on the existing airspace structure and projected programs of the FAA, the effects it would have on the safety of persons and property on the ground, and the effects that existing or proposed manmade objects (on file with the FAA), and known natural objects within the affected area would have on the airport proposal."

3. "The FAA cannot prevent the construction of structures near an airport. The airport environs can only be protected through such means as local zoning ordinances, acquisitions of property in fee title or aviation easements, letters of agreement, or other means."

b. Objectionable – Include the following statement in the determination forwarded to the

proponent: "This is a determination with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground. In making this determination, the FAA has considered matters such as the effect the proposal would have on existing or planned traffic patterns of neighboring airports, the effects it would have on the existing airspace structure and projected programs of the FAA, the effects it would have on the safety of persons and property on the ground, and the effects that existing or proposed manmade objects (on file with the FAA) and natural objects within the affected area would have on the airport proposal."

c. Notice of Completion – Include a reminder that the sponsor is required to notify the nearest Airport District Office (ADO) or regional office within 15 days after completion of the project. For a Part 157 airport, this is accomplished by returning the FAA Form 5010–5 to the appropriate Airport office.

12–1–6. AIRPORT MASTER RECORD

When appropriate, enclose within the determination, FAA Form 5010, Airport Master Record, and include a statement in the determination letter providing the sponsor guidance on its use.

12–1–7. ADVISE FEDERAL AGREEMENT AIRPORT SPONSORS

When a determination is sent to the sponsor, include the following additional statement: "This determination does not constitute a commitment of Federal funds and does not indicate that the proposed development is environmentally acceptable in accordance with applicable Federal laws. An environmental finding is a prerequisite to any major airport development project when Federal aid will be granted for the project. This approval is given subject to the condition that the proposed airport development identified below must not be undertaken without prior written environmental approval by the FAA. These items include [list items] (see FAAO 5050.4A, Chapter 3, for more information)."

12–1–8. DISSEMINATION OF STUDY RESULTS

The Airports Office must make available to FAA offices that participated in the study a copy of each determination issued. Include a copy to AAS–330 for Part 157 proposals. AAS–330 must be provided a copy of the entire airspace determination when the FAA Form 5010–5, is returned from the proponent. Additionally, the results of an airport study circularized outside the FAA or discussed in an informal meeting should be disseminated by the Airports Office to those persons/offices on the circular distribution list, attendees at the informal airspace meeting, and any other interested person, as soon as feasible after the sponsor has been notified. Outside of agency distribution must be in the form of a notice "To All Concerned." Include in the notice the aeronautical study number together with a brief summary of the factors on which the determination was based and a recital of any statement included in the determination. In addition, if a conditional statement concerning environmental acceptability has been included in the determination to the proponent, include a similar statement in the notice.

12–1–9. REVIEW OF SENSITIVE OR CONTROVERSIAL CASES AND PART 157 DETERMINATIONS

a. A proponent of an airport proposal or interested persons may, at least 15 days in advance of the determination void date, petition the FAA official who issued the determination to:

1. Revise the determination based on new facts that change the basis on which it was made.

2. Extend the determination void date. Determinations will be furnished to the proponent, aviation officials of the state concerned, and, when appropriate, local political bodies and other interested persons.

b. The petition must be based on aeronautical issues and will not be accepted after airport construction has begun. The appropriate regional office should attempt to resolve the issue(s) in the following manner:

1. Informal Meeting. The Airports Office should hold a special informal airspace meeting with all interested parties when requested. Emphasize that the scope of an airport study analysis is limited, and that the FAA's determination is based on the safe and efficient use of navigable airspace by aircraft and the safety of persons and property on the ground (see paragraph 12–1–5). The air traffic office

must assist in the meeting when requested by Airports.

2. Reevaluate. If any new factors regarding the safe and efficient use of the airspace become known as a result of the informal meeting then reevaluate the airport proposal. Affirm or revise the original determination as appropriate.

3. Public Hearing. The regulations provide no right to, or procedures for, a public hearing regarding airport matters. An airport airspace determination is only advisory and for the FAA's own use. Circularization and, where required, informal airspace meetings should be sufficient to provide interested persons a forum to present their views. When Federal funds are, or will be involved in the airport or its development, there is a right to a public hearing on site location, but no similar right exists to a hearing on airspace matters. If a party is emphatic in their demand for a public hearing Mission Support, Policy, through the service area office, should be notified and there must be no implication made that a hearing may be granted. It is general policy not to grant such hearings. However, should circumstances dictate otherwise, Mission Support, Policy would direct the conduct of the hearing to be informal in nature, not within the scope of the Administrative Procedures Act, and the subject matter would be limited to the scope of the airspace analysis (i.e., the safe and efficient use of navigable airspace by aircraft).

12–1–10. DISPOSAL OF FEDERAL SURPLUS REAL PROPERTY FOR PUBLIC AIRPORT PURPOSES

a. Site Endorsement. The FAA must study and officially endorse the site before property interest in land owned and controlled by the United States is conveyed to a public agency for public airport purposes.

b. Processing Procedures. Surplus Federal property cases must be processed in the same manner as Federal airport proposals.

Chapter 13. Military, NASA, and Other Agency Airport Proposals

Section 1. General

13–1–1. PRIOR NOTICE TO FAA

49 U.S.C. § 44718 provides, in part, that the Department of Defense (DOD), the National Aeronautics and Space Administration (NASA), or other agencies must not acquire, establish, or construct any military airport, missile or rocket site, or substantially alter any runway layout unless reasonable prior notice is given to the FAA Administrator so that the appropriate committees of Congress, and other interested agencies, may be advised as to the effects of such projects upon the use of airspace by aircraft.

13–1–2. FORM OF NOTICE

The DOD forwards military airport or missile site projects to FAA Washington Headquarters in the form of an annual Military Construction Program (MCP). Military projects not involved in the annual program are submitted to the FAA regional office by the individual services or commands through the regional military representatives (see paragraph 13–1–5). NASA and other agencies submit their projects directly to FAA Washington Headquarters.

13–1–3. FAA HEADQUARTERS REVIEWS

Annual MCPs and proposals submitted by NASA or other agencies are forwarded to Rules and Regulations Group for review and processing. Rules and Regulations Group must coordinate with appropriate headquarters ATP, Flight Technologies and Procedures, and Spectrum Assignment and Engineering Services Offices prior to forwarding the proposal to the regional/service area office for study. Any problems with the proposal at the headquarters level should be resolved prior to requesting regional/service area input.

13–1–4. REGIONAL/SERVICE AREA OFFICE REVIEW

Rules and Regulations Group will then forward the projects to the appropriate regional office for processing in the same manner as civil airport proposals, except that service area offices are responsible for the study. The determination and recommendation on the proposal, plus all pertinent comments and related material, must be forwarded to Rules and Regulations Group by the service area office. The official FAA determination must be formulated by Rules and Regulations Group after review and any required inter–services coordination and forwarded to DOD, NASA, or other agencies as appropriate. A copy of the determination must be forwarded to the affected regional/service area office.

13–1–5. MILITARY PROPOSALS OTHER THAN MCP

Other military airport proposals may be submitted by individual services through the appropriate regional military representatives to the regional/service area office. These proposals must be processed in the same manner as civil airport proposals except as indicated below. This exception does not apply to notices on joint–use airports received under Part 157 or AIP projects.

a. The regional Airports Division must coordinate with the service area office, Flight Standards Division, technical operations services area office, FPT, and other offices as required for formulation of the official FAA determination. The determination must be issued to the appropriate regional military representative with a copy to Rules and Regulations Group.

b. When a controversial proposal is referred to Washington Headquarters for resolution, the airspace finding and official agency determination must be formulated by the AAS–100 in coordination with Rules and Regulations Group and other offices, as required, and forwarded to the appropriate regional military representatives through the regional/service area office.

Part 4. Terminal and En Route Airspace

Chapter 14. Designation of Airspace Classes

Section 1. General

14–1–1. PURPOSE

In addition to the policy guidelines and procedures detailed in Part 1 of this order, this part prescribes specific policies and procedures for managing terminal and en route airspace cases.

14–1–2. CONTROLLED AIRSPACE

Controlled airspace is airspace of defined dimensions within which ATC service is provided to IFR and VFR flights in accordance with the airspace classification. Within controlled airspace, all aircraft operators are subject to certain qualification, operating, and aircraft equipage requirements (see Title 14 CFR Part 91). Controlled airspace in the United States is designated in 14 CFR Part 71 as follows:

a. CLASS A AIRSPACE. That airspace from 18,000 feet MSL to FL 600, including the airspace overlying the waters within 12 nautical miles (NM) of the coast of the 48 contiguous States and Alaska. Unless otherwise authorized, all persons must operate their aircraft under IFR.

b. CLASS B AIRSPACE. Generally, that airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports in terms of airport operations or passenger enplanements. The configuration of each Class B airspace area is individually tailored and consists of a surface area and two or more layers, and is designed to contain all published instrument procedures. An ATC clearance is required for all aircraft to operate in the area, and all aircraft that are so cleared receive separation services within the airspace. The cloud clearance requirement for VFR operations is "clear of clouds."

c. CLASS C AIRSPACE. Generally, that airspace from the surface to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach control, and that have a certain number of IFR operations or passenger enplanements. Although the configuration of each Class C area is individually tailored, the airspace usually consists of a surface area with a 5 NM radius, an outer circle with a 10 NM radius that extends from no lower than 1,200 feet up to 4,000 feet above the airport elevation. Each person must establish two–way radio communications with the ATC facility providing air traffic services prior to entering the airspace, and thereafter maintain those communications while within the airspace.

d. CLASS D AIRSPACE. Generally, that airspace from the surface to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower. The configuration of each Class D airspace area is individually tailored and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Arrival extensions for instrument approach procedures may be Class D or Class E airspace. Unless otherwise authorized, each person must establish two–way radio communications with the ATC facility providing air traffic services prior to entering the airspace, and thereafter maintain those communications while in the airspace. No separation services are provided to VFR aircraft, except as noted in FAA Orders JO 7110.65, Air Traffic Control; and JO 7210.3, Facility Operation and Administration.

e. CLASS E AIRSPACE. Class E airspace is controlled airspace that is designated to serve a variety of terminal or en route purposes as described in this paragraph. Class E airspace consists of:

1. The airspace extending upward from 14,500 feet MSL to, but not including, 18,000 feet MSL overlying the 48 contiguous States, the District of Columbia and Alaska, including the waters within 12 NM from the coast of the 48 contiguous States and Alaska; excluding the Alaska Peninsula west of longitude 160º00'00''W., and the airspace below 1,500 feet above the surface of the earth. (The

1,500 feet above the surface exclusion from Class E airspace above 14,500 feet MSL would apply in mountainous terrain areas.)

2. The airspace above FL 600.

3. Surface area designation for an airport where a control tower is not in operation and for non–towered airports. Class E surface areas extend upward from the surface to a designated altitude, or to the adjacent or overlying controlled airspace. When designated, the airspace will be configured to contain all instrument procedures.

4. Extension to a surface area. Airspace designated as extensions to Class C, Class D, and Class E surface areas. Class E airspace extensions begin at the surface and extend upward to the overlying controlled airspace. The extensions provide controlled airspace to contain standard instrument approach procedures without imposing communication requirements on pilots operating in visual meteorological conditions.

5. Airspace used for transition. Airspace extending upward from either 700 feet or 1,200 feet AGL to the overlying controlled airspace designated for transitioning aircraft to/from the terminal or en route environments.

6. Federal airways and low–altitude RNAV routes. Federal airways and low–altitude RNAV routes are Class E airspace and unless otherwise specified, extend upward from 1,200 feet AGL to, but not including, 18,000 feet MSL.

7. Offshore/Control Airspace Areas. Airspace designated in international airspace, extending outward from 12 NM from the coast of the United States to the CTA/FIR boundary, in accordance with the criteria in 14 CFR Part 71, within which the United States applies domestic ATC procedures.

8. En Route Domestic Airspace. Airspace extending upward from a specified altitude to, but not including, 18,000 feet MSL designated for providing IFR en route ATC services where the Federal airway system is inadequate.

14–1–3. UNCONTROLLED AIRSPACE

Airspace that is not designated in 14 CFR Part 71 as Class A, Class B, Class C, Class D, or Class E controlled airspace is Class G (uncontrolled) airspace.

14–1–4. FRACTIONAL MILES

Unless otherwise stated, all distances are nautical miles. When figuring the size of surface areas and Class E airspace or their extensions, any fractional part of a mile must be converted to the next higher 0.1–mile increment.

EXAMPLE–
3.62 miles would be considered to be 3.7 miles.

14–1–5. AIRSPACE LEGAL DESCRIPTION

a. A text header must be used and include the following information:

1. On line one:

(a) FAA routing symbol of the region.

(b) Two–letter abbreviation of the state.

(c) Type of airspace.

(d) Location (City, State)

2. On line two: Enter the name of the airport (Name, State) for which the airspace is designated.

3. On line three: Enter the geographic coordinates for the airport for which the airspace is designated.

NOTE–
This does not apply to en route domestic airspace areas.

4. If applicable, on subsequent lines: Enter the name of any NAVAID or airport, point of origin, or other reference used in the legal description. Include the NAVAID or airport geographic coordinates on the line following the name.

b. State vertical limits in the first sentence of the text.

c. Do not restate geographic coordinates used in the text header in the legal description text.

d. If applicable, use a semicolon to separate the description of geographically separate sub–areas.

14–1–6. EXAMPLES OF TERMINAL AIRSPACE LEGAL DESCRIPTIONS

NOTE–

For part–time areas add the following words to the basic legal description:

"This Class (add appropriate letter) airspace area is effective during the specific dates and times established in advance by a Notice to Air Missions. The effective date and time will thereafter be continuously published in the Chart Supplement."

a. ***EXAMPLE 1–***

ANE MA B BOSTON, MA

Logan International Airport, MA (Primary Airport)
(lat. 42°21'51"N., long. 70°59'22"W.)
Boston VORTAC
(lat. 42°21'27"N., long. 70°59'22"W.)

Boundaries.

Area A. That airspace extending upward from the surface to and including 7,000 feet MSL within an 8–mile radius of the Boston VORTAC.

Area B. That airspace extending upward from 2,000 feet MSL to and including 7,000 feet MSL within a 10.5–mile radius of the Boston VORTAC, excluding Area A.

Area C. That airspace extending upward from 3,000 feet MSL to and including 7,000 feet MSL within a 20–mile radius of the Boston VORTAC, excluding Areas A and B previously described and that airspace within and underlying Area D described hereinafter.

Area D. That airspace extending upward from 4,000 feet MSL to and including 7,000 feet MSL between the 15– and 20–mile radii of the Boston VORTAC extending from the Boston VORTAC 230° radial clockwise to the Boston VORTAC 005° radial.

b. ***EXAMPLE 2–***

ANM MT C Billings, MT

Billings Logan International Airport, MT
(lat. 45°48'30"N., long. 108°32'38"W.)

That airspace extending upward from the surface to and including 7,700 feet MSL within a 5–mile radius of the Billings Logan International Airport; and that airspace extending upward from 4,900 feet MSL to and including 7,700 feet MSL within a 10–mile radius of the airport

c. ***EXAMPLE 3–***

AGL MN D Duluth, MN

Duluth International Airport, MN
(lat. 46°50'32"N., long. 92°11'38"W.)

That airspace extending upward from the surface to and including 3,900 feet MSL within a 4.9–mile radius of Duluth International Airport.

d. ***EXAMPLE 4–***

AEA VA E2 Danville, VA

Danville Regional Airport, VA
(lat. 36°34'22''N., long. 79°20'10''W.)

That airspace extending upward from the surface within a 5–mile radius of Danville Regional Airport and within 2.4–miles each side of a 208° bearing from the airport, extending from the 5–mile radius to 7 miles southwest of the airport, and within 2.4–miles each side of a 016° bearing from the airport, extending from the 5–mile radius to 7 miles northeast of the airport.

Section 2. Ad Hoc Committee Procedures for Class B and Class C Airspace Actions

14–2–1. BACKGROUND

The ad hoc committee process was adopted in the 1980s in response to criticism that local user needs and suggestions were not being considered by the FAA during the initial airspace design phase prior to the issuance of an NPRM.

14–2–2. POLICY AND PURPOSE

a. An ad hoc committee must be formed to give users the opportunity to present input and recommendations to the FAA regarding the proposed design of, or modifications to, Class B and C airspace areas. The intent is to obtain suggestions from affected users before a proposed airspace design is developed by the FAA for publication in an NPRM.

b. The ad hoc committee process is not required for proposals to revoke Class B or C airspace or change the airspace designation from full–time to part–time or part–time to full–time.

14–2–3. COMMITTEE FORMATION

a. To initiate the formation of an ad hoc committee, the Service Center must first submit a request to the Rules and Regulations Group for approval to begin the public involvement phase (See chapter 15 or 16). A copy of the ATC facility's staff study must be included with the request.

b. Upon approval by the Rules and Regulations Group, the Service Center begins the ad hoc process by requesting an aviation–related group, such as the concerned state government aviation department or another aviation organization to coordinate the formation of an ad hoc committee. Committee makeup and size should be determined by the local situation or requirements. Committee membership should represent a cross section of airspace users and aviation organizations that would be affected by the proposed airspace change.

c. Once formed, the group should elect a chairperson to lead the committee's efforts.

14–2–4. FAA PARTICIPATION

a. FAA participation on the committee is limited to the role of technical advisor or subject matter expert only. The FAA is not a voting member of the group and is not responsible for the operation of the committee or the development of recommendations.

b. The Service Center, in collaboration with the affected ATC facility and overlying ARTCC, will designate FAA representative(s). The FAA representative(s) will provide advice and assistance to the committee on technical matters such as ATC procedures, operations, and safety issues.

NOTE–
The number of FAA representatives designated to the committee should be kept to the minimum number required to avoid the appearance of FAA influence on the committee's discussions and recommendations.

c. Upon request, the FAA may provide administrative support to the committee, resources permitting.

14–2–5. COMMITTEE PROCESS

a. There is no set number of ad hoc committee meetings required. The committee should meet as needed to develop its recommendations to present to the FAA.

NOTE–
The ad hoc committee meetings should not be confused with the separate, informal airspace meetings that are also required for Class B and Class C airspace actions (see chapter 2 of this order).

b. At the first ad hoc committee meeting, the FAA representative should:

1. Review the FAA's policy for establishing ad hoc committees and the intended purpose of ad hoc committees.

2. Brief the committee on the purpose and need for the proposed airspace action. A depiction of current/projected traffic flows may be useful to illustrate what the issue is and why an airspace change is needed.

c. The ad hoc committee should limit its focus and efforts to addressing the specific airspace issue for

which it was established. The committee should not address other airspace or procedural enhancement actions that do not contribute to resolving the issue under consideration.

d. Upon completion of the committee's work, the chairperson will ensure that a written report is prepared, summarizing the committee's efforts and documenting its recommendations for FAA consideration. The report is submitted to the FAA Service Center.

e. The ad hoc committee must automatically be dissolved upon submission of the committee's written report to the FAA.

14–2–6. FAA ACTION ON COMMITTEE RECOMMENDATIONS

a. The committee's recommendations must be considered and, to the extent practicable, should be incorporated into the proposed airspace design (i.e., if operationally feasible, safety and/or efficiency would not be compromised, and there is no conflict with regulations or ATC procedures.)

b. A copy of the committee's report will be included with the Service Center's recommendation to the Rules and Regulations Group that the project continue to the NPRM phase.

Chapter 15. Class B Airspace

Section 1. General

15–1–1. PURPOSE

a. Class B airspace areas are designed to improve aviation safety by reducing the risk of midair collisions in the airspace surrounding airports with high–density air traffic operations. Aircraft operating in these airspace areas are subject to certain operating rules and equipment requirements.

b. Additionally, Class B airspace areas are designed to enhance the management of air traffic operations to and from the airports therein, and through the airspace area.

15–1–2. NONRULEMAKING ALTERNATIVES

Before initiating a Class B airspace proposal, determine if there are nonrulemaking alternatives that could resolve the issue(s). If nonrulemaking alternatives resolve the issue(s), no Class B rulemaking action is required.

15–1–3. RESPONSIBILITIES

a. The Rules and Regulations Group is responsible for oversight of the Class B airspace designation/modification/revocation process and issuance of all informal airspace meeting notices, NPRMs, and final rules. The Rules and Regulations Group will provide assistance, as needed, to the Service Centers in developing Class B airspace proposals.

b. The Service Center is responsible for coordination to determine Class B airspace candidacy or the need for modifications or revocation of an existing area. As part of this responsibility, the Service Center must request a staff study be conducted by the appropriate office and perform an analysis of the staff study. All Class B airspace establishment, modification, or revocation plans must be coordinated with the Rules and Regulations Group before any public announcement.

15–1–4. SERVICE CENTER EVALUATION

a. Service centers must biennially evaluate existing Class B airspace areas to determine if the area continues to meet the purpose of Class B airspace and if airspace modifications are required. The evaluation should consider, but is not limited to, the following:

1. The Class B airspace guidance in this chapter;

2. Review the current configuration to determine if:

(a) It ensures the containment of instrument procedures.

(b) Any lateral or vertical gaps exist between adjacent airspace areas where VFR flight could increase hazards for Class B operations; or if the configuration contains any “traps” or “dead–end” corridors for VFR aircraft.

(c) There is a record of Class B excursions.

3. Airspace modeling results (PDARS, TARGETS, etc.);

4. Controller input and user feedback;

5. Applicable safety data; for example:

(a) Traffic Alert and Collision Avoidance System (TCAS) events;

(b) Air Traffic Safety Action Program (ATSAP);

(c) Aviation Safety Reporting System (ASRS);

(d) Mandatory Occurrence Reports (MOR);

(e) Near Midair Collision (NMAC) reports;

(f) FAA Aviation Safety Information Analysis and Sharing (ASIAS) System; and

(g) Other sources as appropriate.

6. Significant changes in primary airport traffic flows, runway utilization, or instrument procedures that affect the Class B configuration;

7. Secondary/satellite airport operations affecting Class B operations or controller workload;

8. Planning activities such as construction of new runways, changes to existing runways (for example, decommissioned, lengthened, etc.), development of new instrument procedures, or cancellation of existing procedures, resectorization plans (determine whether planned changes require Class B airspace modifications);

9. Need for charting enhancements: Sectional Aeronautical Chart, Terminal Area Chart (TAC), VFR Flyway Planning Chart; and

REFERENCE–
FAA Order JO 7210.3, Para 10–1–4, Sectional Aeronautical and Terminal Area Charts.

10. Any other factors deemed relevant to the Class B airspace area being evaluated.

b. The Service Center must document the biennial evaluation to the file, with an information copy of the evaluation sent to the Rules and Regulations Group (AJV–P21). If the evaluation indicates that airspace modifications or revocation should be made, Service Centers must follow the applicable procedures in this Order.

c. In addition to the biennial evaluation, airspace specialists should maintain coordination with planners (such as Metroplex, NextGen, Performance–Based Navigation, FPT, etc.) for awareness of instrument flight procedures under development to determine if they will be contained within the existing Class B airspace configuration. If the planned procedures would exit the existing Class B airspace, initiate a corresponding Class B modification project.

Section 2. Class B Airspace Planning

15–2–1. CRITERIA

a. The criteria for considering a given airport as a candidate for a Class B airspace designation is based primarily on the volume of aircraft at the airport being considered, and an assessment of the midair collision risk in the terminal area.

b. For a site to be considered as a Class B airspace candidate, the Class B designation must contribute to the safety and efficiency of operations, be necessary to correct a current situation that cannot be solved without a Class B designation, and meet the following criteria:

1. The airport being considered has a total airport operations count of at least 300,000 (of which at least 240,000 are air carriers and air taxi) and at least 5 million passengers enplaned annually; or

2. The airport being considered has a total airport operations count of more than 220,000 operations and will exceed 300,000 operations (of which 240,000 operations must be air carrier and air taxi) when the itinerant traffic count from (a) and (b) below are added, and at least 5 million passengers enplaned annually.

(a) 50% of the annual itinerant traffic count of any airport within 15 nautical miles (NM) from the airport being considered that has at least 15,000 annual itinerant operations, and

(b) 25% of the annual itinerant traffic count of any airport that is between 15 NM and 30 NM from the airport being considered that has at least 15,000 annual itinerant operations.

c. The Service Center must request a staff study to evaluate whether or not to revoke a primary airport's Class B airspace when that airport has not met the Class B airspace criteria for at least a five–year period and is projected to remain below those criteria for the next five years (See paragraph 15–3–6.).

d. These criteria are subject to periodic review by the Rules and Regulations Group and Service Centers to determine whether adjustments are required.

15–2–2. DESIGNATION

Class B airspace locations must include at least one primary airport around which the Class B airspace area is designated.

15–2–3. CONFIGURATION

a. General Design. There is no standard Class B design. Instead, the size and shape of the Class B airspace area will vary depending upon location–specific ATC operational and safety requirements. The Class B airspace design should be as simple as practical, with the number of sub–areas kept to a minimum. Its vertical and lateral limits must be designed to contain all instrument procedures at the primary airport(s) within Class B airspace.

1. Designers have the flexibility to use the configuration that best meets the purposes of reducing the midair collision potential, assures containment of instrument procedures, and enhances the efficient use of airspace.

2. Ensure that the design does not contain lateral or vertical gaps between adjacent airspace where VFR flight could pose increased hazards for Class B operations.

3. Avoid configurations that create "traps" or "dead–end" corridors for VFR aircraft attempting to navigate the area.

b. Lateral Boundaries. Boundaries may be defined using a variety of techniques such as latitude/longitude points, Fix/Radial/Distance references, NAVAIDs, alignment to coincide with prominent landmarks or terrain features (where feasible), etc.

1. The airspace should be centered on the airport reference point (ARP), an on–airport NAVAID, or a "point–of–origin" (defined by latitude/longitude coordinates), as dictated by local requirements.

2. The outer limits of the airspace should extend to the minimum distance necessary to provide containment of instrument procedures, including radar vectoring, but must not extend beyond 30 NM from the primary airport. This will ensure that the Class B boundaries remain within the 30 NM "Mode–C Veil." The boundaries should be designed

considering operational needs, runway alignment, adjacent regulatory airspace, and adjacent airport traffic.

3. If a circular design is appropriate, the airspace may be configured in concentric circles to include a surface area and intermediate and outer shelf sub–areas. A combination of circular and linear boundaries may also be used, as required.

(a) The surface area should be designed based on operational needs, runway alignment, adjacent regulatory airspace, or adjacent airports, but must encompass, as a minimum, all final approach fixes.

(b) The intermediate and outer shelf sub–areas may be subdivided based on terrain and other regulatory airspace, but must contain instrument procedures.

c. Vertical Limits. The upper limit of the airspace should not exceed 10,000 feet MSL. However, high airport field elevation, adjacent high terrain, or operational factors may warrant a ceiling above 10,000 feet MSL.

1. The surface area extends from the surface to the upper limit of the Class B airspace. This area may be adjusted to coincide with runway alignment, adjacent airports, other regulatory airspace, etc., but must encompass, as a minimum, all final approach fixes and minimum altitudes at the final approach fix.

2. The altitude floors of sub–areas should step up with distance from the airport. Determination of sub–area floors should be predicated on instrument procedure climb/descent gradients to ensure containment of the procedures. Sub–area floors may be adjusted to have various floor altitudes considering terrain, adjacent regulatory airspace, and common vectored flight paths that are not on procedures.

3. Sub–area exclusions are permitted to accommodate adjacent regulatory airspace and/or terrain.

4. Different Class B altitude ceilings may be designated for specific sub–areas if there is an operational or airspace efficiency advantage, provided this would not cause pilot confusion or lead to inadvertent intrusions into, or excursions from, Class B airspace. Address the need for different altitude ceilings in the staff study.

d. Variations. Variation from the above lateral or vertical design guidance is permissible, but must be justified in the staff study and recommended by the Service Center.

e. Satellite Airports. When establishing Class B airspace floors, consider the adverse effect on satellite airport operations. When airspace directly over a satellite airport is not required, it should be excluded from the Class B airspace. Special published traffic patterns, and/or procedures may be required for satellite airports.

15–2–4. IFR TRANSITION ROUTES

If ATC operational factors and traffic permit, consider whether RNAV T–routes could be developed to guide transiting pilots to fly through, or navigate around, the Class B airspace area.

15–2–5. VFR CONSIDERATIONS

To the extent feasible, procedures must be developed to accommodate VFR aircraft desiring to transit the Class B airspace (See FAA Order JO 7210.3, Facility Operation and Administration, Chapter 11, National Programs). The following charts can assist pilots in identifying Class B boundaries and to transit or circumnavigate the area.

a. VFR Terminal Area Charts (TAC). TAC charts are published for most Class B airspace areas. They provide detailed information needed for flight within or in the vicinity of Class B airspace.

b. Charted VFR Flyway Planning Charts. VFR Flyway Planning Charts are published on the back of selected TAC charts. The Flyway Planning Charts are intended to facilitate VFR transitions through high–density areas. They depict generalized VFR routing clear of major controlled traffic flows. An ATC clearance is not required to fly these routes. If not already published, Class B facilities are encouraged to develop a flyway planning chart.

15–2–6. CHART ENHANCEMENTS

Consider enhancements to TAC and VFR Flyway Planning Charts that would increase situational awareness for VFR pilots and others transiting the area, aid the identification of Class B boundaries, and assist pilots desiring to avoid the Class B airspace. Example chart depictions include, but are not limited to:

a. Identification of key boundary points with a combination of latitude/longitude coordinates and

NAVAID fix/radial/distance information (if available).

b. Prominent landmarks or terrain features easily visible from the air.

c. VFR checkpoints (“Flags”).

d. IFR arrival and departure routes to/from the primary airport. Explore the feasibility of including significant IFR arrival/departure routes at secondary airports.

e. GPS and VFR waypoints placed in and around the Class B airspace to assist pilots in transiting or avoiding the airspace.

NOTE–
See FAA Order JO 7210.3 (Chapters 10 and 12) for descriptions of TAC and VFR Flyway Planning Charts and the instructions for establishing, modifying, and review of the charts.

Section 3. Class B Airspace Processing

15–3–1. OVERVIEW

Class B airspace actions require rulemaking under 14 CFR Part 71. Due to their size and operating requirements, Class B airspace proposals tend to be controversial with processing times extending to several years. This section describes the steps required from the development of a Class B proposal through the issuance of a final rule that implements the airspace change.

15–3–2. STAFF STUDY

A Staff Study is required to identify and document the need to establish or modify a Class B airspace area. The study will be used to determine if an ad hoc committee should be formed to begin the airspace change process. The content of the study will depend on site–specific details for the situation being considered. The following is a list of suggested items for the study. This list and study format may be modified as needed.

a. Executive Summary. A one–page summary that describes the problem, alternatives considered, and justification for the proposed airspace change request.

b. Background. Describe the current operation and aviation activity in the area and forecast data for the primary and secondary airports.

1. Primary airport(s).

(a) Current passenger enplanement count.

(b) Airport(s)' latest total annual operations count.

2. Secondary/satellite airport(s).

(a) Current passenger enplanement count.

(b) Airport(s)' total operations count.

(c) Types of operations conducted (for example, flight school training, gliders, parachuting, Unmanned Aircraft System (UAS) activities, etc.).

3. Description of the terminal area.

(a) IFR and VFR departure and arrival traffic flows at primary and secondary/satellite airports.

(b) Existing routes and altitudes that IFR and VFR traffic use while operating en route through the area or transitioning to/from all affected airports.

(c) Numbers of VFR operations that receive ATC services that are denied service, and that circumnavigate the present terminal airspace configuration.

NOTE–
Include any anticipated increase or decrease in these numbers if the Class B airspace configuration is designated or modified as proposed.

4. Adjacent airspace considerations.

(a) Other ATC facility delegated airspace.

(b) Special use airspace.

(c) Unique geographical features.

5. Overflight traffic volume affecting Class B operations.

6. FAA Terminal Area Forecast (TAF) data. Include the latest TAF data for the primary and key secondary airports.

c. Statement of the Problem.

1. Identify and document the operational issue(s). Explain how safety and the efficient management of air traffic operations in and through the terminal area are affected.

2. Provide supporting data to illustrate the operational issue(s), such as TCAS Resolution Advisories, Near Midair Collision (NMAC) reports, airspace modeling graphics, containment issue documentation, controller/user input, etc.

d. Alternatives Considered. Non–rulemaking alternatives must be examined before proposing rulemaking airspace changes, such as:

1. Are there internal measures that could resolve the problem (for example, new equipment/control positions, changing facility procedures, resectorization, etc.?)

2. Modification of instrument procedures.

3. Pilot/Controller education programs.

e. Analysis of staffing options and issues, such as:

1. Current staffing status and the anticipated staffing requirements for implementing the proposed Class B airspace.

2. Impact on air traffic and air navigation facilities, including new or modified control positions required; and new, or relocation of existing, navigational aids/communication equipment.

f. Preliminary airspace design.

1. A written description of the complete Class B airspace area including full boundaries of all sub–areas, existing and proposed. (For examples, see FAA Order JO 7400.11, Airspace Designations and Reporting Points.)

2. A depiction of the preliminary Class B airspace configuration on a VFR aeronautical chart.

3. An explanation of how the preliminary airspace design addresses the operational issue.

4. Discussion of any anticipated adverse impacts on nonparticipating aircraft.

g. Charting. Consider enhancements to the VFR TAC that add information to assist pilots in identifying Class B boundaries, navigating through the area, or avoiding Class B airspace. Examples include, but are not limited to:

1. Depiction of prominent terrain features or landmarks.

2. Proposed VFR Flyways, with associated recommended altitudes that would be charted to accommodate VFR aircraft desiring to avoid the Class B airspace area.

REFERENCE–
FAA Order JO 7210.3, Chapter 12, Section 4, VFR Flyway Planning Chart Program.

3. VFR corridor and transition routes to transit through the Class B airspace area.

4. GPS waypoints and VFR checkpoints.

5. RNAV routes for transiting or deviating around the Class B airspace.

NOTE–
TAC chart content is separate from the Class B rulemaking process. Service centers/ATC facilities must coordinate chart content/design requests directly with Aeronautical Information Services.

h. Environmental considerations.

i. Conclusions. Explain how the proposed airspace designation/modification will reduce the midair collision potential and enhance safety and efficiency in the terminal area.

15–3–3. PRE–NPRM AIRSPACE USER CO-ORDINATION

The Service Center must ensure that user input is sought and considered before formulating any proposed Class B airspace area design.

a. An ad hoc advisory committee, composed of representatives of local airspace users, must be formed to present input or recommendations to the FAA regarding the proposed design of the Class B airspace area (See Chapter 14 of this order).

b. Informal airspace meeting(s) must be conducted in accordance with Chapter 2 of this order.

c. Based on the results of the Service Center's analysis of the staff study and user input, the Service Center determines whether the proposal should be continued to NPRM or terminated.

15–3–4. NPRM PHASE

a. The air traffic facility, assisted by the appropriate Service Center office, will develop a proposed Class B airspace design, incorporating user input, to be published in an NPRM.

NOTE–
If modifying an existing Class B area that has a published Charted VFR Flyway Planning Chart, determine if changes are also needed to the flyways to ensure there are no conflicts with the proposed Class B design. Service centers/ATC facilities must coordinate flyway chart changes directly with Aeronautical Information Services (See FAA Order JO 7210.3).

b. The Service Center will submit a memorandum to the Rules and Regulations Group to initiate rulemaking action. The memorandum must summarize the background, requirement, justification, and Service Center recommendation. Include, as attachments, the following information:

1. Ad hoc Committee Report.

2. Informal Airspace Meeting summary(ies) and comments submitted.

3. Responses to substantive ad hoc committee recommendations and Informal Airspace Meeting public comments received.

4. Written proposed Class B airspace description.

5. An explanation of how the proposed airspace design addresses the operational issue.

6. Any other pertinent information.

c. The Rules and Regulations Group will prepare the NPRM for publication in the Federal Register. A 60–day comment period applies to Class B NPRMs.

15–3–5. POST–NPRM PROCESSING

a. The Service Center must:

1. Review all comments received in response to the NPRM.

2. Coordinate with the ATC facility(ies) to address all substantive aeronautical comments.

3. Finalize the Class B airspace design for submission to the Rules and Regulations Group.

4. Submit a memorandum to the Rules and Regulations Group with recommendations for final action on the proposal. Include, as attachments, the following information:

(a) A discussion of how each substantive comment was addressed.

(b) The final version of the Class B airspace description. Explain any differences from the NPRM design.

(c) The requested airspace effective date (must match the Sectional/TAC chart date).

5. If required, coordinate Sectional, TAC, and VFR Flyway charting changes with Aeronautical Information Services (AIS).

b. The Rules and Regulations Group will review the Service Center package and prepare the final rule for publication in the Federal Register.

15–3–6. REVOKING CLASS B AIRSPACE

a. When a Class B primary airport no longer meets the Class B airspace criteria, and is identified during the Biennial Review process, the Class B airspace must be considered for revocation.

b. The Service Center requests a staff study be conducted by the appropriate office.

c. Based on their analysis of the staff study, the Service Center must determine if the Class B airspace will be:

1. Retained as Class B airspace; or

2. Revoked and redesignated as Class C or Class D airspace, as appropriate.

d. If the Service Center determines that Class B airspace should be retained, they must document their analysis and determination to file with the biennial evaluation, and send an information copy of the retention determination to the Rules and Regulations Group (AJV–P21). If it is determined that the Class B airspace should be revoked and redesignated as Class C or Class D airspace, the Service Center must initiate rulemaking action as specified in this Order.

Chapter 16. Class C Airspace

Section 1. General

16–1–1. PURPOSE

Class C airspace areas are designed to improve aviation safety by reducing the risk of midair collisions in the terminal area and enhance the management of air traffic operations therein. Aircraft operating in these airspace areas are subject to certain operating rules and equipment requirements.

16–1–2. NONRULEMAKING ALTERNATIVES

Before initiating a Class C airspace proposal, determine if there are nonrulemaking alternatives that could resolve the operational issue(s). If nonrulemaking alternatives resolve the issue(s), no Class C rulemaking action is required.

16–1–3. RESPONSIBILITIES

a. The Rules and Regulations Group is responsible for oversight of the Class C airspace designation/modification process and issuance of all Notices of Proposed Rulemaking (NPRM) and final rules. The Rules and Regulations Group will provide assistance, as needed, to the Service Centers in developing Class C airspace proposals.

b. The Service Center is responsible for coordination to determine Class C airspace candidacy or the need for modifications to an existing area. All Class C airspace establishment or modification plans must be coordinated with the Rules and Regulations Group prior to any public announcement. The Service Center must perform an analysis of the Class C airspace candidate and document the analysis in a staff study. Preparation of the staff study may be delegated to the facility.

16–1–4. SERVICE CENTER EVALUATION

a. Service Centers must biennially evaluate existing Class C airspace areas to determine if the area meets candidacy requirements, satisfies the intended purpose of reducing the potential for midair collision, and enhances the management of air traffic operations in the terminal area. Some suggested evaluation considerations include, but are not limited to:

1. The Class C standards in this chapter;

2. Airspace modeling results (PDARS, TARGETS, etc.);

3. Traffic Alert Collision Avoidance System – Resolution Advisories;

4. User feedback/controller input;

5. Safety reports (ATSAP, ASRS, etc.);

6. Significant changes in airport operations and/or terminal area traffic flows; and/or

7. Airport runway configuration changes.

b. If the evaluation indicates that airspace modifications should be made, Service Centers must follow the applicable procedures in this Order.

Section 2. Class C Airspace Planning

16–2–1. CRITERIA

a. The criteria for considering a given airport as a candidate for Class C designation is based on the volume of aircraft or number of enplaned passengers, the traffic density, and the type or nature of operations being conducted.

b. For a site to be considered as a candidate for Class C airspace designation, it must meet the following criteria:

1. The airport must be serviced by an operational airport traffic control tower and a radar approach control; and

2. One of the following applies:

(a) An annual instrument operations count of 75,000 at the primary airport.

(b) An annual instrument operations count of 100,000 at the primary and secondary airports.

(c) An annual count of 250,000 enplaned passengers at the primary airport.

3. Class C designation contributes to the efficiency and safety of operations and is necessary to correct a current situation or problem that cannot be solved without a Class C designation.

NOTE–
Operations counts are available from the Office of Aviation Policy and Plans, Statistics and Forecast Branch, APO–110. Enplaned passenger counts may be obtained by contacting the Office of Airport Planning and Programming, APP–1. Current validated counts are normally available in mid–October of the current year for the previous year.

16–2–2. DESIGNATION

Class C airspace areas should be designated around a single primary airport.

16–2–3. CONFIGURATION

In general, airspace design identifies simplification and standardization of Class C airspace areas as prime requisites. Containment of instrument procedures within Class C airspace is not required. Lateral and vertical limits must be in accordance with the following, to the extent possible:

a. Lateral Limits. Class C airspace areas should initially be designed as two concentric circles centered on the airport reference point. The surface area should have a 5 NM radius, and the outer limits of the airspace area should not extend beyond a 10 NM radius. Wherever possible, use VOR radials and DME arcs to define the boundaries of the airspace and any of its sub–areas. It is important, however, that prominent visual landmarks also be considered to assist the VFR traffic preferring to remain clear of Class C airspace.

b. Vertical Limits. The ceiling of a Class C airspace should be 4,000 feet above the primary airport's field elevation. The surface area extends from the surface to the upper limit of the airspace. The floor of the airspace between the 5 and the 10 NM must extend from no lower than 1,200 feet AGL to the upper limit of the airspace.

c. Variations. Any variation from the lateral and vertical limits design guidance must be justified in the staff study and recommended by the Service Center. (The number of sub–areas must be kept to a minimum.)

NOTE–
Though not requiring regulatory action, an Outer Area is the procedural companion to Class C airspace. The normal radius of an Outer Area is 20 NM from the primary Class C airspace airport. Its vertical limit extends from the lower limits of radio/radar coverage up to the ceiling of the approach control's delegated airspace, excluding the Class C airspace itself, and other airspace as appropriate.

16–2–4. TIME OF DESIGNATION

a. Class C airspace areas may be designated as continuous or part–time. If part–time, the effective time must be stated in local time. In order to designate a part–time Class C airspace area, the following statement must be included in the airspace description: "This Class C airspace area is effective during the specific dates and times established, in advance, by a Notice to Air Missions (NOTAM). The effective date and time will thereafter be continuously published in the (*insert appropriate publication from below*)."

1. The appropriate volume of the Chart Supplement U.S.;

2. Chart Supplement Alaska; or

3. Chart Supplement Pacific.

b. For permanent changes to existing part–time Class C airspace area designations, the following actions must be accomplished:

1. Issue an airspace NOTAM specifying the new part–time Class C effective hours.

2. Submit the new part–time Class C effective hours to AIS for publication in the Chart Supplement U.S., Chart Supplement Alaska, or Chart Supplement Pacific, as appropriate.

3. Retain the NOTAM specifying the new part–time Class C effective hours until the new hours are published in the appropriate chart supplement.

c. For unexpected events that affect the availability of part–time Class C services, issue a service NOTAM, in accordance with FAA Order 7930.2, Notices to Air Missions, describing the ATC service available and duration. No airspace NOTAM is issued.

d. Notices to Air Missions specifying the dates and times of a designated part–time area may be issued by the appropriate facility only after coordination with the Service Center. The Service Center must ensure that such action is justified and in the public interest.

Section 3. Class C Airspace Processing

16–3–1. STAFF STUDY

A Staff Study is required to identify and document the need to establish or modify a Class C airspace area. The study will be used to determine if an ad hoc committee should be formed to begin the airspace change process. The content of the study will depend on site–specific details for the situation being considered. The following is a list of suggested items for the study. This list and study format may be modified as needed.

a. Executive Summary. A one–page summary that describes the problem, alternatives considered, and justification for the proposed airspace change request.

b. Background. Describe the current operation and aviation activity in the area.

1. Primary airport(s).

(a) Current passenger enplanement count.

(b) Airport(s)' latest total annual operations count.

2. Satellite/secondary airport(s).

(a) Current passenger enplanement count.

(b) Airport(s)' total operations count.

(c) Types of operations conducted (for example, flight school training, gliders, parachuting, etc.).

3. Description of the terminal area.

(a) IFR and VFR departure and arrival traffic flows at primary and satellite/secondary airports.

(b) Existing routes and altitudes that IFR and VFR traffic use while operating en route through the area or transitioning to/from all affected airports.

4. Adjacent airspace considerations.

(a) Other ATC facility delegated airspace.

(b) Special use airspace.

(c) Unique geographical features.

c. Statement of the Problem.

1. Identify and document the operational issue. Explain how safety and the efficient management of air traffic operations in and through the terminal area are affected.

2. Provide supporting data to illustrate the operational issue, such as Traffic Alert and Collision Avoidance System (TCAS) RAs, airspace modeling graphics, user/controller input, etc.

d. Alternatives Considered. Nonrulemaking alternatives must be examined before proposing rulemaking airspace changes, for example:

1. Are there internal operational measures that could resolve the problem (for example, new equipment, changing facility procedures, resectorization, etc.).

2. Modification of instrument procedures.

3. Pilot/controller education programs and aviation education safety seminars.

e. Analysis of staffing options, and issues, such as:

1. Current staffing status and the anticipated staffing requirements for implementing the proposed Class C airspace.

2. Impact on air traffic and air navigation facilities, including new or modified control positions required; and new, or relocation of existing, navigational aids/communication equipment.

f. Proposed airspace design.

1. A written description of the complete Class C airspace area including full boundaries of all sub–areas existing and proposed. For examples, see FAA Order JO 7400.11, Airspace Designations and Reporting Points.

2. A depiction of the proposed Class C airspace configuration on a VFR aeronautical chart.

3. An explanation of how the proposed airspace design addresses the operational issue.

4. Discussion of any anticipated adverse impacts on nonparticipating aircraft.

g. Environmental considerations.

h. Conclusions. Explain how the proposed airspace designation/modification will reduce the midair collision potential and enhance safety and efficiency in the terminal area.

16–3–2. PRE–NPRM AIRSPACE USER COORDINATION

The Service Center must ensure that user input is sought and considered prior to formulating any proposed Class C airspace area design.

a. An ad hoc advisory committee, composed of representatives of local airspace users, must be formed to present input or recommendations to the FAA regarding the proposed design of the Class C airspace area. (See Chapter 14 of this order).

b. Informal airspace meeting(s) must be conducted in accordance with Chapter 2 of this order.

c. Based on the results of the Service Center's analysis of the staff study and user input, the Service Center determines whether the proposal should be continued to NPRM or terminated.

16–3–3. NPRM PHASE

a. The Service Center and facility will develop a proposed Class C airspace design, incorporating user input, to be published in an NPRM.

b. The Service Center will submit a memorandum to Headquarters to initiate rulemaking action. The memorandum should summarize the background, requirement, justification, and Service Center recommendation. Include, as attachments, the following information:

1. Ad hoc Committee Report.

2. Informal Airspace Meeting summary(ies) and comments submitted.

3. Responses to substantive ad hoc committee recommendations and Informal Airspace Meeting public comments received.

4. Written proposed Class C airspace description.

5. An explanation of how the proposed airspace design addresses the operational issue.

6. Any other pertinent information.

c. The Rules and Regulations Group will prepare the NPRM for publication in the Federal Register. A 60–day comment period applies to Class C NPRMs.

16–3–4. POST–NPRM PROCESSING

The Service Center must:

a. Review all comments received in response to the NPRM.

b. Coordinate with the ATC facility(ies) to address all substantive aeronautical comments.

c. Finalize the Class C airspace design for submission to Headquarters.

d. Submit a memorandum to Headquarters with recommendations for final action on the proposal. Include, as attachments, the following information:

1. A discussion of how each substantive comment was addressed.

2. The final version of the Class C airspace description. Explain any differences from the NPRM design.

3. The requested airspace effective date.

e. Headquarters will prepare the final rule.

16–3–5. PUBLICITY

After issuance of the final rule designating Class C airspace, user education meetings are required to publicize the implementation of Class C service. See FAA Order JO 7210.3, Facility Operation and Administration, Chapter 12, National Programs, for details.

Chapter 17. Class D Airspace

Section 1. General

17–1–1. PURPOSE

Class D airspace areas are terminal airspace that consist of specified airspace (i.e., Surface Areas) within which all aircraft operators are subject to operating rules and equipment requirements. Service area offices are responsible for the coordination and implementation of Class D airspace designations.

a. Generally, a surface area is designated Class D airspace to provide controlled airspace for terminal VFR or IFR operations at airports having a control tower.

b. For non–towered airports requiring a surface area, the airspace will be designated Class E, see FAA Order JO 7400.9, Airspace Designations and Reporting Points.

c. The designation of navigable airspace outside of the United States is the responsibility of the Rules and Regulations Group (for example, U.S. territories).

17–1–2. REGIONAL/SERVICE AREA OFFICE EVALUATION

a. Service area offices must biennially evaluate existing and candidate Class D airspace areas using the information contained in this chapter as a guideline.

b. If the conclusion of an evaluation indicates that airspace modifications should be made, regions/service area offices must follow the applicable procedures in this order.

17–1–3. DESIGNATION

If the communications and weather observation reporting requirements of paragraphs 17–2–9 and 17–2–10 are met, a surface area:

a. Must be designated where a FAA control tower is in operation. Final rules will not be published in the Federal Register prior to a control tower becoming operational at the primary airport.

b. May be designated where a non–FAA control tower is in operation.

c. Must be designated to accommodate instrument procedures (planned, published, special, arrival, and departure) if such action is justified and/or in the public interest. The following factors should be considered:

1. Type of procedure, including decision height or minimum descent altitude.

2. The actual use to be made of the procedure, including whether a certificated air carrier or an air taxi/commuter operator providing service to the general public uses it.

NOTE–
For special instrument procedures, consideration should be given to availability to other users.

3. The operational and economic advantage offered by the procedure, including the importance and interest to the commerce and welfare of the community.

4. Any other factors considered appropriate.

17–1–4. TIME OF DESIGNATION

Class D or surface areas may be designated full–time or part–time. If part–time, the effective time must be stated in Coordinated Universal Time (UTC). Service area offices must ensure effective times are forwarded to AIS to be published in the NFDD.

17–1–5. PART TIME SURFACE AREAS

a. A provision may be incorporated in part–time Class D surface area designations (rules) to allow, by Notices to Air Missions, for changes when minor variations in time of designation are anticipated. To apply this provision a Notice of Proposed Rulemaking and final rule must be issued which provides the following statement in the specific airspace designation: “This surface area is effective during the specific dates and times established, in advance, by a Notice to Air Missions.”

b. The effective date and time will thereafter be continuously published. Information concerning these surface areas must be carried in the following publications as applicable:

1. The Chart Supplement U.S. for the contiguous United States, Puerto Rico, and Virgin Islands.

2. The Chart Supplement Alaska.

3. The Chart Supplement Pacific

c. Notices to Air Missions specifying the dates and times of a designated part–time area may be issued by the appropriate facility only after coordination with the regional/service area office The service area office must assure that such action is justified and in the public interest.

Section 2. Class D Airspace Standards

17–2–1. CONFIGURATION

a. A Class D airspace area must be of sufficient size to:

1. Allow for safe and efficient handling of operations.

2. Contain IFR arrival operations while between the surface and 1,000 feet above the surface and IFR departure operations while between the surface and the base of adjacent controlled airspace.

b. Size and shape may vary to provide for 1 and 2 above. The emphasis is that a Class D area must be sized to contain the intended operations.

17–2–2. AIRPORT REFERENCE POINT/ GEOGRAPHIC POSITION

a. The Class D airspace boundary should normally be based on the airport reference point (ARP) or the geographic position (GP) of the primary airport. The ARP/GP is the center of the airport expressed in coordinates and should be incorporated into the surface area's legal description.

b. If a Class E surface area is established in conjunction with a part–time Class D area, the areas should normally be coincident. Explain any differences in the rulemaking documents.

NOTE–
Under certain conditions, the ARP/GP can change. If this occurs, the airspace should be reviewed to ensure the instrument procedures are still contained within existing airspace.

17–2–3. SATELLITE AIRPORTS

a. Using shelves and/or cutouts to the extent practicable, exclude satellite airports from the Class D airspace area (see FIG 17–2–3).

b. Satellite airports within arrival extensions may be excluded using the actual dimensions of the TERPs trapezoid.

c. Do not exclude airports inside the TERPs primary obstruction clearance area of the procedure(s) for which the surface area is being constructed or when the exclusion would adversely affect IFR operations.

17–2–4. ADJOINING CLASS D AIRSPACE AREAS

Designate separate Class D airspace area for airports in proximity to each other. A common boundary line must be used so that the airspace areas do not overlap. When operationally advantageous, the common boundary separating adjacent Class D areas may be eliminated if the areas are contained in an existing Class B or Class C airspace area controlled by the same IFR ATC facility.

17–2–5. DETERMINING CLASS D AREA SIZE

The size of a Class D area, and any necessary extensions, is determined by the use of a 200 feet per NM climb gradient and information obtained from the person responsible for developing instrument procedures (see FIG 17–2–1).

NOTE–
Normally, the person responsible for developing instrument procedures for civil and U.S. Army airports is a FAA Aviation Standards Airspace Evaluation Specialist. A military representative handles all other military procedures.

17–2–6. DEPARTURES

a. When diverse departures are authorized, design the Class D area using a radius of 3.5 NM plus the distance from the ARP/GP to the departure end of the outermost runway (see FIG 17–2–1).

b. When specific departure routes are required, the routes will determine the shape of the Class D area. Use the 200 feet per NM climb gradient procedure in subparagraph a. above and FIG 17–2–2 plus 1.8 NM either side of the track(s) to be flown.

c. In areas with rising terrain, apply the procedures reflected in FIG 17–2–2.

17–2–7. ARRIVAL EXTENSION

a. A Class D area arrival extension must be established to the point where an IFR flight on an instrument approach can be expected to descend to less than 1,000 feet above the surface.

b. When multiple approach procedures are established using the same initial approach course,

but with different 1,000–foot points, the extension length must be based on the approach requiring the greatest distance. Consistent with safety and operational feasibility, if an adjustment to the 1,000–foot point can be made to eliminate or shorten an extension, the specialist must coordinate with the person responsible for developing the instrument approach to request the adjustment.

c. The width of the extension must be equal to the width of the TERPs primary obstruction clearance area at the point where an IFR flight on an instrument approach can be expected to descend to an altitude below 1,000 feet above the surface. However, if the primary area widens between the point where the flight leaves 1,000 feet and the airport, the widened portion of the primary area located outside the basic surface area radius must be used for the extension. These extensions must, in all cases, extend to a minimum of 1 NM on each side of the centerline.

d. If all arrival extensions are 2 NM or less, they will remain part of the basic Class D area. However, if any extension is greater than 2 NM, then all extensions will be Class E airspace.

17–2–8. VERTICAL LIMITS

Class D areas should normally extend upward from the surface up to and including 2,500 feet AGL. The altitude must be converted to MSL and rounded to the nearest 100 feet. However, in a low density or non–turbo aircraft traffic environment, a vertical limit of 2,500 feet AGL may be excessive and a lower altitude should be used.

NOTE–
The nearest 100 feet means that 49 feet and below must be rounded down and 50 feet and above must be rounded up.

17–2–9. COMMUNICATIONS

Communications capability must exist with aircraft, that normally operate within the Class D Surface Area down to the runway surface of the primary airport (the airport upon which the surface area is designated). This communication may be either direct from the ATC facility having jurisdiction over the area or by rapid relay through other communications facilities which are acceptable to the ATC facility having that jurisdiction.

17–2–10. WEATHER OBSERVATIONS AND REPORTING

a. Weather observations must be taken at the primary airport during the times and dates the Class D airspace is active. A federally certified weather observer or a federally commissioned automated weather observing system (this includes all FAA and NWS approved and certified weather reporting systems) can take the weather observation. The weather observer must take routine (hourly) and special observations. An automated weather observing system can provide continuous weather observations.

b. Scheduled record and special observations from weather observers or automated weather reporting systems must be made available to the ATC facility(s) having control jurisdiction over the Class D designated surface area. This can be accomplished through Flight Service Station (FSS), Longline Dissemination, National Weather Service (NWS), or other FAA–approved sources. Facilities that require weather reports from satellite airports may enter into a letter of agreement (LOA) with the associated FSS, airline/contract observer, airport management, etc.

NOTE–
1. *At ATC sites where non–Federal employees perform weather duties, the appropriate FAA office must ensure that the reporting and dissemination requirements applicable to National Weather Service and FAA publication standards are followed.*

2. *In facilities where direct access to automated weather observing systems is not available, controllers will apply the provisions of FAA Order JO 7110.65, Air Traffic Control.*

17–2–11. LOSS OF COMMUNICATION OR WEATHER REPORTING CAPABILITY

a. If the capabilities outlined in paragraph 17–2–9 and/or paragraph 17–2–10 are temporarily out of service for an active Class D Surface Area, a Notice to Air Missions must be issued stating the temporary loss of the affected service.

b. However, if it is determined that the capabilities are consistently unavailable, a Notice to Air Missions must be issued, as described above, and rulemaking action initiated to revoke the Surface Area, as appropriate.

c. The FPT needs to be kept informed of any planned action, especially when instrument approach procedures (IAP) are involved, so as to assess the impact on published approaches. The Standards Specialist may decide changes are needed in the IAP, dependent on possible new altimeter source and other considerations. These changes will have an effect on the airspace action required; for example, minimums may be raised, or procedure may be canceled.

FIG 17–2–1
CLASS D AREA RADIUS FORMULA

Class D AREA RADIUS FORMULA
RADIUS
ARP/GP = AIRPORT REFERENCE POINT AND/OR GEOGRAPHIC POSITION
EOR = END OF OUTERMOST RUNWAY
6076 = ONE NAUTICAL MILE IN FEET
200 FEET PER NAUTICAL MILE = STANDARD CLIMB GRADIENT
D = DISTANCE IN FEET FROM ARP/GP TO EOR 3.5 MILES = DISTANCE REQUIRED FOR DEPARTURE TO REACH 700–FOOT CLASS E AIRSPACE USING STANDARD CLIMB GRADIENT
(700/200)
2.5 MILES = DISTANCE REQUIRED FOR DEPARTURE TO REACH 1200–FOOT CLASS E AIRSPACE USING STANDARD CLIMB GRADIENT
((1200 − 700)/200)
THE FORMULA CAN BE EXPRESSED AS: R = D/6076 + 3.5

Example:

At Airport A, the distance from the geographic position to the end of the outermost runway is 4,023 feet; therefore, assuming flat terrain, the radius is calculated as:

R = 4023/6076 + 3.5 = .662 + 3.5 = 4.162 = 4.2
The radius for the 700–foot Class E airspace becomes: 4.2 + 2.5 = 6.7

RISING TERRAIN

In the above example, an aircraft departing to the west would reach the lateral boundary of the surface area without reaching 700 feet AGL and, in effect, leave controlled airspace. To ensure that the lateral boundary of the Class D area is congruent with the beginning of the 700–foot Class E airspace, the specialist must:

a. Search the Class D area's radius circle for the highest terrain.

b. Calculate the MSL height of the aircraft by adding 700 feet to the airport elevation.

c. Compare MSL altitudes of the aircraft versus the highest terrain to determine if the aircraft has reached the overlying or adjacent controlled airspace. If not, increase the size of the Class D area, as necessary, to contain the departure.

NOTE–
When terrain, obstacles, or procedures prohibit departures in portions of the basic surface area, a terrain search is not necessary in that area and that height is not used in the computations.

FIG 17–2–2
RISING TERRAIN

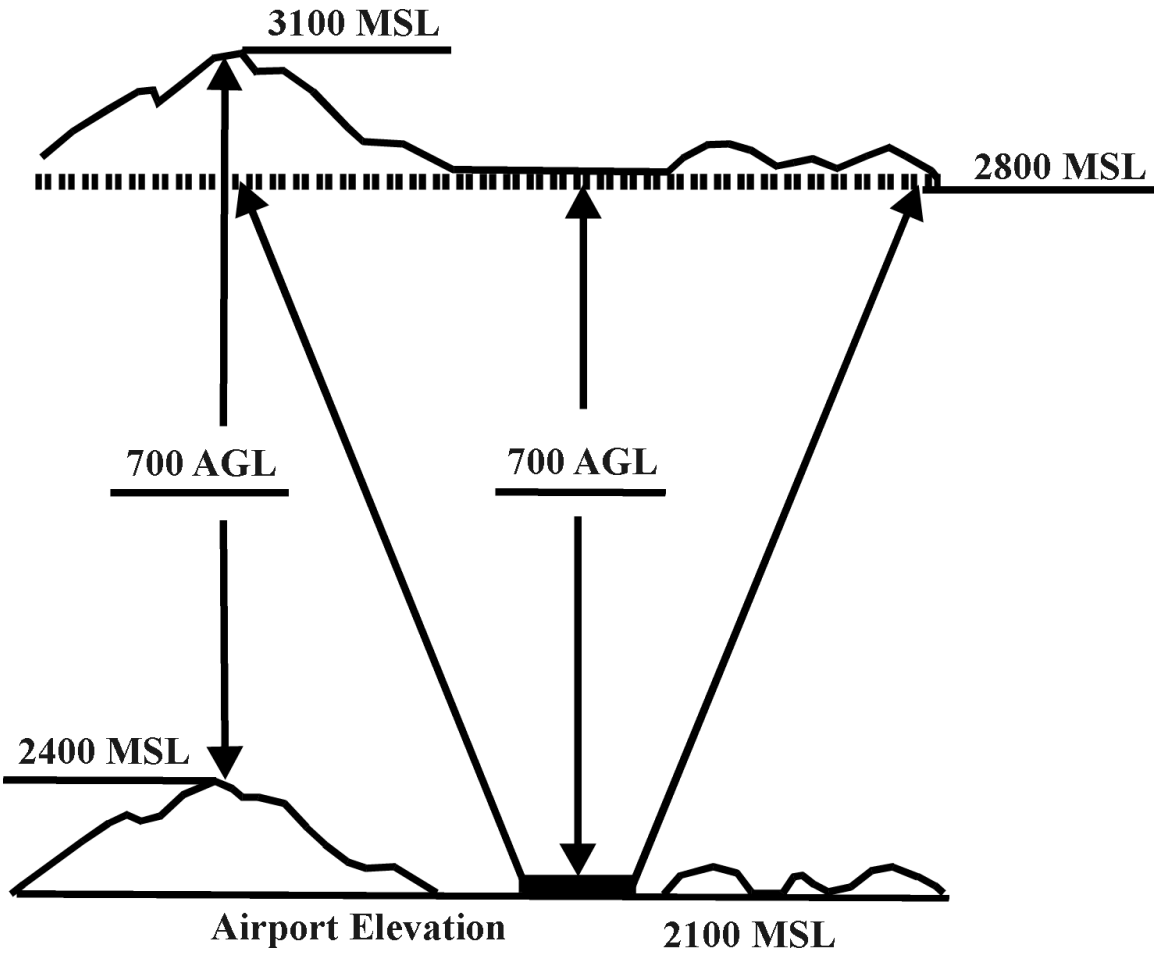
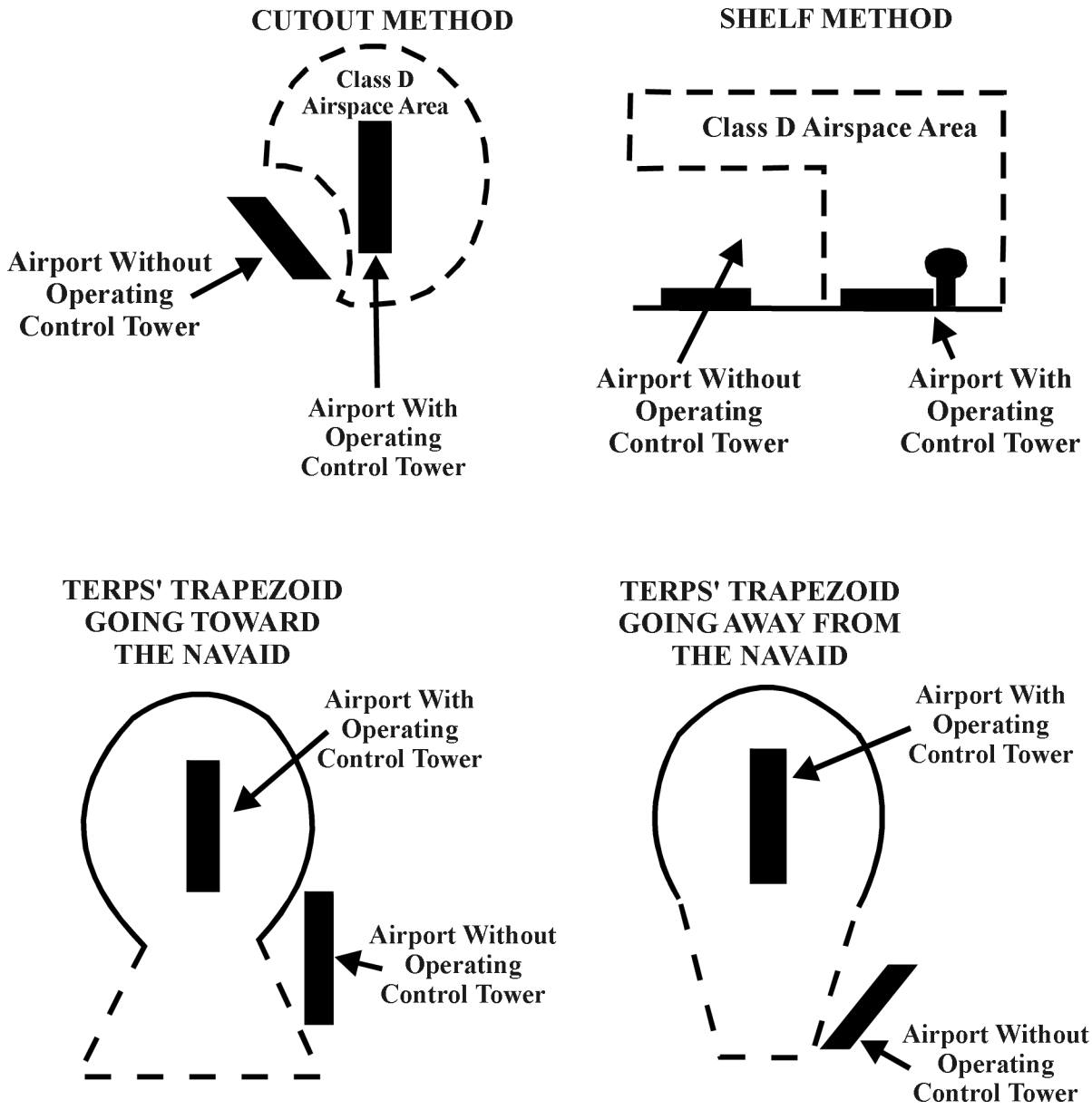


FIG 17–2–3

EXAMPLES OF SATELLITE AIRPORTS EXCLUDED FROM SURFACE AREA AIRSPACE AREAS



Chapter 18. Class E Airspace

Section 1. General

18–1–1. INTRODUCTION

Class E airspace consists of:

a. The airspace of the United States, including that airspace overlying the waters within 12 NM of the coast of the 48 contiguous states and Alaska, extending upward from 14,500 feet MSL up to, but not including 18,000 feet MSL, and the airspace above FL600, excluding –

1. The Alaska peninsula west of longitude 160°00’00”W.; and

2. The airspace below 1,500 feet above the surface of the earth.

b. Surface area designated for an airport. When designated as a surface area for an airport, the airspace will be configured to contain all instrument procedures to the extent practicable.

c. Airspace used for transition. Class E airspace areas extending upward from either 700 or 1,200 feet AGL used to transition to/from the terminal or en route environment.

d. En Route Domestic Areas. Class E airspace areas that extend upward from a specified altitude and provide controlled airspace in those areas where there is a requirement to provide IFR en route ATC services but the Federal airway structure is inadequate.

e. Federal Airways. The Federal airways and low altitude RNAV routes are Class E airspace areas and unless otherwise specified, extend upward from 1,200 feet to, but not including, 18,000 feet MSL. The colored airways are green, red, amber, and blue. The VOR airways are classified as Domestic, Alaskan, and Hawaiian.

f. Offshore Airspace Areas. Class E airspace areas that extend upward from a specified altitude to, but not including, 18,000 feet MSL and are designated as offshore airspace areas. These areas provide controlled airspace beyond 12 miles from the coast of the U.S. in those areas where there is a requirement to provide IFR en route ATC services and within which the U.S. is applying domestic procedures.

18–1–2. CLASS E SURFACE AREAS

a. A Class E surface area is designated to provide controlled airspace for terminal operations where a control tower is not in operation. Class E surface areas extend upward from the surface to a designated altitude; or to the adjacent or overlaying controlled airspace. Class E airspace surface areas must meet the criteria in paragraph 17–1–3 of this order.

b. When a surface area is established to accommodate part time operations at a Class C or D airspace location, the surface area will normally be coincident with that airspace. If the airspace is not coincident, it should be explained in the rule.

18–1–3. DESIGNATION

If the communication and weather requirements described in paragraphs 17–2–9 and 17–2–10 are met, Class E surface airspace may be designated to accommodate:

a. IFR arrival, departure, holding, and en route operations not protected by other controlled airspace.

b. Instrument approach procedures. Surface airspace may be designated to accommodate special instrument procedures if such action is justified and/or in the public interest. The following factors are among those that should be considered:

1. Type of procedure including decision height or minimum descent altitude.

2. The actual use to be made of the procedure, including whether it is used by a certificated air carrier or an air taxi/commuter operator providing service to the general public.

NOTE–
For special instrument procedures, consideration should be given to availability to other users.

3. The operational and economic advantage offered by the procedure, including the importance and interest to the commerce and welfare of the community derived by the procedure.

4. Any other factors considered appropriate.

Section 2. Transitional Airspace

18–2–1. PURPOSE

Transitional areas, Class E, are designated to serve terminal and en route aircraft to include helicopter operations such as:

a. Transitioning to/from terminal and en route.

b. Transiting between airways and routes.

c. En route climbs or descents.

d. Holding.

e. Radar vectors.

f. Providing for course changes.

g. When the route under consideration is almost all within existing Class E airspace and small additions would complete the coverage.

NOTE–
The only areas that are normally excluded in the Class E description should be limited to Mexico, Canada, SUA and international airspace. Exclude SUA only when active. Do not exclude Federal Airways or other airspace areas.

h. En route training operations.

18–2–2. 700/1,200–FOOT CLASS E AIRSPACE

Class E–5 700/1200–foot airspace areas are used for transitioning aircraft to/from the terminal or en route environment.

18–2–3. 700–FOOT CLASS E AIRSPACE

A Class E–5 airspace area with a base of 700 feet above the surface must be designated to accommodate arriving IFR operations below 1,500 feet above the surface and departing IFR operations until they reach 1,200 feet above the surface.

18–2–4. 1,200–FOOT CLASS E AIRSPACE

Where sufficient controlled airspace does not exist, designate a 1,200 foot Class E–5 airspace area to accommodate arriving IFR operations at 1,500 feet and higher above the surface and departing IFR operations from the point they reach 1,200 feet above the surface until reaching overlying or adjacent controlled airspace.

18–2–5. CLASS E AIRSPACE FLOORS ABOVE 1,200 FEET

Class E–5 airspace areas may be established with MSL floors above 1,200 feet AGL. Normally floors will be at least 300 feet below the minimum IFR altitude.

18–2–6. COORDINATION OF MISSED APPROACH ALTITUDES

Coordination must be initiated with the appropriate FPT or military representatives to adjust missed approach altitudes upward to at least 1,500 feet above the terrain at locations where existing procedures specify lower altitudes and such action can be accomplished without penalty to overall IFR operations or without exceeding TERPS criteria.

Section 3. Transitional Airspace Area Criteria

18–3–1. DEPARTURE AREA

a. The configuration of Class E airspace for departures is based on either specific or diverse departure routings and determines whether the Class E airspace will be circular or oriented in one or more specific direction(s).

b. A climb gradient of 200 feet per NM must be applied to determine the size of all Class E airspace for departures, and when necessary departure extensions. Specific departure areas with a base of 700 feet require the airspace 1.8 NM each side of the track centerline. Departure areas with a base of 1,200 feet require 4 NM each side of the track centerline.

c. When a surface area does not exist, the climb gradient must be applied from the departure end of the outermost runway to determine the width of the 700–foot Class E airspace and the beginning of the 1,200–foot Class E airspace.

d. The lateral boundary of a 1,200–foot Class E airspace that overlies the waters within 12 NM of the coast of the 48 contiguous states and Alaska, excluding the Alaskan Peninsula west of longitude 160 degrees, must terminate at 12 NM.

e. In the western states where the floor of controlled airspace is 14,500 MSL or 1,500 AGL, the 1200–foot airspace should be route oriented and normally only necessary between the 700–foot Class E airspace and the closest adjacent existing controlled airspace.

NOTE–
Where diverse departures are authorized, the 700–foot Class E airspace will normally be a 2.5 NM radius beyond the radius of the basic surface areas. This standard does not apply to surface areas associated with Class C airspace.

18–3–2. LENGTHY DEPARTURE CLASS E AIRSPACE EXTENSIONS

If lengthy Class E airspace extensions are established for departing flights, they must include the additional airspace within lines diverging at angles of 4.5 degrees from the centerline of the route radial beginning at the associated NAVAID. In planning such extensions, the same frequency protection considerations involved in airway planning must be included.

NOTE–
The 4.5–degree angle leaves an 8 NM wide area at 51 NM from the associated NAVAID.

18–3–3. ARRIVAL AREA

The point at which a flight can be expected to leave 1,500 feet above the surface on an instrument approach and the width of the primary obstruction clearance area must be obtained from the office responsible for developing the instrument approach.

18–3–4. ARRIVAL EXTENSION

Class E airspace extension with a base of 1,200 feet above the surface and 4 NM each side of the track centerline must be established to contain the flight path of arriving IFR flights at altitudes at least 1,500 feet or higher above the surface.

a. To determine length of an arrival extension, one needs:

1. The point at which a flight can be expected to leave 1,500 feet above the surface.

2. The airspace needed to contain arriving IFR operations at 1,500 feet and higher above the surface.

b. The extension length must be based on the approach requiring the greatest distance when multiple approach procedures (for example, NDB/ILS) are established using the same approach course but with different final approach altitudes.

c. The width of the extension must be equal to the width of the TERPS primary obstruction clearance area at the point where an IFR flight on an instrument approach can be expected to descend to less than 1,500 feet above the surface. However, if the primary area widens between the point where the flight leaves 1,500 feet and the airport, the widest portion of the primary area must be used for the extension. Extensions must, in all cases, extend to a minimum of 1 NM on each side of the centerline, although the primary obstruction clearance area extends less than 1 NM from the centerline.

d. The extension width must be based on the approach requiring the greatest width when multiple approach procedures (for example, NDB/ILS) are established using the same approach course.

18–3–5. PROCEDURE TURN PROTECTION

Class E airspace extensions must be established for the protection of low altitude procedure turn areas as follows:

a. Procedure turns authorized to a distance of 5 NM or less:

1. The boundary on the procedure turn side is 7 NM from, and parallel to, the approach course.

2. The boundary on the side opposite the procedure turn side is 3 NM from, and parallel to, the approach course.

3. The outer limit is established at 10 NM outbound from the procedure turn fix.

b. Procedure turns authorized to a distance greater than 5 NM:

1. The boundary on the procedure turn side is 8 NM from, and parallel to, the approach course.

2. The boundary on the side opposite the procedure turn is 4 NM from, and parallel to, the approach course.

3. The outer limit is established at 16 NM outbound from the procedure turn fix. This length is extended 1 NM and the width is widened .2 (2/10) of a NM for each NM beyond 10 NM that the procedure turn is authorized.

18–3–6. DETERMINING BASE ALTITUDES

In determining the base altitude of Class E airspace designated to encompass procedure turns, it is only necessary to consider governing terrain within the TERPS primary obstruction clearance area, excluding the entry zone, rather than terrain within the entire rectangular areas specified above.

Chapter 19. Other Airspace Areas

Section 1. General

19–1–1. EN ROUTE DOMESTIC AIRSPACE AREAS

a. En Route Domestic Airspace Areas consist of Class E airspace that extends upward from a specified altitude to provide controlled airspace in those areas where there is a requirement to provide IFR en route ATC services but the Federal airway structure is inadequate. En Route Domestic Airspace Areas may be designated to serve en route operations when there is a requirement to provide ATC service but the desired routing does not qualify for airway designation. Consideration may also be given to designation of En Route Domestic Airspace Areas when:

1. The NAVAIDs are not suitable for inclusion in the airway system, but are approved under Part 171, are placed in continuous operation, and are available for public use; or

2. Navigation is by means of radar vectoring. En route Domestic Airspace Areas are listed in FAA Order JO 7400.9, Airspace Designations and Reporting Points.

b. En Route Domestic Airspace Areas are designated under 14 CFR § 71.71 and are listed in FAA Order JO 7400.9, Airspace Designations and Reporting Points.

19–1–2. OFFSHORE/CONTROL AIRSPACE AREAS

a. Offshore/Control Airspace Areas are locations designated in international airspace (between the U.S. 12–mile territorial limit and the CTA/FIR boundary, and within areas of domestic radio navigational signal or ATC radar coverage) wherein domestic ATC procedures may be used for separation purposes.

b. These areas provide controlled airspace where there is a requirement to provide IFR en route ATC services, and to permit the application of domestic ATC procedures in that airspace.

c. Class A Offshore/Control Airspace Areas are identified as “High” (for example, Atlantic High; Control 1154H). Class E areas are identified as “Low” (for example, Gulf of Mexico Low, Control 1141L).

d. Since there is no standard established for offshore routes NAVAID spacing, such spacing should be determined on a regional, site–by–site basis.

e. In determining which configuration to use, consider user requirements, NAVAID quality and dependability, radar vectoring capabilities, transition to/from offshore airspace areas, requirements of other users for adjacent airspace, and possible future requirements for controlled airspace.

f. Offshore/Control areas that require use of one NAVAID for an extended distance should be based on L/MF facilities so that lower MEAs can be established.

NOTE–
Care should be exercised in relocating NAVAIDs on which offshore airspace areas are based so that the desired offshore airspace configuration can be retained.

g. Where Offshore/Control Class E airspace is extended to the domestic/oceanic boundary, the diverging lines must terminate at their intersection with the domestic/oceanic boundary.

19–1–3. DESIGNATION

Offshore control airspace areas are designated in Sections 71.33 and 7l.71. These areas are listed in FAA Order JO 7400.9, Airspace Designations and Reporting Points.

19–1–4. PROCESSING

Offshore airspace area rulemaking actions are processed by Rules and Regulations Group. Regions/service area offices may process those domestic cases that are ancillary to a terminal airspace action with approval of Rules and Regulations Group.

Chapter 20. Air Traffic Service Routes

Section 1. General

20–1–1. PURPOSE

a. This chapter prescribes general guidance for the designation of Air Traffic Service (ATS) routes.

b. An ATS route is a specified route designed for channeling the flow of air traffic as necessary for the management of air traffic operations.

c. This chapter applies only to those U.S. domestic ATS routes that are listed in 14 CFR section 71.13, Classification of Air Traffic Service (ATS) Routes; specifically: jet routes, VOR Federal airways, L/MF (Colored) Federal airways, and area navigation routes.

NOTE–
This chapter does not apply to the designation of nonregulatory oceanic ATS routes (e.g., AR11, B760, etc.) that are established primarily outside of U.S. domestic airspace. Those routes are not designated in 14 CFR part 71.

d. Unless otherwise specified, the criteria and procedures for the development of ATS routes are contained in FAA Orders: 7100.41, Performance Based Navigation Implementation Process; 8260.3, United States Standard for Terminal Instrument Procedures (TERPS); 8260.19, Flight Procedures and Airspace; 8260.43, Flight Procedures Management Program; and 8260.58, United States Standard for Performance Based Navigation (PBN) Instrument Procedure Design.

20–1–2. CONTROLLED AIRSPACE

ATS routes are designated as either Class A airspace (section 71.31) or Class E airspace (section 71.71) corresponding to the altitude structure of the route.

20–1–3. DESIGNATION OF ATS ROUTES

a. ATS routes are designated through rulemaking action under 14 CFR part 71. The designation of ATS routes is based on air traffic and user requirements.

b. ATS routes must be predicated upon NAVAIDs that are suitable for inclusion in the NAS or area navigation (RNAV) references, as applicable to the type of route.

c. The benefits of the designation should outweigh any adverse effects to the NAS and provide airspace users with charted information pertaining to navigational guidance, minimum en route altitudes, changeover points, etc.

20–1–4. RESPONSIBILITIES

a. The Rules and Regulations Group is responsible for part 71 rulemaking to establish, amend, or remove ATS routes.

b. Service Center OSGs must:

1. Coordinate ATS routes with appropriate offices (e.g., ATC facilities, adjacent Service Center offices, AIS, Technical Operations, and regional Frequency Management Offices) to determine if operational requirements and air traffic warrant a rulemaking action.

NOTE–
ATS route actions must be coordinated with and have concurrence from affected ATC facilities.

2. Ensure that the FPT and the Rules and Regulations Group coordinate the details of proposed new and amended ATS routes to facilitate part 71 rulemaking action.

3. Conduct periodic reviews of ATS routes in their area of responsibility in accordance with FAA Order 8260.19, Flight Procedures and Airspace, Chapter 2, and initiate Part 71 rulemaking action as necessary.

20–1–5. ROUTE IDENTIFICATION

All alpha–numeric ATS route identifiers are assigned by the Rules and Regulations Group as follows:

a. L/MF (Colored) Federal airways are identified by color names (Amber, Blue, Green, or Red). The identifier consists of the first letter of the color followed by a number (e.g., R–50, G–13, A–1, etc.).

1. Identify L/MF (Colored) airways oriented mainly west and east as Green or Red.

2. Identify L/MF (Colored) airways oriented mainly south and north as Amber or Blue.

b. VOR Federal airways (below FL 180) are identified by the letter "V" prefix followed by a number (e.g., V–104).

c. Jet routes (FL 180 through FL 450) are identified by the letter "J" prefix followed by a number (e.g., J–75).

d. RNAV routes are identified as follows:

1. Low altitude (below FL 180) RNAV routes are identified by a "T" prefix followed by a number (e.g., T–245).

2. High altitude (FL 180 through FL 450) RNAV routes are identified by a "Q" prefix followed by a number (e.g., Q–120).

3. Helicopter RNAV routes are identified by a "TK" prefix followed by a number (e.g., TK–502).

e. ATS route numbers are assigned as follows:

1. Even numbers for ATS routes oriented mainly west and east.

2. Odd numbers for ATS routes oriented mainly south and north.

f. ICAO has allocated the following number sets for U.S. RNAV routes:

1. Q routes: 1 through 499.

2. T routes: 200 through 500.

3. TK routes: 501 through 650.

g. Points in route descriptions must be listed from west to east for even numbered ATS routes and south to north for odd numbered ATS routes.

h. Points listed in 14 CFR part 71 route descriptions consist of:

1. The beginning and end points of the route;

2. Points where a route changes direction;

3. Holding fixes; and

4. Points required due to the maximum distance allowed between NAVAIDs (see service volume limitations in FAA Order 9840.1, U.S. National Aviation Handbook for the VOR/DME/TACAN Systems).

i. When radials or bearings from a navigation aid are used to define intersections in an ATS route description, both True and Magnetic degrees must be stated in the NPRM. Only True degrees are stated in the final rule.

20–1–6. BASE ALTITUDES

a. The base of an ATS route must be at least 1,200 feet above the surface and at least 500 feet below the minimum en route altitude (MEA) except that route floors may be established no less than 300 feet below the MEA when:

1. The 500–foot buffer would result in the loss of a cardinal altitude; or

2. A definite operational advantage would exist.

b. The route floor should conform, as closely as possible to the floor of transitional airspace.

20–1–7. MINIMUM EN ROUTE ALTITUDES

Procedures for establishing MEAs are set forth in FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS), and FAA Order 8260.19, Flight Procedures and Airspace. MEAs are designated in 14 CFR part 95, IFR Altitudes.

20–1–8. PROCEDURAL REQUIREMENTS

Procedural requirements may dictate designation of airspace lower than 500 feet below the MEA or Minimum Reception Altitude (MRA) in certain en route radar vectoring areas or when necessary to accommodate climb or descent operations. Such airspace must not be designated for the specific purpose of including a Minimum Obstruction Clearance Altitude (MOCA) unless use of the MOCA is procedurally required.

20–1–9. ACTION TO RAISE BASE OF TRANSITION AREAS

When action is initiated to raise the base of transition airspace associated with a route segment, care must be taken to designate, in accordance with applicable criteria, sufficient airspace to encompass IFR procedures prescribed for airports which underlie the route. Additionally, care must be taken to ensure that controlled airspace, such as transition airspace or lower floor of control area, is provided for aircraft climbing from one MEA to a higher one.

Section 2. Flight Inspection Requirements

20–2–1. FLIGHT INSPECTION REQUESTS

Requests for ATS route flight inspections are processed in accordance with FAA Orders 8240.32, Request for Flight Inspection Services, and 8200.44, Flight Inspection Services Instrument Flight Procedure Coordination. Aeronautical Information Services (AIS) is responsible to submit a procedure package to Flight Inspection Services for review, analysis, and flight check (if needed).

20–2–2. REQUEST FOR FLIGHT INSPECTION DATA

The Service Center OSG is responsible for providing AIS with a copy of the NPRM relating to new or revised ATS routes. Requests for flight inspection data (e.g., MEA, COP, etc.) for ATS routes must be initiated by the Service Center office (see paragraph 2–3–5, Flight Procedural Data, of this order for actions that will be processed by a final rule without an NPRM).

20–2–3. FLIGHT INSPECTION REPORT

Flight Inspection Services use FAA Forms 8200–17 and 18, Flight Inspection Procedure Control (FIPC), to record the results of flight inspections. The FIPC provides the following status options:

a. SAT: the procedure is satisfactory.

b. SAT W/CHANGES: the procedure is approved provided the modifications noted in the remarks are incorporated.

c. UNSAT: the procedure does not meet flight inspection requirements.

20–2–4. FLIGHT INSPECTION DATA DISTRIBUTION

Aeronautical Information Services (AIS) must notify the Rules and Regulations Group when the flight inspection of an ATS route is complete. A satisfactory flight inspection is required before the Rules and Regulations Group can issue a 14 CFR part 71 final rule.

Section 3. Federal Airways

20–3–1. DEFINITION

a. Federal airways consist of VOR Federal airways and Low/Medium Frequency (L/MF) (Colored) Federal airways.

b. Unless otherwise specified, the names appearing in VOR Federal airway descriptions are the names of VOR or VORTAC navigation aids. DME fixes and latitude/longitude coordinates are not used in Federal airway descriptions.

20–3–2. NAVAID SPACING

a. VOR Federal airways are based on VOR or VORTAC NAVAIDs which normally are spaced no farther apart than 80 NM. They may be based on more widely spaced NAVAIDs if a usable signal can be provided and frequency protection afforded for the distance required (see FAA Order 9840.1, U.S. National Aviation Handbook, for the VOR/DME/TACAN Systems).

b. L/MF (Colored) Federal airways are based on Non–Directional Beacon (NDB) NAVAIDs. NDB NAVAID spacing is determined on an individual basis.

20–3–3. VERTICAL AND LATERAL EXTENT

The standard vertical and lateral extent of Federal airways is specified in FAA Orders 8260.3, United States Standard for Terminal Instrument Procedures (TERPS), and 8260.19, Flight Procedures and Airspace. Nonstandard dimensions may be specified, when required, subject to any flight inspection limitations and by paragraph 20–1–6, Base Altitudes, of this order.

a. Each Federal airway is based on a center line that extends from one navigational aid or intersection to another navigational aid (or through several navigational aids or intersections) specified for that airway.

b. Unless otherwise specified:

1. Each Federal airway includes the airspace within parallel boundary lines 4 miles on each side of the center line. Where an airway changes direction, it includes that airspace enclosed by extending the boundary lines of the airway segments until they meet.

2. Where the changeover point for an airway segment is more than 51 miles from either of the navigational aids defining that segment, and—

(a) The changeover point is midway between the navigational aids. The airway includes the airspace between lines diverging at angles of 4.5° from the center line at each navigational aid and extending until they intersect opposite the changeover point; or

(b) The changeover point is not midway between the navigational aids. The airway includes the airspace between lines diverging at angles of 4.5° from the center line at the navigational aid more distant from the changeover point, and extending until they intersect with the bisector of the angle of the center lines at the changeover point; and between lines connecting these points of intersection and the navigational aid nearer to the changeover point.

3. Where an airway terminates at a point or intersection more than 51 miles from the closest associated navigational aid, it includes the additional airspace within lines diverging at angles of 4.5° from the center line extending from the associated navigational aid to a line perpendicular to the center line at the termination point.

4. Where an airway terminates, it includes the airspace within a circle centered at the specified navigational aid or intersection having a diameter equal to the airway width at that point. However, an airway does not extend into an oceanic control area.

c. Unless otherwise specified—

1. Each Federal airway includes that airspace extending upward from 1,200 feet above the surface of the earth (or higher) to, but not including, 18,000 feet MSL, except that Federal airways for Hawaii have no upper limits. Variations of the lower limits of an airway are expressed in digits representing hundreds of feet above the surface or MSL and, unless otherwise specified, apply to the segment of an airway between adjoining navigational aids or intersections; and

2. The airspace of a Federal airway, within the lateral limits of a Class E airspace area with a lower floor, has a floor coincident with the floor of that area.

d. A Federal airway does not include the airspace of a prohibited area.

EXAMPLE–
Variable airway floor description:

V–497
From Rome, OR; via Wildhorse, OR; Kimberly, OR; 49 miles, 65 MSL, Klickitat, WA; INT Klickitat 053 ° and Moses Lake, WA, 206 ° radials; Moses Lake; to Ephrata, WA.

NOTE–
In the example above, the floor of V–497 is 1,200 feet AGL from Rome, OR, to Kimberly, OR; then 6,500 feet MSL starting at Kimberly and continuing for 49 miles from Kimberly, then the floor drops back to 1,200 feet AGL the rest of the way to Klickitat, WA and on to Ephrata, WA.

20–3–4. WIDTH REDUCTIONS

a. Width reductions are not applicable to L/MF (Colored) Federal airways.

b. For ATS routes other than L/MF (Colored) Federal airways, a reduced airway width of 3 NM on one or both sides of the centerline may be established from the NAVAID to the point where 4.5 degree intersecting lines equal 3 NM. Normally, lines perpendicular to the airway centerline determine the ends of the reduced portion. If required, the ends of the reduced portion may be defined differently. A reduced width is permissible to obtain additional traffic capacity and flexibility through the use of multiple routes and to avoid encroachment on special use airspace or other essential maneuvering areas. Width reductions are considered the exception rather than the rule and are approved only where adequate air navigation guidance and justification exist.

EXAMPLE–
Reduced airway width description:

V–204
From Hoquiam, WA; Olympia, WA; INT Olympia 114 ° and Yakima, WA, 271 ° radials; Yakima; 25 miles, 7 miles wide (3 miles N and 4 miles S of centerline), Pasco, WA; INT Pasco 035 ° and Spokane, WA, 221 ° radials; to Spokane.

NOTE–
In the example above, V–204 reduces from 8 miles wide to 7 miles wide starting at Yakima, WA for 25 miles from Yakima then reverts back to 8 miles wide the rest of the way to Pasco, WA, and on to Spokane, WA.

Section 4. Jet Routes

20–4–1. DEFINITION

a. Jet routes extend from FL 180 to FL 450, inclusive, and are designated to indicate frequently used routings. Jet routes are not designated above FL 450 due to navigation aid service volume limitations and frequency protection issues.

b. Unless otherwise specified, the names appearing in jet route descriptions are the names of VOR or VORTAC navigation aids. DME fixes and latitude/longitude coordinates are not used in jet route descriptions.

NOTE–
Terminal class VOR (TVOR) NAVAIDs must not be used to designate jet routes.

20–4–2. NAVAID SPACING

Jet routes are normally based on "H" class NAVAIDs spaced no farther apart than 260 NM or non–VOR/DME area navigation system performance. They may be based on more widely spaced NAVAIDs if a usable signal can be provided (e.g., expanded service volume) and frequency protection is afforded for the distance required.

20–4–3. JET ROUTE WIDTH

Jet routes have no specified width; however, alignment should be planned using protected airspace specified for VOR Federal airways in FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS), or any flight inspection limitation to prevent overlapping special use airspace or the airspace to be protected for other jet routes.

Section 5. Area Navigation (RNAV) Routes

20–5–1. PURPOSE

Area navigation (RNAV) is a method of navigation that permits aircraft operation on any desired flight path within the coverage of ground– or space–based navigation aids, or within the limits of the capability of self–contained aids, or a combination of these. The potential advantages of RNAV routes include:

a. Time and fuel savings;

b. Reduced dependence on radar vectoring, and speed assignments allowing a reduction in required ATC transmissions; and

c. More efficient use of airspace.

20–5–2. RNAV ROUTE CRITERIA

a. Refer to FAA Orders 7100.41, Performance Based Navigation Implementation Process; 8260.3, United States Standard for Terminal Instrument Procedures (TERPS); 8260.19, Flight Procedures and Airspace; and 8260.58, United States Standard for Performance Based Navigation (PBN) Instrument Procedure Design, for criteria and procedures applicable to RNAV route development.

b. The basic width of an RNAV route is 8 NM (4 NM each side of the route centerline).

c. Operational and airworthiness guidance regarding operation on U.S. Area Navigation routes may be found in AC 90–100, U.S. Terminal and En Route Area Navigation (RNAV) Operations.

20–5–3. WAYPOINTS

a. A waypoint is a predetermined geographical position defined in terms of latitude/longitude coordinates, using a degrees, minutes, seconds, and hundredths of a second format.

b. RNAV waypoints are used not only for navigation references, but also for ATC operational fixes. Waypoints are to be established along RNAV routes at:

1. The beginning and end points of the route;

2. Points where a route changes direction;

3. Holding fixes; and

4. Points required due to the maximum distance allowed between NAVAIDs, fixes or waypoints.

c. Waypoint names must consist of a single, five–letter pronounceable name. Five–letter names are assigned by AIS (see paragraph 3–3–4 in this order).

20–5–4. LATERAL PROTECTED AIRSPACE CRITERIA FOR RNAV EN ROUTE SEGMENTS

The primary en route obstacle clearance area has a width of 8 NM; 4 NM on each side of the centerline of the route. Primary, secondary, and turning area criteria are found in FAA Orders 8260.3, United States Standard for Terminal Instrument Procedures (TERPS); 8260.19, Flight Procedures and Airspace; and/or 8260.58, United States Standard for Performance Based Navigation (PBN) Instrument Procedure Design, as applicable.

20–5–5. RNAV ROUTE DESCRIPTIONS

a. RNAV route descriptions are published in Order JO 7400.11. RNAV routes consist of points that may be defined as waypoints, fixes, and/or ground–based navigation aids.

b. RNAV route descriptions must be formatted as follows:

1. On line one:

(a) The route number; and

(b) The route start/end points (i.e., point name, state, and NAVAID ID as required);

2. On subsequent lines for each point that makes up the route:

(a) The point name, state, and NAVAID ID as required;

(b) The type of point (i.e., WP, Fix, or NAVAID type); and

(c) The geographic coordinates of each point expressed in degrees, minutes, seconds, and hundredths of a second.

3. On the last line, if applicable: Any exclusions from the route (e.g., "Excluding the airspace within Canada").

c. See Section 1 of this chapter for information on route numbering.

d. Examples of RNAV route descriptions:

EXAMPLE–

1. ***Q–71 BOBBD, TN to Philipsburg, PA (PSB)***

BOBBD, TN WP (lat. 35 °47'57.59"N., long. 083 °51'33.90"W.)

ATUME, KY WP (lat. 36 °57'13.65"N., long. 083 °03'24.36"W.)

HAPKI, KY WP (lat. 37 °04'55.73"N., long. 082 °51'02.62"W.)

KONGO, KY FIX (lat. 37 °30'19.46"N., long. 082 °08'12.56"W.)

WISTA, WV WP (lat. 38 °17'00.52"N., long. 081 °27'46.55"W.)

GEFFS, WV FIX (lat. 39 °00'49.86"N., long. 080 °48'49.85"W.)

EMNEM, WV WP (lat. 39 °31'27.12"N., long. 080 °04'28.21"W.)

PSYKO, PA WP (lat. 40 °08'37.00"N., long. 079 °09'13.00"W.)

Philipsburg, PA (PSB) VORTAC (lat. 40 °54'58.53"N., long. 077 °59'33.78"W.)

2. ***T–329 Morro Bay, CA (MQO) to NACKI, CA***

Morro Bay, CA (MQO) VORTAC (lat. 35 °15'08.12"N., long. 120 °45'34.44"W.)

Paso Robles, CA (PRB) VORTAC (lat. 35 °40'20.87"N., long. 120 °37'37.59"W.)

LKHRN, CA WP (lat. 36 °05'59.82"N., long. 120 °45'22.53"W.)

Panoche, CA (PXN) VORTAC (lat. 36 °42'55.65"N., long. 120 °46'43.26"W.)

MKNNA, CA WP (lat. 37 °04'23.41"N., long. 120 °50'22.26"W.)

OXJEF, CA WP (lat. 37 °46'11.40"N., long. 121 °02'03.31"W.)

TIPRE, CA WP (lat. 38 °12'21.00"N., long. 121 °02'09.00"W.)

HNNRY, CA WP (lat. 38 °23'27.61"N., long. 121 °37'43.50"W.)

ROWWN, CA WP (lat. 38 °24'55.86"N., long. 121 °47'00.05"W.)

RAGGS, CA FIX (lat. 38 °28'34.94"N., long. 122 °09'24.65"W.)

POPES, CA FIX (lat. 38 °29'09.41"N., long. 122 °20'45.16"W.)

NACKI, CA WP (lat. 38 °43'47.73"N., long. 123 °05'52.93"W.)

Part 5. Special Use Airspace

Chapter 21. General

Section 1. Policy

21–1–1. PURPOSE

The primary purpose of the Special Use Airspace (SUA) program is to establish/designate airspace in the interest of national defense, security, or interest. Charted SUA identifies to other airspace users where these activities occur.

NOTE–
SUA is not intended to benefit an individual or commercial operator over the public's right of transit through the navigable airspace.

21–1–2. SCOPE

In addition to the policy guidelines and procedures detailed in Part 1 of this order, this part prescribes specific policies and procedures for handling SUA cases.

21–1–3. DEFINITION AND TYPES

a. SUA is airspace of defined dimensions wherein activities must be confined because of their nature, or wherein limitations may be imposed upon aircraft operations that are not a part of those activities, or both.

b. The types of SUA areas are Prohibited Area, Restricted Area, Military Operations Area (MOA), Warning Area, Alert Area, Controlled Firing Area (CFA), and National Security Area (NSA).

NOTE–
1. *Air Traffic Control Assigned Airspace (ATCAAs) below FL 180, and Altitude Reservations (ALTRVs) must not be used as a substitute for SUA when conducting activities for which a SUA is designed to contain.*

2. *Since ATCAAs and ALTRVs are not depicted on aeronautical charts, they do not inform the flying public of the location of the activity as is provided by charted SUA.*

3. *Additionally, ATCAAs and ALTRVs are not to be used as an interim solution while a SUA proposal is pending.*

21–1–4. CATEGORIES

There are two categories of SUA: regulatory (rulemaking) and other than regulatory (nonrulemaking). Prohibited Areas and Restricted Areas are rulemaking actions that are designated by amendment to part 73. MOAs, Warning Areas, Alert Areas, and NSAs are implemented by nonrulemaking action published in a National Flight Data Digest (NFDD). CFAs are implemented by nonrulemaking action published in an approval letter by the Operations Support Group (OSG).

21–1–5. SUA APPROVAL AUTHORITY

FAA Headquarters is the final approval authority for all permanent and temporary SUA, except CFAs. CFA approval authority is delegated to the Service Center OSG. The Service Center OSG must forward SUA proposals recommended for approval (except CFA) to FAA Headquarters for a final determination.

NOTE–
Final approval of Warning Areas requires consultation with other agencies per Executive Order 10854. Warning Area proposals, except for controlling/using agency changes or minor editorial corrections, must be coordinated with the Department of State and the Department of Defense for concurrence. The Rules and Regulations Group, AJV–P2, is responsible for accomplishing this coordination.

21–1–6. MINIMUM VOLUME AND TIMES

The dimensions and time of designation/times of use of SUA must be the minimum required for containing the proposed activities, including safety zones required by the proponent. When it is determined that a specified SUA area is no longer required, the using agency, or their appropriate headquarters authority, must inform the Service Center OSG that action may be initiated to remove and return the SUA airspace to the NAS.

21–1–7. OPTIMUM USE OF AIRSPACE

a. To ensure the optimum use of airspace, military using agencies must, where mission requirements permit, make their assigned SUA available for the activities of other military units on a shared–use basis.

b. SUA should be located to impose minimum impact on nonparticipating aircraft and ATC operations, with consideration of the proponent's requirements. To the extent practical, SUA should avoid Air Traffic Service routes, major terminal areas, and known high volume VFR routes.

c. Large SUA areas should be subdivided, where feasible, in order to facilitate the real–time release of the airspace when activation of the entire area is not required by the using agency.

21–1–8. JOINT–USE POLICY

a. SUA must be returned to the controlling agency and become available for access by nonparticipating aircraft during periods when the airspace is not needed by the using agency for its designated purpose.

b. Restricted areas, warning areas, and MOAs must be designated as joint–use unless it is demonstrated that this would result in negative impacts to the using agency's mission. For certain SUA areas, joint–use may be impractical because of the area's small size, geographic location, or high level of use. In these cases, the airspace proposal package must include specific justification addressing why joint–use is not appropriate.

c. Joint–use does not apply to prohibited areas. Alert areas and CFAs are joint–use by design because nonparticipating aircraft may transit these areas without limitation.

d. Joint–use procedures must be specified in a joint–use Letter of Agreement (LOA) or Letter of Procedure (LOP) between the using agency and the controlling agency. These letters should include provisions for the real–time activation/deactivation of the airspace and timely notification to the controlling agency when the scheduled activity has changed, been canceled, or was completed for the day.

21–1–9. ENVIRONMENTAL ANALYSIS

a. SUA actions are subject to environmental impact analysis in accordance with the National Environmental Policy Act of 1969 (NEPA). Guidance for the environmental analysis of SUA proposals is contained in FAA Order 1050.1, Environmental Impacts; Policies and Procedures; of this order; other relevant FAA directives; and the Memorandum of Understanding between the Federal Aviation Administration and the Department of Defense for Environmental Review of Special Use Airspace Actions at Appendix 7 of of this order. All environmental impact analyses and reviews must be coordinated with the airspace specialist and the environmental specialist of the appropriate Service Center OSG to ensure that SUA using agencies' environmental impact review and documentation are consistent with known regulations, proposals, and applicable studies.

b. Advisory Actions. Designation of alert areas and warning areas are considered advisory actions under FAA Order 1050.1. Actions of this type are not considered major Federal actions under NEPA, and NEPA review is therefore not required.

c. Categorical Exclusions. The following SUA actions are categorically excluded, provided it is determined that no extraordinary circumstances, as specified in FAA Order 1050.1, exist:

1. Actions to return all or part of SUA to the NAS, such as revocation of airspace, a decrease in dimensions, or a reduction in times of use (e.g., from continuous to intermittent, or use by a NOTAM).

2. Modification of the technical description of SUA that does not alter the dimensions, altitudes, or times of designation of the airspace (such as changes in designation of the controlling or using agency, or correction of typographical errors).

3. Designation of CFAs.

4. Actions to increase the altitude of SUA.

21–1–10. CONTROLLING AGENCY

The controlling agency is the FAA ATC facility that exercises control of the airspace when a SUA area is not activated. A military ATC facility may be assigned as the controlling agency, subject to the concurrence of the Service Center OSG and the concerned ARTCC. A controlling agency must be designated for each joint–use SUA area.

21–1–11. USING AGENCY

a. The using agency is the organization, or military command/unit whose activity established the requirement for the SUA. The using agency is responsible for ensuring that:

1. The airspace is used only for its designated purpose.

2. Scheduling procedures are established, utilized, and captured in an LOA/LOP.

3. The controlling agency is kept informed of changes in scheduled activity, to include the completion of activities for the day.

4. A point of contact is made available to enable the controlling agency to verify schedules, and coordinate access for emergencies, weather diversions, etc.

REFERENCE–
FAA Order JO 7400.2, Para 21–1–6, Using Agency.

REFERENCE–
FAA Order JO 7610.4, Chapter 9, Military Operations Requirements(For Official Use Only). .

b. Restricted area and MOA using agencies are responsible for submitting Restricted Area/MOA Annual Utilization Reports in accordance with Section 7 of this chapter.

c. An ATC facility may be designated as the using agency for joint–use areas when that facility has been granted priority for use of the airspace in a joint–use LOA/LOP.

21–1–12. WAIVERS

The establishment of SUA does not, in itself, waive compliance with any part of the Code of Federal Regulations. DOD has been granted a number of waivers, exemptions, and authorizations to accomplish specific missions. Information about current waivers, exemptions, and authorizations granted for military operations may be obtained from FAA Headquarters, Rules and Regulations Group, or the Office of Rulemaking (ARM).

21–1–13. PUBLIC NOTICE PROCEDURES

Public notice procedures invite the public to comment on the impact of SUA proposals on the safe and efficient use of the navigable airspace. In addition to the public notice procedures described in Chapter 2 of this order, SUA proposals are subject to the following:

a. All nonregulatory SUA proposals must be circularized, and an NPRM must be issued for all regulatory SUA proposals, except for those actions that clearly have no impact on aviation and are not controversial. A nonrulemaking circular or NPRM is not normally required for the following types of proposals:

1. Changes to the using or controlling agency.

2. Editorial changes to correct typographical errors.

3. Internal subdivision of an existing area to enhance real–time use of the SUA (provided there is no expansion of the existing external boundaries).

4. Actions that lessen the burden on the flying public by revoking the SUA areas or reducing the size or times of use of SUA.

b. SUA nonrulemaking circulars are prepared and distributed by the Service Center OSG. FAA Headquarters prepares SUA NPRMs. Normally, circulars and NPRMs provide a minimum of 45 days for public comment.

c. When comments or coordination show that the proposal may be controversial, or there is a need to obtain additional information relevant to the proposal, an informal airspace meeting may be considered (see Chapter 2 of this order).

21–1–14. SUA NONRULEMAKING CIRCULARS

a. Prepare and distribute SUA nonrulemaking circulars as specified in Chapter 2 of this order and the additional requirements in this paragraph. Ensure wide dissemination to the potentially affected aviation user community within 50 NM (recommended) of the affected airspace. Send one copy of each SUA circular to the Rules and Regulations Group, AJV–P2, and to the appropriate Service Center OSG military representative(s).

b. CONTENT – Circulars should contain sufficient information to assist interested persons in preparing comments on the aeronautical impact of the proposal. SUA circulars should only address SUA areas and include:

1. A brief narrative that:

(a) Describes the purpose of the proposed airspace, the types of activities to be conducted, and the expected frequency of those activities. If the proposal modifies existing SUA, describe the changes and explain the desired result. For temporary MOA proposals, include a brief summary of the planned exercise or mission scenario.

(b) Discusses measures planned to minimize impact on nonparticipating aircraft, such as airport exclusions, joint–use procedures, limited activation times, etc. If there are known plans to provide real time area status information and/or traffic advisory services for nonparticipating pilots, include that information in the circular.

2. A complete description of the proposed area consisting of boundaries, altitudes, times of use, controlling agency, and using agency.

3. A copy of a sectional aeronautical chart depicting the boundaries of the proposed area.

4. The name and address (provided by the proponent) of the person to whom comments on the environmental and land–use aspects of the proposal may be submitted.

NOTE–
Do not include statements in the circular that certify NEPA compliance or state that environmental studies are complete. The proponent and/or FAA must consider any environmental issues raised in response to the circular before a final determination is made on the proposal.

5. The issue date of the circular and the specific date that the comment period ends. Provide at least 45–days for public comment.

NOTE–
When selecting the comment closing date, consider the time needed for the preparation, printing and release of the circular, plus a representative mailing time, in order to afford the public at least 45 days to submit comments.

c. SPECIAL DISTRIBUTION – In addition to the distribution requirements in Chapter 2 of this order, send copies of SUA nonrulemaking circulars to:

1. State transportation, aviation, and environmental departments (or the state clearing house if requested by the state).

2. Local government authorities, civic organizations, interest groups, or individuals that may not have an aeronautical interest, but are expected to become involved in a specific proposal.

3. Persons or organizations that have requested to be added to the circularization list.

NOTE–
1. *The Service Center OSG determines additional distribution requirements in accordance with Service Center OSG policies after considering the type of proposal, potential for controversy, and extent of possible aeronautical impact.*

2. *If the proposed airspace overlaps service area geographical boundaries or airspace jurisdictions, the lead Service Center OSG must coordinate with the affected adjacent Service Center OSG to ensure distribution of circulars to all appropriate parties.*

21–1–15. CHARTING AND PUBLICATION REQUIREMENTS

a. All SUA areas except CFAs, temporary MOAs, and temporary restricted areas, must be depicted on aeronautical charts, and published as required in aeronautical publications.

b. Approved SUA actions normally become effective on the 56–day charting dates published in FAA Order 8260.26, Appendix A.

EXCEPTION–
Effective dates for temporary restricted areas, temporary MOAs, and CFAs are determined by exercise start dates/mission requirements instead of the 56–day charting dates.

c. Temporary areas must be described in the Domestic Notices found in the Federal NOTAM System (FNS) External Links or the Air Traffic Plans and Publications website. Normally, issuance of the graphic notice will begin two issues prior to the exercise start date and will continue through completion of the exercise. The notice must include the area's legal description, effective dates, and a chart depicting the area boundaries. For large exercises, a brief narrative describing the exercise scenario, activities, numbers and types of aircraft involved, and the availability of in–flight activity status information for nonparticipating pilots should be included.

NOTE–
The Service Center OSG must submit temporary SUA Domestic Notice information, along with the airspace proposal package, to the Rules and Regulations Group, AJV–P2, by the dates specified in the appropriate chapter of this order. All graphics submitted must be of high quality and in camera ready form. The Rules and Regulations Group, AJV–P2, will process and submit the Domestic Notice to Publications and Administration,

AJV−P12 for download into the Domestic Notices found in the Federal NOTAM System (FNS) External Links or the Air Traffic Plans and Publications website.

d. When a SUA action becomes effective before it appears on the affected sectional chart(s), a description and map of the area will be presented in the Domestic Notices found in the Federal NOTAM System (FNS) External Links or the Air Traffic Plans and Publications website. This information will be carried in the Domestic Notices until the change has appeared on the affected sectional chart(s). The Rules and Regulations Group, AJV−P2, is responsible for complying with this requirement.

NOTE−
1. *Minor editorial corrections to a SUA description or changes to the using or controlling agencies, will not be published in the Domestic Notices.*

2. *In addition to the above, SUA designations or amendments that occur after publication of the latest sectional chart(s) will be listed in the "Aeronautical Chart Bulletins" section of the appropriate volume of the Chart Supplement. This information will be carried in the Chart Supplement until the change is published on the affected sectional chart(s).*

21−1−16. CERTIFICATION OF SUA GEOGRAPHIC POSITIONAL DATA

a. Geographic positional data for all permanent and temporary SUA boundaries, except CFAs, must be certified for accuracy by the AIS. The Rules and Regulations Group, AJV−P2, is responsible for submitting proposed positional data to AIS for certification. Latitude and longitude positions used in SUA descriptions must be based on North American Datum 83 (NAD 83).

b. The Rules and Regulations Group, AJV−P2, must forward any corrections or recommended changes made by AIS to the Service Center OSG. The Service Center OSG will forward the AIS recommended changes to the Service Center OSG military representative(s), or civil proponent, for review. The Service Center OSG military representative(s)/civil proponent will inform the Service Center OSG of its concurrence with the AIS recommended changes or reason for nonconcurrence. The Service Center OSG will advise the Rules and Regulations Group, AJV−P2, of the proponent's concurrence or nonconcurrence and rationale. A record of this coordination must be retained in the airspace docket or nonrulemaking study file.

21−1−17. LEAD SERVICE CENTER

a. The Service Center OSG that is responsible for the geographical area containing the affected airspace processes the SUA proposal. When a proposal overlaps Service Center geographical jurisdictions, the concerned Service Centers must coordinate to determine which office will serve as the lead Service Center for processing the proposal. Coordination between both Service Centers is also required when the SUA airspace and the using agency/controlling agency are under the jurisdiction of different Service Centers.

b. The lead Service Center OSG must ensure that:

1. All affected ATC facilities review the proposal and provide input to the aeronautical study, as required.

2. Distribution of nonrulemaking circulars include interested parties in each Service Center OSG jurisdiction, as necessary.

c. The airspace package(s) submitted to the Rules and Regulations Group, AJV−P2, include documentation confirming Service Center OSG coordination.

Section 2. SUA Legal Descriptions

21–2–1. GENERAL

a. The legal description is the official airspace definition used for NAS database and charting purposes. This section provides guidelines and formats for preparing SUA legal descriptions. See TBL 21–2–1 for examples of regulatory and nonregulatory SUA legal descriptions.

b. All bearings and radials used in SUA legal descriptions are true from point of origin.

c. Mileages used in SUA legal descriptions must be expressed in nautical miles (NM).

d. Descriptions of approved SUA, except temporary areas and CFAs, are compiled and published once a year in FAA Order JO 7400.10, Special Use Airspace. Updates to the order are not published between editions and the descriptions are considered current only as of the date specified in the order. For this reason, FAA Order JO 7400.10 should be used as a general reference only and should not be relied upon as a sole source when accurate positional data are needed (e.g., video maps, letters of agreement, etc.). For up–to–date descriptions of SUA areas, contact the Rules and Regulations Group, AJV–P2 or AIS.

21–2–2. BOUNDARIES

a. SUA boundaries are normally defined by geographic (latitude/longitude) coordinates. All coordinates must be expressed in a "degrees, minutes, and seconds" format using whole numbers. Do not convert seconds to tenths of minutes. To reflect "zero" minutes or "zero" seconds, enter 00' or 00" respectively. See TBL 21–2–1 for examples.

b. Other methods may be used to define boundaries, if necessary, to simplify the description, such as defining the boundaries by reference to a NAVAID radial/DME or NAVAID arc.

c. To aid pilots in area identification, boundaries may be aligned along a prominent terrain feature, such as rivers, highways, railroad tracks, etc., provided the feature is clearly discernable from the air.

d. Except for temporary SUA areas, boundaries must not be described as "along the boundary" of another designated airspace area.

e. Consider subdividing SUA areas laterally to enhance joint–use of the airspace.

21–2–3. ALTITUDES

a. For SUA areas that contain aircraft operations exclusively, altitudes at or above 18,000 feet MSL must be expressed as flight levels (FL).

b. For SUA areas that contain other than aircraft operations, or a combination of aircraft and other than aircraft operations, altitudes at or above 18,000 feet MSL must be expressed in feet above MSL.

c. Where terrain considerations or other factors would make the use of an MSL altitude impractical, the floor of the area may be described in feet above ground level (AGL).

d. In describing SUA ceilings, unless otherwise specified in the description, the word "to" an altitude or flight level means "to and including" that altitude or flight level. If the upper vertical limit does not include the altitude or flight level, the ceiling must be stated as "to but not including" the altitude or flight level.

NOTE–
Do not use the word "up" in the altitude information of SUA legal descriptions.

e. Do not designate variable altitudes to describe the floor or the ceiling of an SUA area. When there is a requirement for the altitude of the floor or ceiling to change based on time of use, or geographic position within the SUA area, etc., the differing sections must be established as separate subdivisions.

EXCEPTION–
The floor of an area may be described using a combination of MSL and AGL altitudes if necessary due to terrain or operational considerations. For example, "5,000 feet MSL or 3,000 feet AGL, whichever is higher."

f. In limited situations, and provided a specific operational requirement exists, the same altitude may be used to describe both the ceiling of one SUA subdivision and the floor of an overlying subdivi-

sion. In this case, the same ATC facility must be designated as the controlling agency for both subdivisions.

g. Consider subdividing SUA areas vertically to enhance joint–use of the airspace.

21–2–4. TIME OF DESIGNATION (RULEMAKING SUA) / TIMES OF USE (NON–RULEMAKING SUA)

a. The time of designation/times of use indicate the period during which the using agency is authorized to schedule and use a SUA area. The time of designation applies to SUA rulemaking and times of use applies to SUA non–rulemaking. These times should reflect when normal operations are expected to occur. In determining the times of use, the proponent should select the minimum period needed to meet the using agency's requirements. The goal is to capture the majority of the day–to–day activities. When the using agency has a requirement for intermittent, less frequent use of the airspace (outside the specific published time period), a provision to activate the airspace by NOTAM may be stated in the SUA legal description.

NOTE–
The times of use should be based on the intended typical use of the area. These times are depicted on aeronautical charts to assist other airspace users in determining the most likely periods of area activation.

b. Times of use are stated using the options, or combination of options, shown below:

1. Specific hours/days. Local time using the 24–hour clock, and days of the week. If the time of use will change significantly on a seasonal basis, or mission requirements call for specific time blocks, variable times of use may be designated. NOTAMs will not be issued when the time of designation/times of use for a SUA area reflect specific hours/days only.

NOTE–
1. *As used in SUA legal descriptions, the term "daily" means 7 days per week.*

2. *If the SUA area overlaps more than one local time zone, state the predominant time zone in the description, for example: "0700 – 1800 central time; Monday – Friday."*

3. *Include "local time" in rulemaking SUA time of designation information in accordance with 14 CFR 73.3(d).*

EXAMPLE–
1. *"0700 – 2200 local time, Monday – Friday."*

2. *"Sep – Apr, 0800 – 1700, Monday – Friday; an May –Aug, 0600 – 2400 Monday – Friday."*

3. *"0800 – 0930 and 1300 – 1600 local time, Monday – Friday."*

4. *"0700 – 1600, daily."*

2. Continuous. Use only when justification exists for utilization 24 hours a day, 365 days a year.

EXCEPTION–
"Continuous" may also be used when the area will be utilized 24 hours per day over a specific period, such as "Continuous, Monday – Friday;" or "Continuous, April – June."

3. NOTAM activation. Use "By NOTAM" or "Other Times by NOTAM" to indicate when a NOTAM must be issued in order to activate the area. NOTAM options are:

(a) "Other times by NOTAM." Used along with specific times to provide for activation of the SUA area outside the specified times of use that were established according to b.1., above.

EXAMPLE–
"0700 – 1900 local time, Monday – Friday; other times by NOTAM."

(b) "By NOTAM," with specific times from b.1., above. Used when issuance of a NOTAM is required prior to activating the area during the specified hours.

EXAMPLE–
1. *"By NOTAM, 0700–1800 local time, Monday – Friday."*

2. *"By NOTAM (x) hours in advance, 0700–1800 local time, Monday – Friday."*

(c) "By NOTAM" without specific times. Used when anticipated usage times cannot be specifically determined, or when the user's mission requires infrequent or erratic use.

(d) The NOTAM provision must apply to the entire area and not only a portion thereof. If the time of designation or times of use will vary from one portion of the area to another, the dissimilar portions should be subdivided as separate areas.

(e) NOTAMs should be issued as far in advance as feasible to ensure widest dissemination of the information to airspace users.

NOTE–
Under no circumstances may SUA be activated by a NOTAM unless the words "By NOTAM" or "other times by NOTAM" are stated in the SUA legal description.

4. Sunrise to sunset. This option should be reserved for cases where seasonal sunrise/sunset time variations make publication of specific clock times impractical.

5. Intermittent. Must include an associated time–period or "by NOTAM" provision. In any case, intermittent for restricted areas must include a "by NOTAM" provision even if an associated time–period is identified.

EXAMPLE–
1. *"Intermittent, 0700 – 2200, Monday – Friday."*

2. *"Intermittent by NOTAM at least (x) hours in advance, 0700 – 2200, Monday – Friday local time."*

21–2–5. CONTROLLING AGENCY

The ATC facility designated as the controlling agency (see paragraph 21–1–10).

NOTE–
A controlling agency is not designated for prohibited areas, alert areas, controlled firing areas, or national security areas.

21–2–6. USING AGENCY

The using agency, is the organization, or military command/unit whose activity established the requirement for the SUA. For military using agencies, specify the military service, command/unit, and location. For non–military using agencies, specify the organization name and location.

NOTE–
See paragraph 22–1–6 for prohibited area using agency requirements.

REFERENCE–
FAA Order JO 7400.2, Para 21–1–11, Using Agency.

21–2–7. SUA LEGAL DESCRIPTION AMENDMENTS

All changes to a published SUA legal description must be made through the appropriate regulatory or non–regulatory procedures described in this order. This includes minor changes, editorial corrections, internal subdivisions of an existing area, changes of the controlling or using agency, or reducing the area's dimensions or time of designation/times of use.

TBL 21–2–1

EXAMPLES OF SPECIAL USE AIRSPACE LEGAL DESCRIPTIONS

REGULATORY SUA DESCRIPTION:

R–2305 Gila Bend, AZ

Boundaries – Beginning	at lat. 32°50’25”N., long. 112°49’03”W.; to lat. 32°50’52”N., long. 112°42’56”W.; to lat. 32°49’00”N., long. 112°39’03”W.; to lat. 32°29’00”N., long. 112°43’03”W.; to lat. 32°29’00”N., long. 112°53’33”W.; to the point of beginning.
Designated altitudes	Surface to FL 240.
Time of designation	0630–0000, local time, Monday–Saturday; other times by NOTAM.
Controlling agency	FAA, Albuquerque ARTCC.
Using agency	U.S. Air Force, 56th Fighter Wing, Luke AFB, AZ.

NONREGULATORY SUA DESCRIPTION:

Taiban MOA, NM

Boundaries – Beginning	at lat. 34°34’36”N., long. 104°07’00”W.; to lat. 34°33’00”N., long. 103°55’02”W.; to lat. 34°10’00”N., long. 103°55’02”W.; to lat. 34°10’00”N., long. 104°07’00”W.; to the point of beginning.
Altitudes	500 feet AGL to but not including 11,000 feet MSL.
Times of use	0800–0000 Monday–Friday; other times by NOTAM.
Controlling agency	FAA, Albuquerque ARTCC.
Using agency	U.S. Air Force, 27th Special Operations Wing, Cannon AFB, NM.

COORDINATE FORMAT – Do not round off latitude and longitude coordinates. Always use the full format consisting of degrees, minutes, and seconds, as follows:

Correct	**Incorrect**
40°06’00”N.	40°06’N.
104°35’30”W.	104°35.5’W.
39°00’00”N.	39°N.

Section 3. SUA Proposals

21–3–1. GENERAL

This section describes the requirements for SUA proposals submitted to the FAA. SUA proposals must be based on a specific airspace requirement. The need for the proposed airspace must be definitive and sufficient grounds must be provided to justify any resultant imposition on nonparticipating aircraft and/or to afford priority to the SUA user. Before proposing the establishment of new SUA, proponents must consider the use of existing SUA, or the modification of an existing SUA, to conduct their mission.

21–3–2. CLASSIFIED INFORMATION

Do not include classified information in the proposal package. If any information required by this section is classified, the Service Center OSG military representative should contact the Service Center OSG to discuss the handling of that information.

21–3–3. PROPOSAL CONTENT

SUA proposal packages must contain the following information, as applicable:

a. Proponent's Transmittal Letter. Summarize the proposal and provide a point of contact for further information. Military proposals must include a military representative indorsement.

b. Area Description. Using the guidelines in Section 1 and Section 2 of this chapter, describe the proposed area as follows:

1. Title. State type of area (restricted area, warning area, etc.). For MOA proposals, include proposed name of the MOA.

2. Boundaries. A description of the proposed SUA boundary and any subdivisions (see paragraph 21–2–2).

NOTE–
All geographic coordinates must be based on North American Datum 83 (NAD 83) (see paragraph 21–1–16).

3. Altitudes. State the floor and ceiling of the proposed SUA (see paragraph 21–2–3).

4. Time of designation/Times of use. State the time of designation/times of use to be published for the area(s) as determined in paragraph 21–2–4. Include an estimate of the expected SUA usage in number of hours per day and days per year. In cases where the unit plans to use the airspace during different blocks of time each day, but actual clock times may vary within the charted "time of designation/times of use," describe those planned operations to provide as accurate a picture as possible of the projected daily use of the airspace.

NOTE–
Time of designation/times of use of SUA must be the minimum required for containing the proposed activities (see paragraph 21–1–6).

5. Controlling agency. State the FAA or military ATC facility to be designated as the controlling agency for the proposed SUA.

NOTE–
A controlling agency is not designated for prohibited areas, alert areas, controlled firing areas, or national security areas .

6. Using agency. State the organization to be designated as the using agency for the proposed SUA. Specify the military service, unit or organization, and location. For non–military using agencies, specify the organization name and location.

c. Airspace Statement of Need and Justification.

1. Describe the purpose and need for the proposed SUA. Sufficient justification must be provided to support approval of the proposal. Additionally, any known or anticipated aeronautical impact(s) on other airspace users must be considered and addressed in the proposal, including proposed mitigations, if any, to lessen the impact(s).

(a) For new SUA areas, explain why the requirement cannot be met by using existing SUA or by modifying an existing area. List SUA areas that were considered and explain why each area is not acceptable.

(b) For proposals to increase the dimensions or time of designation/times of use of an existing area, explain the need for the increase.

(c) Coordinate with the Service Center Environmental Specialist to ensure the Airspace

Statement of Need and Justification is consistent with the Statement of Purpose and Need and alternatives in the applicable NEPA document.

2. State whether the SUA will be available for joint–use in accordance with paragraph 21–1–8. Provide justification for non–joint–use SUA.

d. Air Traffic Control Assigned Airspace (ATCAA). State whether an ATCAA will be requested to support the proposed SUA, including the ATCAA dimensions and times of use.

NOTE–
ATCAA information is requested in the proposal solely to assist the FAA in evaluating the overall aeronautical impact of the SUA proposal. Requests to establish an ATCAA are coordinated directly with the ATC facility having jurisdiction over the airspace and are handled separately from the SUA proposal process.

NOTE–
ATCAAs below FL 180, and ALTRVs) must not be used as a substitute for SUA when conducting activities for which a SUA is designed to contain. Since ATCAAs and ALTRVs are not depicted on aeronautical charts, they do not inform the flying public of the location of the activity as is provided by charted SUA.
Additionally, ATCAAs and ALTRVs are not to be used as an interim solution while a SUA proposal is pending.

e. Activities. List all activities to be conducted in the proposed SUA. Include the following information:

1. For areas that will contain aircraft operations:

(a) The number and types of aircraft that will normally use the area.

(b) A listing of the specific activities and the maximum altitudes required for each type of activity planned.

(c) State whether supersonic flight will be conducted.

(d) A chart depicting the location and the representative pattern of firing and/or ordnance delivery runs and weapons impact areas (if applicable).

2. For areas to contain surface–to–surface or surface–to–air weapons firing:

(a) Type weapon(s) to be fired.

(b) Maximum altitude required for each weapon listed.

(c) A chart depicting firing points, impact areas, firing fans and safety buffers for each type weapon used.

f. Environmental and land use information.

1. In coordination with the Service Center OSG Environmental Specialist, furnish the name, organization, and mailing address of the person to whom comments on environmental and land use aspects of the proposal may be sent.

2. Proposals to establish SUA with a floor below 1200 feet AGL, where there is underlying private or public use land, must include a statement that the proponent agrees to provide reasonable and timely aerial access to such land. Where applicable, describe provisions to be used to accommodate such access.

3. Proposals to designate the surface as the floor of a prohibited or restricted area must include a statement explaining how the proponent will exercise control of the underlying surface (i.e., by ownership, lease, or agreement with the property owner). Do not submit a copy of the deed, lease, or control agreement.

NOTE–
Restricted areas that were designated with the surface as the floor prior to December 1, 1967, are exempt from the "own, lease, or control" requirement. The exemption status remains valid until amendment actions are taken which would expand the dimensions or times of use, or change the designated purpose of the area. Nevertheless, using agencies of such restricted areas are encouraged to acquire sufficient control of the property to prevent possible disruption of that agency's activities.

g. Communications and Radar.

1. If known, state whether radar and/or radio communications will be used to monitor the airspace. Identify the facility or agency that will provide radio and/or radar monitoring, e.g., range control, military radar unit (MRU), airborne radar unit (ARU), Fleet Area Control and Surveillance Facility (FACSFAC).

2. If a military ATC facility will be designated as the controlling agency for the airspace, indicate whether area status information and traffic advisories will be provided to nonparticipating pilots. If applicable, provide a VHF frequency to be depicted on aeronautical charts.

h. Safety Considerations. Include an explanation of the following items, if applicable:

1. Measures taken to ensure containment of the activity within the proposed area.

2. Procedures for handling malfunctions.

3. Ordnance trajectory envelopes.

4. When an aircraft activity could measurably affect the safety of persons or property on the surface, the proponent must demonstrate that provisions have been made for their protection.

i. Proposal Pre–Coordination. List ATC facilities, military units, and/or other organizations contacted in developing the proposal. (See 21–4–2.)

j. Area Chart. Submit a sectional aeronautical chart depicting the boundaries of the proposed area and any subdivisions.

k. Environmental Documents. Submit applicable environmental documents. If the environmental analysis is incomplete, indicate the status and estimated completion date.

l. Graphic Notice Information. For temporary MOA or temporary restricted area proposals, include the graphic notice information required by paragraph 21–1–15, above.

m. Other. Include any additional information that should be considered by the FAA in making its determination on the proposal.

21–3–4. ABBREVIATED PROPOSALS

a. For certain SUA proposals, it is not necessary to include in the proposal package all of the items specified in paragraph 21–3–3 above. Proponents should consult with the Service Center OSG to determine if an abbreviated proposal may be submitted. Abbreviated proposals may be considered for:

1. Amendments of existing SUA to:

(a) Change the controlling or using agency.

(b) Reduce the dimensions or times of use.

(c) Subdivide or revoke the airspace.

(d) Make minor editorial corrections to the legal description.

2. Recurring proposals for temporary airspace supporting annual exercises provided the location is the same and activities are similar to previous exercises.

3. Renewal of an existing CFA.

b. Abbreviated proposals should include the following, as applicable:

1. The type, purpose, and reason(s) for the action.

2. The specific changes to be made in the area's legal description.

3. For recurring temporary MOAs or CFAs, written confirmation that the activities, times, altitudes, safety precautions, etc., are to be the same as for a previously approved area.

4. The proposed effective date.

5. A summary of proposal coordination accomplished.

6. Environmental documentation, or written re–evaluation/updates of environmental documents used to support a previous temporary MOA.

7. Additional items as determined by the Service Center.

Section 4. Coordination of Proposals

21–4–1. POLICY

The Service Center OSG military representatives are the points of contact for the coordination of the respective military service's SUA proposals for their designated geographic service area. The Service Center OSG will handle all coordination of nonmilitary SUA proposals.

21–4–2. PRE–PROPOSAL COORDINATION

a. Before submitting a SUA proposal to the FAA Service Center OSG, military proponents will coordinate their proposal concept, at a minimum, with locally affected ATC facilities and military units, local FAA Air Traffic Representatives (ATREP) or liaison officers (where assigned), and the ARTCC having jurisdiction over the affected airspace.

b. Inquiries from nonmilitary sources regarding the establishment or amendment of SUA will be referred to the appropriate Service Center OSG for assistance.

21–4–3. ATC FACILITY COORDINATION

a. The proponent will coordinate with affected ATC facilities as needed to discuss the proposal. Proponents should provide the facility with specific information about the mission requirement, desired airspace parameters, and why existing SUA within a reasonable distance are not suitable to accommodate the requirement (see paragraph 21–3–1).

b. Affected ATC facilities will review the proposal concept to evaluate its potential impact on aeronautical and facility operations. Following the review, facilities will inform the proponent whether the proposed airspace concept is operationally feasible, adversely impacts aeronautical or facility operations, or the location is not acceptable to the FAA for aeronautical reasons. Facilities may suggest alternative locations or negotiate the design of the proposed SUA area to resolve or lessen any adverse impacts.

c. Proponents are cautioned that ATC facility favorable consideration with the proposal concept represents just the facility's preliminary assessment of the aeronautical and ATC operational feasibility of the proposal. The proposal will still be subject to the further processing requirements of this order (e.g., aeronautical study, safety risk management, public comment period, and environmental analysis) and the development of a letter of agreement. Therefore, ATC facility favorable consideration must not be interpreted as the FAA's endorsement or as a final approval of the proposal.

21–4–4. SUBMISSION OF PROPOSALS

a. SUA proposals are submitted to the appropriate FAA Service Center OSG for formal processing. Military SUA proposals must be submitted to the appropriate Service Center OSG military representative. Before submitting the proposal to the Service Center OSG, the military representative will review the package to determine compliance with the requirements of this order and applicable military service policies.

b. SUA proponents must promptly notify the Service Center OSG if there is a change in requirements that would alter the requested effective date or cancel the need for the proposed airspace. Military SUA proponents must make this notification through their appropriate Service Center OSG military representative.

Section 5. Service Center OSG Actions

21–5–1. GENERAL

a. SUA proposals should be processed as expeditiously as possible, consistent with thorough analysis, public notice procedures, and environmental requirements. Lengthy delays in processing the proposal may result in the need for a supplemental public comment period, and/or the revalidation of the aeronautical and environmental studies.

b. The Service Center OSG will notify the appropriate military representative, in writing, if a significant processing delay is anticipated or major problems arise.

21–5–2. SERVICE CENTER OSG PROCESSING REQUIREMENTS

This paragraph describes the basic SUA processing requirements accomplished by the Service Center OSG. The Service Center OSG may supplement or modify the sequence of these items as needed.

NOTE–
CFAs have a limited process identified in Chapter 27.

a. Assign a rulemaking docket number or nonrulemaking study number, as appropriate (see Chapter 2 of this order).

NOTE–
When amending any part of the legal description of an existing SUA area, a docket number, or study number must be assigned. This includes minor changes, editorial corrections, and the reduction or revocation of the airspace.

b. Review the proposal package for content and compliance with the requirements of this order.

c. Task affected FAA ATC facilities to conduct an aeronautical study of the proposal (see Section 6 of this chapter).

d. Determine if other airspace or airport actions are pending or on file at other FAA offices (e.g., Airports, Flight Standards, PBN, etc.) for possible conflict with the proposal.

e. Coordinate with other FAA offices (e.g., Airports, Flight Standards, PBN, QCG (Quality Control Group), etc.), as required, for assistance in identifying impacts on airport development plans, aviation safety, and IFR/VFR operations.

f. Coordinate the proposal with adjacent Service Centers, if necessary.

g. Circularize nonrulemaking proposals as specified in Chapter 2 and Chapter 21, Section 1, of this order. Send an information copy of each circular to the Rules and Regulations Group, AJV–P2.

h. For restricted area or prohibited area proposals, submit the proposal package and Service Center OSG recommended action to the Rules and Regulations Group, AJV–P2, to initiate rulemaking action.

i. Determine if an informal airspace meeting is necessary.

NOTE–
If informal airspace meetings or environmental public meetings are planned, and the schedule is known, include meeting information in the nonrulemaking circular, or in the rulemaking package for publication in the NPRM. Also, see meeting notification requirements in Chapter 2 of this order.

j. Review all public comments received. Evaluate comments with respect to the proposal's effect on the safe and efficient utilization of airspace. Where required, consider the proposal's impact on the safety of persons and property on the ground. All substantive aeronautical comments must be addressed in the final rule or nonrulemaking case file. The OSG is responsible for drafting the FAA's response to substantive public comments received.

k. Review aeronautical study results.

l. Evaluate aeronautical impacts identified through public comments, aeronautical study, or other sources. Coordinate with the proponent regarding ways to mitigate aeronautical impact and/or resolve problem areas. As additional impacts are identified during the processing of the proposal, provide the information to the proponent.

m. Review environmental or land–use comments addressed to the FAA, then forward them to the proponent and Service Center OSG Environmental Specialist for consideration in appropriate environmental documents.

n. If, after the publication of an NPRM or a non–rulemaking circular, the proposal is modified by the proponent or to mitigate aeronautical or environmental impacts, determine if the changes are significant enough to necessitate a supplemental public comment period.

o. Coordinate with the Service Center OSG Environmental Specialist for review of the proponent's environmental documents (see paragraph 21–5–4 below).

p. Determine whether to recommend FAA headquarters approve the proposal, or disapprove the proposal at the Service Center level (see paragraphs 21–5–6 and 21–5–7, below).

21–5–3. AERONAUTICAL IMPACT CONSIDERATION

There is no set formula for balancing the various competing user requirements for the use of airspace. If approval of the SUA proposal would result in an adverse aeronautical impact, every effort must be made to seek equitable solutions to resolve or minimize the adverse aeronautical effects. If the aeronautical impact cannot be mitigated, the Service Center OSG must carefully weigh the extent of that impact against the need and justification provided by the SUA proponent. The Service Center OSG's recommendation should include a discussion of how aeronautical issues were resolved or provide information addressing the Service Center OSG's analysis of the aeronautical impact that cannot be mitigated.

21–5–4. ENVIRONMENTAL DOCUMENT REVIEW

In coordination with the Service Center OSG Environmental Specialist, the Airspace Specialist will review the proponent's draft and final environmental documents to ensure that the environmental analysis matches the proposed airspace parameters (e.g., time of use, lateral and vertical dimensions, types and numbers of operations, supersonic flight). Any environmental issues identified in this review must be forwarded to the proponent for consideration.

21–5–5. SERVICE CENTER DETERMINATION

After considering all pertinent information, the Service Center OSG determines whether it is necessary to negotiate proposal changes with the proponent, disapprove the proposal or recommend approval to the Rules and Regulations Group, AJV–P2. All FAA environmental documentation requirements must be completed before a recommendation for approval can be forwarded to the Rules and Regulations Group, AJV–P2.

NOTE–
Supplemental public notice with an additional comment period may be necessary if significant changes are made to the proposal after it was advertised for public comment. If a FAA determination has not been issued within 36 months of the last aeronautical public comment period or, if it is known that the aeronautical conditions in the area have changed significantly from what existed at the time of that last comment period, a supplemental comment period is required.

21–5–6. DISAPPROVAL OF PROPOSALS

a. The Service Center OSG may disapprove any SUA proposal, however, such disapproval should be based on valid aeronautical reasons or non–compliance with FAA policy. The Service Center OSG must notify the proponent, in writing, stating the reasons for disapproval. Reasonable efforts should be made to resolve problem areas before disapproving the proposal. Provide an information copy of the disapproval correspondence to the Rules and Regulations Group, AJV–P2.

b. If the proponent resubmits the proposal after resolving problem areas, the Service Center OSG should determine required actions and resume processing the proposal.

c. If the proponent resubmits the proposal without resolving problem areas, the Service Center OSG must forward the case along with their recommendation to the Rules and Regulations Group, AJV–P2, for further action.

21–5–7. SUBMISSION OF APPROVAL RECOMMENDATIONS TO FAA HEADQUARTERS

Submit SUA proposals recommended for approval to the Rules and Regulations Group, AJV–P2, for final determination and processing. Include the following (as applicable):

a. A Service Center OSG transmittal memorandum containing a brief overview of the proposal and their recommendation for headquarters action. Describe any amendments made to the original proposal in response to public comments, or negotiations to mitigate impacts, etc. Include the desired airspace effective date.

NOTE–
If coordination with the designated controlling agency indicates that plans exist to provide nonparticipating pilots with traffic advisories, or real–time area activity status information, the OSG must coordinate with AIS to depict that information on aeronautical charts.

b. An attachment that contains the recommended legal description of the area (e.g., boundaries, altitudes, times, controlling agency, and using agency). Use the format shown in TBL 21–2–1.

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. A copy of the proponent's airspace request correspondence and proposal package, to include all applicable items required by Section 3 of this chapter.

e. A copy of aeronautical comments received in response to the NPRM or non–rulemaking circular, along with a discussion of how each substantive comment was resolved or the Service Center OSG's analysis of the aeronautical impacts that cannot be mitigated.

f. Identify any modifications made to the proposal to mitigate environmental effects.

g. A copy of the aeronautical study.

h. If an informal airspace meeting was held, include a summary of meeting discussions, issues raised at the meeting, and copies of written comments submitted at the meeting or during the associated comment period.

i. Copies of pertinent correspondence received from other FAA offices (e.g., Flight Standards, Airports, adjacent Service Centers, affected ATC facilities, etc.).

j. FAA environmental documents. Do not submit an approval recommendation prior to completion of the FAA's final decision on environmental impacts, per procedures in of this order.

k. Any other information that should be considered by the Rules and Regulations Group, AJV–P2, in making a final determination on the proposal.

21–5–8. HANDLING OF PROPOSALS TO REDUCE OR REVOKE SUA

a. Normally, proposals which lessen the burden on the public by reducing the boundaries, altitudes, or by revoking SUA, do not require advance public notice and comment. An abbreviated proposal package may be submitted in accordance with paragraph 21–3–4.

b. SUA reduction or revocation normally does not require an environmental impact statement or environmental assessment because it is covered by the categorical exclusion in FAA Order 1050.1.

21–5–9. FAA INITIATED SUA PROPOSALS

a. Proposals to establish or modify SUA are normally initiated by a DOD proponent. However, the FAA may initiate SUA proposals when such actions are necessary to resolve a safety issue, enhance joint–use, or enhance the capability of the SUA to accommodate the using agency's mission. Prior to initiating a SUA proposal, the Service Center OSG must exhaust every avenue to resolve the issues by other means. When modification of an existing SUA area is contemplated, full consideration must be given to providing the affected using agency with an equivalent capability to perform its mission.

b. When initiating a proposal, the Service Center OSG will prepare the SUA proposal package and required documentation. The proposal will be coordinated with affected military using agencies through the appropriate military representative, or non–military using agencies directly, to identify and document the impact of the proposed change. If an environmental analysis is required, the Service Center OSG will determine responsibility assignment.

c. If the using agency objects and agreement cannot be reached, but there is strong justification to proceed with the proposal, the Service Center OSG must send the proposal package to the Rules and

Regulations Group, AJV–P2. Include with the proposal package, the reason for the proposal, a copy of the objections, a summary of efforts to resolve the objections, and the Service Center OSG's recommendation including their analysis of the proposal in light of the using agency's objections. Do not initiate public notice procedures for such proposals without concurrence from the Rules and Regulations Group, AJV–P2.

Section 6. Aeronautical Study

21–6–1. PURPOSE

An aeronautical study must be conducted to identify the impact of the SUA proposal on the safe and efficient use of airspace and ATC procedures.

21–6–2. POLICY

a. An aeronautical study is required for all prohibited area, restricted area, MOA, and warning area proposals, except those which reduce or revoke SUA, change the controlling or using agency, or make minor corrections to the legal description. The Service Center OSG determines whether to require an aeronautical study for alert area or NSA proposals. CFAs do not require an aeronautical study.

b. The Service Center OSG must task the affected appropriate office(s) to conduct the aeronautical study. When applicable, coordinate with adjacent Service Centers for input. Appropriate offices must submit the completed study to the Service Center OSG. When input to the study from a military ATC facility is needed, the Service Center OSG must submit a request to the appropriate Service Center OSG military representative.

c. For recurring temporary restricted area and MOA actions, such as periodic military exercises, a previous study may be used provided it has been reviewed for currency and updated as necessary.

d. The Service Center OSG will review the study to determine if there are any aeronautical impacts to be resolved. The Service Center OSG may supplement the study as needed to include Service Center OSG perspective, cumulative effect analysis, etc. Coordinate the study findings with the proponent to explore possible options to mitigate any identified aeronautical impact.

e. A copy of the study must be included with the SUA proposal package submitted to the Rules and Regulations Group, AJV–P2.

21–6–3. CONTENT OF STUDY

The Service Center OSG may specify the content and format of the study based on the type and extent of the SUA proposal. Suggested items include:

a. Introduction. An overview of the existing airspace structure, airports, and types and volume of aeronautical activities currently operating in the airspace affected by the proposal.

b. Impact on IFR and VFR Terminal Operations. Consider the proposal's impact on existing and proposed terminal procedures.

1. Arrival and departure flows, SIDs/STARs, and approach and departure procedures.

2. Airport traffic patterns, and Class C, D, and Class E airspace surface areas.

c. Impact on public use and charted private airports (airports with FAA Form 5010 on file).

1. Number and types of aircraft based.

2. Amount of operations.

3. The proposal's effect on airport access, capacity, and operations.

d. Impact on IFR en route operations, including:

1. IFR traffic flow.

2. Existing ATS routes.

3. Average daily traffic count on affected ATS routes.

4. Feasibility of realigning ATS routes to accommodate the proposed SUA.

5. Direct IFR routings.

e. Impact on VFR operations, routes, and flyways. Consider the effect on charted VFR routes, and known, but uncharted, high–volume VFR routes or VFR flyways.

NOTE–
Although VFR pilots are not denied access to MOAs, the potential for aeronautical impact due to VFR pilots electing to deviate around the MOA when active should be evaluated when processing a MOA proposal. Consider the proposed MOA's size and location, and the extent of current non–participating VFR operations in the affected airspace.

f. Impact on other pending proposals. Consider known airport development plans, ATC facility resectorization plans, other airspace or ATS route proposals, or instrument procedures currently being processed or on file.

g. Cumulative Aeronautical Impact Assessment. Establishment of the proposed airspace may have broader effects beyond the immediate vicinity of the proposed airspace. Consider the overall impact of the proposal on aviation operations when combined with:

1. Existing adjacent airspace such as Class B, C, or D areas, or other SUA.

2. Existing geographical features such as large bodies of water, mountainous terrain, or obstructions that could influence the flight paths of nonparticipating aircraft or affect the ability of nonparticipating aircraft to circumnavigate the proposed SUA.

3. Aviation safety issues, compression of air traffic, etc.

NOTE–
If the proposed SUA will contain aircraft operations, also consider the impact of routes to be used by the participating aircraft to enter/exit the SUA area.

h. Associated ATCAA. If it is known that an ATCAA will be requested in conjunction with the proposed SUA, determine if use of the ATCAA would result in any additional aeronautical impact that should be considered.

i. Alternatives. When adverse aeronautical impacts are identified consider measures or alternatives that could mitigate or lessen the impacts.

j. ATC Facility Assessment. The ATC facility's assessment of a proposal's impact on aeronautical and facility operations.

k. ATC services. Indicate whether the controlling agency plans to provide real–time SUA status information, allow transitions through the area by nonparticipating aircraft, or provide traffic advisories to nonparticipating pilots requesting such services. If the controlling agency agrees to advertise such service, provide facility identification and a VHF frequency to be depicted on aeronautical charts.

l. Recommendations. Provide a recommendation for FAA action on the proposal.

Section 7. Restricted Area and MOA Annual Utilization Reports

21–7–1. PURPOSE

Annual utilization reports provide the FAA with information regarding the times and altitudes used, and the types of activities conducted in restricted areas and MOAs. These reports assist the FAA in its management of the SUA program.

21–7–2. REPORTING REQUIREMENTS

a. Using agencies are required to submit annual reports to the FAA detailing the use of all assigned restricted areas and/or MOAs. Actual utilization data are required. See FIG 21–7–1 for report format. Instructions for preparing the report are contained in FIG 21–7–2.

b. Reports must cover each fiscal year period (October 1 through September 30). If the area was assigned to the using agency for only part of the fiscal year, report the utilization for that partial period.

c. For areas that are subdivided by legal description, a separate report is required for each officially designated sub–area published in FAA Order JO 7400.10, Special Use Airspace.

d. Do not include classified information in the report.

e. Submit reports by January 31 following the end of each fiscal year, to the Service Center OSG having jurisdiction over the airspace being reported.

f. Military using agencies must submit reports to the FAA through the appropriate Service Center OSG military representative. The military representative will ensure that an information copy of each report is sent to the Manager, Rules and Regulations Group, AJV–P2, 800 Independence Avenue, SW, Washington, DC 20591. Electronic reporting is acceptable.

g. Non–military using agencies must submit reports directly to the FAA Service Center OSG having jurisdiction over the airspace being reported. The Service Center OSG will send an information copy of nonmilitary reports to the Manager, Rules and Regulations Group, AJV–P2.

21–7–3. SUPPLEMENTARY REPORTS

The Service Center OSG may request the using agency submit a supplementary report if it determines that additional information is needed to evaluate the use of a restricted area or MOA. Requests will be submitted through the appropriate military representative. Using agencies should provide the requested information within 60 days of receiving the request.

21–7–4. UTILIZATION REPORT TERMS

Terms as used in Restricted Area and MOA Annual Utilization Reports are defined as follows:

a. ATCAA. Airspace assigned by ATC to segregate air traffic between the specified activities being conducted within the assigned airspace and other IFR traffic.

b. Activated. The time–period during which the controlling agency has released the restricted area or MOA airspace to the using agency; regardless of whether any activity is actually occurring.

c. Controlling Agency. The designated ATC facility having jurisdiction over the SUA airspace when it is not in use by the using agency. Also, the facility that authorizes transit through, or flight within, special use airspace, in accordance with joint–use procedures contained in a letter of agreement.

d. Joint–Use. A term applied to SUA which is returned to the controlling agency for public access during periods when the airspace is not needed by the using agency for its designated purpose. It also means airspace wherein access may be granted to non–participating aircraft subject to the joint–use procedures specified in a letter of agreement between the controlling and using agencies.

e. Nonparticipating aircraft. An aircraft, civil or military, which is not a part of the activities being conducted within a SUA area.

f. Scheduled. The using agency's planned time period(s) of intended use of a SUA area as submitted in advance to the controlling agency (for military using agencies, see the scheduling requirements

contained in FAA Order JO 7610.4, Chapter 9, Military Operations Requirements (For Official Use Only)).

g. Using agency – The agency, organization, or military command/unit whose activity established the requirement for the SUA and the agency responsible for compilation and submission of Restricted Area/MOA Annual Utilization Reports.

h. Utilized – Amount of time (hours or days) that activities were actually conducted in the SUA area (for example, when participating aircraft were operating, or other designated activities were conducted, in the airspace).

21–7–5. REVIEW REQUIREMENT

a. The Service Center OSG must perform a thorough review of all annual utilization reports for restricted areas and MOAs within its jurisdiction. At a minimum, the following utilization report items should be analyzed:

1. Activities. Are the reported activities appropriate for the airspace type and consistent with the area's designated purpose?

2. Altitudes. Do the reported activities and altitudes reflect a requirement for the altitudes published in the area's legal description?

3. Utilization Data. Consider whether actual use supports the published times in the legal description, or if discussions should be held with the using agency to determine if an airspace amendment action is appropriate. Calculate the following percentages for reference in comparing the published times of the area with its reported actual utilization.

(a) Hours scheduled as a percentage of hours published in the area's legal description.

(b) Hours activated as a percentage of hours scheduled.

(c) Hours actually utilized as a percentage of hours activated.

(d) Days actually utilized as a percentage of days activated.

4. Joint –Use Information. Is the airspace being made available for joint–use (if applicable)?

5. Remarks. Consider any mitigating factors that explain or clarify reported data. Are any other issues identified that require further action?

b. If additional information is needed to complete the utilization report review, request the using agency submit a supplementary report as described in paragraph 21–7–3.

c. As required, initiate discussions to resolve issues or forward recommendations for corrective action, to the military representative or responsible official for nonmilitary SUA.

d. Refer to Section 8 of this chapter for additional information regarding SUA review procedures and utilization standards.

21–7–6. REVIEW SUMMARY

The Service Center OSG must prepare a summary of the results of its annual utilization report review. The summary should document the findings, recommendations, and actions taken, as appropriate. Submit review summaries to the Rules and Regulations Group, AJV–P2, by March 31 of each year. It is not necessary to submit copies of the actual utilization reports with the summary.

FIG 21–7–1

RESTRICTED AREA AND MILITARY OPERATIONS AREA ANNUAL UTILIZATION REPORT (RCS: 1412–DOT–AN)

1. Restricted area number or MOA name:
2. Reporting period dates:
3. Reporting Unit Name and Phone:
4. Aircraft Activities:
(a) Aircraft types:
(b) Types of activities conducted:
(c) Altitude/flight levels used for each type of activity:
(d) Supersonic flight:
(1) Area used for supersonic:
(2) Altitudes/flight levels:
5. Artillery/Mortar/Missile Activities (Restricted Area only):
(a) Type activities:
(b) Maximum altitude used for each activity:
6. Other activities not reported in 4 or 5 above:
(a) Type activity:
(b) Maximum altitude used for each activity:
7. Utilization information:
(a) Total number of aircraft sorties:
(b) Total number of days the area was:
(1) Scheduled for use:
(2) Activated:
(3) Actually utilized:
(c) Total number of hours the area was:
(1) Scheduled for use:
(2) Activated:
(3) Actually utilized:
8. Joint–use information:
(a) Total number of hours the area was returned to the controlling agency:
(b) Letter of agreement provisions:
(c) Number of hours access was granted by the Using Agency to non–participating aircraft in accordance to the joint–use procedures agreement between the controlling and using agencies
9. New chart Submitted/No Change:
10. Remarks:

FIG 21–7–2

INSTRUCTIONS FOR PREPARING RESTRICTED AREA and MOA ANNUAL UTILIZATION REPORTS

GENERAL: Restricted area and MOA annual utilization reports provide information needed by FAA airspace managers to confirm airspace requirements and evaluate the efficiency of airspace utilization. It is essential that this report document actual utilization of the airspace as completely and as accurately as possible. The following format is used to report restricted area and MOA utilization. If an item does not apply, enter "N/A" for that item. A "Remarks" section is provided to document additional pertinent information. Do not include classified information in this report. Refer to FAA Order JO 7400.2, Procedures for Handling Airspace Matters, for definitions of terms used in this report, and for additional reporting and submission instructions.

REPORT FORMAT:

1. Restricted area number or MOA name: State the Restricted Area number or MOA name. Report only one area per form. For areas that are officially subdivided by legal description (See FAA Order JO 7400.10), prepare a separate report for each subdivision.

2. Reporting Period Dates: Enter the fiscal year dates (1 Oct [enter applicable fiscal year] to 30 Sept [enter applicable fiscal year]), or period covered if other than a full fiscal year.

3. Reporting Unit: Provide name of organization preparing the report and DSN, commercial and FAX numbers (as available).

4. Aircraft Activities:

(a) Aircraft types: List the specific types of aircraft, which used the area during the reporting period (e.g., F–15, B–1, etc.). Include ROA activities in this section.

(b) Types of activities conducted: List each specific type of activity conducted. Do not use general terms such as "air operations," etc.

(c) Altitudes/flight levels used for each type activity: State the highest altitude/flight level used for each activity listed in 5.(b), above.

(d) Supersonic flight:

(1) Area used for supersonic: Indicate yes/no.

(2) Altitudes/Flight levels: State altitudes/flight levels used for supersonic flight.

5. Artillery/Mortar/Missile Activities (Restricted Areas only):

(a) Type of activities: Indicate type(s) of weapon(s) fired.

(b) Maximum altitude used for each activity: State the highest altitude used for each activity/weapon.

6. Other activities not reported in 4 or 5 above:

(a) Type activity: List any other activities conducted in the area, but not already covered in other sections of the report.

(b) Maximum altitude for each activity: State highest altitude used for each type activity.

7. Utilization information:

(a) Total number of aircraft sorties: Enter the total number of aircraft sorties that utilized the area during the reporting period.

(b) Total number of DAYS the area was: Count a "day" as being scheduled, activated, or utilized, regardless of the amount of time involved on that particular day. The intent of this item is to document the number of different days during the year that the area was needed in order to accomplish the mission, whether it was needed for only 10 minutes or a full 24 hours.

(1) Scheduled for use:

(2) Activated:

(3) Actually utilized:

(c) Total number of HOURS area was:

(1) Scheduled for use: Hours the area was activated by NOTAM may be included in this item.

(2) Activated:

(3) Actually utilized: When computing "actually utilized" time, do not provide a cumulative total of individual aircraft hours flown in the area. Hours reported cannot exceed the area's total available published hours.

8. Joint–use information:

(a) Total number of hours the area was returned to the controlling agency: To compute this figure, subtract the hours reported in 8(c)(2) from 8760 hours (use 8784 hours for "leap year" reporting).

(b) Letter of agreement provisions: Note whether the letter of agreement between the controlling agency and the using agency includes any joint–use provisions which permit the controlling agency to route nonparticipating aircraft through the airspace.

9. New chart Submitted/No Change: Attach a chart of the area depicting, as applicable, aircraft operating areas, flight patterns, ordnance delivery areas, surface firing points, and target, fan, and impact areas. After once submitting an appropriate chart, annual charts are not required unless there is a change in the area, activity, or altitudes used, which would alter the depiction of the activities originally reported. If no change is to be submitted, indicate "No change."

10. Remarks: Include any other information that should be considered by airspace reviewers. Explain reasons for apparent low utilization rates or large differences between "scheduled," "activated," and/or "utilized" data (e.g., extensive weather or maintenance cancellations and delays, unit deployments, etc.); or note recurring airspace denials or restrictions on use of the area imposed by the controlling agency.

Section 8. SUA Review and Analysis

21–8–1. GENERAL

Under Title 49 U.S.C. 40103(b), the FAA is charged with ensuring the safe and efficient use of the nation's airspace. In carrying out this responsibility, the FAA must periodically review existing SUA and take appropriate airspace amendment action, if warranted, based on the findings of its review. The following paragraphs set forth SUA review policy and provide suggested analysis techniques for use by Service Center OSG and the Rules and Regulations Group, AJV–P2.

21–8–2. POLICY

a. The Service Center OSG must conduct an annual review of restricted areas, MOAs, and warning areas under its jurisdiction. CFAs, Alert Areas, and NSAs may be reviewed as deemed necessary by the Service Center OSG. The purpose of the annual review is to:

1. Confirm that the using agency has a continuing requirement for the airspace.

2. Determine if the airspace is being used for its designated purpose.

3. Determine if actual use supports the designated dimensions and times of use.

4. Determine if joint–use airspace is being returned to the controlling agency when not needed for its designated purpose.

5. Determine if any adjustments should be considered to enhance the efficient use or management of the airspace.

b. When the review indicates that airspace amendment or other corrective action should be considered, the Service Center OSG must discuss the findings with the appropriate military representative, or responsible official for non–military SUA, and determine an appropriate course of action.

21–8–3. SOURCES OF INFORMATION

There are a variety of sources of information pertinent to SUA utilization. Using agencies are required to submit annual reports on restricted area and MOA utilization as described in Section 7 of this chapter. Additional information may be obtained through coordination and research to augment these reports or to compile specific information about SUA areas that are not covered by the annual reporting requirement. Coordination with controlling agencies may be necessary to obtain detailed information regarding real–time use and area scheduling practices, or to identify airspace operational problems. The Military Airspace Data Entry/Special Use Airspace Management System (MADE/SAMS) will provide a more centralized and comprehensive source of SUA data for review purposes. MADE/SAMS data should be incorporated into the review process. Additional sources of SUA information include:

a. Center Scheduling Enterprise (CSE), Data Collection and Scheduling Tool (DCAST), and Range Facility Management Support System (RFMSS).

b. Controlling agency or using agency input.

c. Service Center OSG SUA onsite review team reports, if available.

d. FAA Air Traffic Representative (ATREP) inputs.

e. SUA Letters of Agreement.

f. User meeting feedback.

g. Routine use of restrictions imposed by the controlling agency on the activation of SUA, or frequent denials of using agency scheduling/activation requests.

h. Recurring ATC problems, spill outs, or NMAC reports associated with the SUA being reviewed.

21–8–4. UTILIZATION STANDARDS

a. The Government Accountability Office (GAO) recommended that the FAA establish standards to be used to measure the effectiveness of SUA utilization, and to serve as a starting point for Service Center OSG discussions with the using agency about the possible need for an airspace amendment or revocation action. In fulfillment of the GAO recommendation, this paragraph presents a limited, basic standard to be considered when reviewing SUA utilization data. It applies primarily to the review of

restricted area and MOA annual utilization reports, but may be used to evaluate other SUA areas where sufficient utilization data is available.

b. Times of Use. Hours actually utilized should equal at least 75 percent of the hours the area was activated, discounted for weather cancellations and delays, controlling agency preference to keep SUA activated between blocks scheduled by the using agency, or loss of use for reasons beyond the using agency's control (as documented in the utilization report Remarks section).

c. The following standard may be applied in reviewing SUA utilization data:

1. Activities. The activities conducted must be appropriate for the type and designated purpose of the SUA.

2. Times of Use. Hours actually utilized should equal at least 75 percent of the hours the area was activated, discounted for weather cancellations and delays, or loss of use for reasons beyond the using agency's control (as documented in the utilization report Remarks section).

3. Designated Altitudes. Activities conducted/altitudes used indicate a need for retaining the published altitude structure of the SUA area.

21–8–5. SUA REVIEW GUIDE

This paragraph may be used as a framework for conducting a review of SUA. It applies primarily to the review of restricted areas and MOAs for which annual reports are submitted. This should not be considered an all–inclusive list. Reviewers may modify the factors to be examined or the extent of the review based on the availability of information or to fit the specific area/situation under review. The following items should be evaluated:

a. Activities. Are the activities conducted appropriate for the type and purpose of the SUA area? If inappropriate activities are conducted, notify the military representative, or responsible official, that the activity must be terminated in that SUA area or an airspace proposal must be submitted to establish the proper category of SUA to accommodate the activity.

b. Boundaries. Do the boundaries support the mission requirements? Should the using agency consider subdivision of the airspace for better utilization of the airspace and joint–use policy? If the answers indicate a need for change, action must be initiated to amend the description.

c. Altitudes. Does the actual use of altitudes support those specified in the descriptions? Are there less frequently used portions that could be subdivided as separate areas to enhance real–time joint–use of the airspace? Are any portions of the vertical dimensions no longer required for the mission? If the answers indicate a need for change, action must be initiated to amend the description.

d. Times of Use. Compare scheduled, activated, and actual utilized data. Low usage rates do not necessarily indicate a need to revoke or amend airspace. Consideration must be given to the designated purpose of the area and whether limitations were imposed on its use as a condition for the original establishment of the SUA. SUA may be established to accommodate less frequent activities such as certain research, test, and development profiles. Determining the continued requirement for, or validity of, such areas will require discussions with the using agency and cannot be determined strictly based on utilization times. Additionally, low or infrequent use may result from factors beyond the using agency's control, such as adverse weather, unit deployments, maintenance delays, ATC–imposed restrictions, etc.

1. Compare time actually utilized to time activated. This is the most important factor in analyzing SUA utilization. Significant disparity between the time activated and actually utilized may indicate inefficient airspace use and the need to improve real–time use procedures so that the airspace is returned to the controlling agency for joint use when not needed by the user for its designated purpose. Determine whether the published times of use are valid or should be amended to match current mission requirements. If actual utilization is less than 75 percent of the time activated, coordinate with the appropriate military representative to determine the reason and whether corrective action is required. If information is available, the impact of weather and/or ATC delays on the actual utilization of the area should be considered when evaluating this item.

2. Compare scheduled use to published times of use. If scheduled use is significantly less than or greater than (e.g., by use of NOTAMs) the published times, discussions should be held with the using

agency to determine if the published times should be amended to reflect current mission requirements.

3. Compare scheduled time to activated time. Is the amount of time the area is being activated consistent with the amount of scheduled use? A significant difference between these times may indicate a need to discuss real–time use or revalidate published times of use with the user. Consideration should be given to the effects of weather or maintenance cancellations, or other factors limiting the using agency's use of the area.

4. NOTAM Activation. If a NOTAM provision is included in the SUA legal description, and activation by NOTAM is extensive or routine, consider whether it would be advantageous to designate/publish specific times of use to reflect the routine NOTAM period. This action may better inform the flying public of expected area usage periods, and reduce NOTAM system workload.

5. Intermittent Time of Use. If regular use of the area occurs during a set time period daily, or if use has become other than sporadic, consider whether specific times of use should be published to better inform the flying public of expected area usage periods and reflect current mission requirements.

e. Non–utilization of SUA. A using agency is required to explain in the remarks section of its annual utilization report why it did not use the SUA area during an entire reporting period. If no such explanation is provided, request that the appropriate military representative or using agency provide the reasons and the using agency's plans for future use of the SUA.

1. If the using agency r responds that the SUA is no longer required, initiate action to revoke the airspace.

2. If the using agency validates a continuing need for the airspace, coordinate with them to determine if the SUA area's dimensions and/or times of use remain valid or should be amended to reflect current mission requirements.

3. If the SUA remains unused for a second consecutive fiscal year period, inform the appropriate military representative of the FAA's intent to revoke the area unless additional justification for retaining the airspace is submitted.

f. Joint–use Procedures. Evaluate the effectiveness of joint–use procedures and real–time activation/deactivation procedures (if applicable). Obtain input from the controlling agency as needed.

1. Are procedures for timely return of joint–use airspace to the controlling agency contained in a letter of agreement?

2. Are real–time activation/deactivation procedures specified and used?

g. Aeronautical Charts and Publications. Check the accuracy of SUA information shown on aeronautical charts and contained in applicable publications. Submit required corrections to the Rules and Regulations Group, AJV–P2,or Aeronautical Information Services, AJV–A, as appropriate, for processing.

h. Other Issues. Determine if there are any other issues that require further investigation, such as:

1. Adverse impact on NAS operations.

2. Recurring spill outs.

3. Frequent instances of limitations on the use or activation of the SUA by the controlling agency.

21–8–6. SUA REVIEW FOLLOW UP ACTION

The Service Center OSG's annual SUA review forms the basis for further discussions with using agency representatives to resolve any discrepancies noted or other issues that were identified. Results of the review should be documented and maintained on file in accordance with current administrative guidance. Service Center OSG follow up actions are dependent on the results of the review as follows:

a. If it is determined that the existing SUA parameters (boundaries, altitudes, times) are valid, no further action is required other than documenting the review results.

b. If any existing SUA parameters are found to exceed the using agency's requirements or it is determined that the SUA does not accommodate the using agency's current mission requirements, then the Service Center OSG should discuss the finding with the appropriate military representative or non–military using agency representative. When appropriate, the Service Center OSG must request the using agency to submit an airspace proposal to amend the SUA description.

Chapter 22. Prohibited Areas

Section 1. General

22–1–1. DEFINITION

A prohibited area is airspace designated under 14 CFR part 73, within which no person may operate an aircraft without permission of the using agency.

NOTE–
In accordance with paragraph 22–1–5, operations within a prohibited area require a certificate of waiver/authorization.

22–1–2. PURPOSE

Prohibited areas are designated when necessary to prohibit flight over an area on the surface in the interest of national security.

NOTE–
The restrictions imposed by a prohibited area are often highly controversial and potentially disruptive to National Airspace System operations. Therefore, proposed prohibited areas require strong justification and the designation of such areas must be limited.

22–1–3. IDENTIFICATION

Identify prohibited areas with the prefix letter "P" followed by a dash, a two–digit number and location (City, State), (e.g., "P–47, Amarillo, TX"). Identification numbers are assigned by the Airspace Rules and Regulations Team, AJV–P21.

22–1–4. DESCRIPTION

Prohibited areas normally extend from the surface upward to a specified altitude, with a "continuous" time of designation

22–1–5. WAIVERS/AUTHORIZATION

No person may conduct operations within a prohibited area without permission of the using agency and a certificate of waiver/authorization issued by the FAA Administrator. FAA Headquarters, System Operations Security, is responsible for processing waiver requests for operations in a prohibited area.

NOTE–
Operations are permitted for emergency purposes such as search and rescue and active law enforcement situations without a certificate of waiver/authorization. Prohibited areas are not intended to provide an airspace area free of other aircraft in which to conduct routine operations, research, and test activities.

22–1–6. USING AGENCY

The using agency is the agency, organization or military command that established the requirements for the prohibited area.

Section 2. Processing

22–2–1. SUBMISSION OF PROPOSALS

a. Submit prohibited area proposals to the Service Center OSG at least 10 months prior to the desired effective date (see paragraph 21–3–3 for proposal content). The following schedule is an estimate of the minimum time needed to process proposals that are non–controversial, without significant aeronautical impact, and only require routine coordination.

NOTE–
Proposals that are complex, controversial, or require extensive environmental analysis could need additional processing time beyond that shown in TBL 22–2–1.

b. Prohibited area effective dates must coincide with the 56–day charting dates published in FAA Order 8260.26.

c. After the notice of proposed rulemaking comment period ends and review of all pertinent information, Service Center OSGs must submit SUA proposals recommended for approval to the the Rules and Regulations Group, AJV–P2, for final determination and processing in accordance with paragraph 21–5–7.

TBL 22–2–1

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG; processing requirements initiated in accordance with paragraph 21–5–2; proposal request sent to the Rules and Regulations Group, AJV–P2, to begin Rulemaking Process.
D+95	Proposal request reviewed by the Rules and Regulations Group, AJV–P2; NPRM drafted, coordinated, and submitted to the Federal Register for publication.
D+105	NPRM published in Federal Register. Public comment period begins.
D+150	Public comment period ends. Service Center OSG initiates review of all pertinent information received.
D+180	All pertinent information reviewed by the Service Center OSG; proposal determination made in accordance with paragraph 21–5–5. Submit approval recommendations to the Rules and Regulations Group, AJV–P2, in accordance with paragraph 21–5–7.
D+240	Service Center OSG recommendations and all pertinent information reviewed by the Rules and Regulations Group, AJV–P2. FAA final determination made. If approved, rule drafted, coordinated and submitted to the Federal Register for publication.
D+250	Rule published in Federal Register (at least 58 days prior to effective date).

Chapter 23. Restricted Areas

Section 1. General

23–1–1. DEFINITION

A restricted area is airspace designated under 14 CFR part 73 provisions, within which the flight of aircraft, while not wholly prohibited, is subject to restriction.

23–1–2. PURPOSE

Restricted areas are designated when determined necessary to confine or segregate activities considered hazardous to nonparticipating aircraft.

NOTE–
Restricted areas are not designated for non–hazardous activities or the benefit of an individual or commercial operator over the public's right of transit through the navigable airspace.

23–1–3. IDENTIFICATION

Identify restricted areas with the letter "R" prefix followed by a dash, a four–digit number, a location, and the two–letter state abbreviation (e.g., R–2309, Yuma, AZ). Restricted Area subdivisions may be identified by a suffix consisting of a letter, a cardinal point, the terms "high" or "low," or a combination (e.g., R–2309A, R–2501W). The Airspace Rules and Regulations Team, AJV–P21, assigns identification numbers.

23–1–4. RESTRICTED AREA FLOOR

a. The restricted area floor may be established to the surface only when the using agency owns, leases, or by agreement, controls the underlying surface.

NOTE–
Existing restricted areas established from the surface before December 1, 1967, are exempt from the "own, lease, or control" requirement. This remains valid until amendment action is taken which would expand the boundaries, altitudes, or times of use, or changes the designated purpose of the area. Nevertheless, using agencies of such restricted areas are encouraged to acquire sufficient control of the property to prevent possible disruption of that agency's activities.

b. Provisions must be made for aerial access to private and public use land beneath the restricted area, and to accommodate instrument arrivals/departures at affected airports with minimum delay.

c. The restricted area must exclude the airspace 1,500 feet AGL and below within a 3 NM radius of airports available for public use. This exclusion may be increased if necessary based on unique circumstances.

23–1–5. JOINT–USE

a. Restricted areas are established for joint–use by assigning an ATC facility as the controlling agency (see 21–1–10), and by executing a joint–use letter of agreement/letter of procedure between the controlling and using agencies. The letter of procedure/letter of agreement provides for the operation of nonparticipating IFR and/or VFR aircraft within the area. Flight within an active restricted area is controlled by the using agency except when the area has been returned to the controlling agency. During such periods, the controlling agency may permit nonparticipating aircraft operations in the restricted area.

b. Prepare letters of agreement/procedure in accordance with FAA Order JO 7210.3, Facility Operation and Administration. The format of the letter may be modified as needed based on local requirements. The joint–use letter must include procedures for the timely activation, return, or recall of the airspace. The letter may also specify conditions and procedures whereby the controlling agency may route traffic through the area while in use provided approved separation can be maintained between nonparticipating aircraft and the using agencies' activities.

c. The Service Center OSG is the approval authority for joint–use letters of agreement/procedure. This authority may be delegated to a FAA ATC facility designated as the controlling agency.

d. Requirements for coordination and communications between the controlling and using agencies concerning the activation, return, or recall of joint–use restricted areas must be outlined in the letters of agreement/procedure.

23–1–6. TEMPORARY RESTRICTED AREAS

a. Temporary restricted areas may be designated when necessary to accommodate a proponent's need for additional restricted area airspace to periodically conduct hazardous activities associated with short–term military exercises, test programs, etc. When existing restricted area airspace is inadequate to accommodate these short–term military exercises, test programs, etc., temporary restricted areas may be established for a period not to exceed 30 consecutive days. On a case–by–case basis, the Rules and Regulations Group, AJV–P2, may approve a longer period if the proponent provides justification for the increase.

b. Proponents are encouraged to seek permission from using agencies to conduct their activities within existing permanent restricted areas before submitting a request for designation of a temporary restricted area.

c. The duration of a temporary restricted area must be specified in the NPRM/final rule.

d. Once a temporary restricted area is approved, the military must be responsible for publicizing the exercise, test program, etc. within 50 miles of the affected airspace. The publicity may be accomplished through the public media, pilot forums, distribution of information bulletins to known aviation interests, etc.

e. Pointer NOTAMs should be issued in accordance with FAA Order 7930.2.

Section 2. Processing

23–2–1. SUBMISSION OF PROPOSALS

a. Submit restricted area proposals to the Service Center OSG at least 9 months prior to the desired effective date (see paragraph 21–3–3 for proposal content). The following schedule is an estimate of the minimum time needed to process proposals that require only routine coordination.

NOTE–
Proposals that are complex, controversial, or require extensive environmental analysis could need additional processing time beyond that shown in TBL 23–2–1.

b. Permanent restricted area effective dates must coincide with the 56–day charting dates published in FAA Order 8260.26. To the extent practicable, restricted area rules should become effective on a sectional chart date.

c. After the notice of proposed rulemaking comment period ends and review of all pertinent information is complete, Service Centers must submit SUA proposals recommended for approval to the Rules and Regulations Group, AJV–P2, for final determination and processing in accordance with paragraph 21–5–7.

TBL 23–2–1

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG; processing requirements initiated in accordance with paragraph 21–5–2 ; proposal request sent to the Rules and Regulations Group, AJV–P2, to begin Rulemaking Process.
D+95	Proposal request reviewed by the Rules and Regulations Group, AJV–P2; NPRM drafted, coordinated, and submitted to the Federal Register for publication.
D+105	NPRM published in Federal Register. Public comment period begins.
D+150	Public comment period ends. Service Center OSG initiates review of all pertinent information received.
D+180	All pertinent information reviewed by the Service Center OSG; proposal determination made in accordance with paragraph 21–5–5. Submit approval recommendations to the Rules and Regulations Group, AJV–P2, in accordance with paragraph 21–5–7.
D+240	Service Center OSG recommendations and all pertinent information reviewed by the Rules and Regulations Group, AJV–P2. FAA final determination made. If approved, rule drafted, coordinated and submitted to the Federal Register for publication.
D+250	Rule published in Federal Register (at least 58 days prior to effective date).

23–2–2. TEMPORARY RESTRICTED AREA PROPOSALS

a. Temporary restricted areas are subject to the same rulemaking processing (e.g., NPRM and final rule) and environmental analysis requirements as permanent areas. Temporary restricted area effective dates are determined by the exercise or mission requirements rather than the standard 56–day chart cycle and are published in the Domestic Notices found in the Federal NOTAM System (FNS) External Links on the Air Traffic Plans and Publications website early enough to provide the public 28 days notification.

b. The FAA will attempt to accommodate changes in temporary restricted area proposals; however, rulemaking requirements may not permit late changes to the airspace proposed in the NPRM without causing a delay in the planned exercise start date. Significant changes to the proposal after the NPRM is published could necessitate an additional public comment period, further study of the aeronautical impact, and/or supplemental environmental analysis. Early planning, careful ground site

selection, and close coordination between concerned parties throughout the entire planning process are essential.

TBL 23–2–2

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG processing requirements initiated in accordance with paragraph 21–5–2; proposal request sent to the Rules and Regulations Group, AJV–P2, to begin Rulemaking Process.
D+95	Proposal request reviewed by the Rules and Regulations Group, AJV–P2; NPRM drafted, coordinated, and submitted to the Federal Register for publication.
D+105	NPRM published in Federal Register. Public comment period begins.
D+150	Public comment period ends. Service Center OSG initiates review of all pertinent information received.
D+180	All pertinent information reviewed by Service Center OSG; proposal determination made in accordance with paragraph 21–5–5. Submit approval recommendations to the Rules and Regulations Group, AJV–P2, in accordance with paragraph 21–5–7.
D+240	Service Center OSG recommendations and all pertinent information reviewed by the Rules and Regulations Group, AJV–P2. FAA final determination made. If approved, rule drafted, coordinated and submitted to the Federal Register for publication.
D+250	Publish in the Federal NOTAM System (FNS) External Links on the Air Traffic Plans and Publications website early enough to provide public 28 days notification.

Chapter 24. Warning Areas

Section 1. General

24–1–1. BACKGROUND

a. Warning areas were originally established only over international waters, beyond the U.S. territorial limit. Until 1988, U.S. territorial waters extended out to 3 NM from the shoreline. On December 27, 1988, President Ronald Reagan signed Presidential Proclamation No. 5928 that extended the territorial sea of the U.S. outward to 12 NM from the shoreline. In order to expand the U.S. domestic air traffic control authority to cover the newly designated domestic airspace, the FAA issued a final rule that extended controlled airspace, and the applicability of 14 CFR parts 71 and 91, to the airspace overlying the waters between 3 and 12 NM from the U.S. shoreline.

b. At that time, most warning areas extended outward from 3 NM from the shoreline. Because the Proclamation converted the airspace between 3 and 12 NM from international to domestic airspace, this jeopardized the status of the existing warning areas inside the new 12 NM limit. Additionally, the extension of part 91 operating rules to this airspace would have required DoD to either request exemptions to the CFR to continue conducting hazardous activities in the airspace between 3 to 12 NM or those warning area segments inside 12 NM would have to be redesignated as restricted areas under 14 CFR part 73. However, if those segments were redesignated, nonparticipating aircraft (such as fish spotters, exploration, offshore oil platform support flights, etc.) would be excluded from airspace where they had safely operated for decades. This would result in adverse impact on those operators.

c. Accordingly, the FAA issued Special Federal Aviation Regulation (SFAR) No. 53 that established "warning areas" overlying the waters between 3 and 12 NM from the shoreline, and defined "non–regulatory warning areas" as those areas beyond 12 NM over international waters. The SFAR permitted the continuation of military training activities in the warning areas overlying the waters between 3 and 12 NM. The SFAR was made effective for a period of one year to provide time for the FAA to consider the need for additional action to meet military training requirements without creating an unacceptable impact on either DoD or civilian flight operations overlying the waters inside 12 NM. The SFAR was subsequently extended three times. The warning areas established by the SFAR were unique airspace designations intended solely to allow the continuation of military training activity and maintain the right of nonparticipating aircraft to fly through such areas.

d. The FAA and the DoD worked for several years to move the inner boundaries of pre–existing warning areas outward to 12 NM. However, DoD determined that the boundaries of selected warning areas could not be moved because of the need for continued connectivity to existing range resources (e.g., DoD missile launches).

e. In 1996, the FAA resolved the issue by creating a new warning area definition that combined the SFAR definitions of "warning area" and "non–regulatory warning area." This allowed selected warning areas to remain over domestic waters. The FAA codified the new warning area definition by adding it to 14 CFR §1.1, General Definitions. The new definition applies equally to those warning area segments within domestic airspace (from 3 to 12 NM from the shoreline), and to those in international airspace (beyond 12 NM from the shoreline). In effect, the new definition grandfathered a select number of warning areas to remain within domestic airspace between 3 and 12 NM of the shoreline. But, the rule also stated that any new SUA requirements overlying the waters within 3 to 12 NM from the shoreline would have to be the appropriate domestic type of SUA (e.g., restricted areas or MOAs).

REFERENCE–

Presidential Proclamation No. 5928 (54 FR 777; December 27, 1988) (See Fig 24–1–1).Final Rule – Applicability of Federal Aviation Regulations in the Airspace Overlying the Waters Between 3 and 12 Nautical Miles for the United States Coast (54 FR 264; January 4, 1989).

Special Federal Aviation Regulation No. 53 – Establishment of Warning areas in the Airspace Overlying the Waters Between 3 and 12 Nautical Miles from the United States Coast (54 FR 260; January 4, 1989).

Final Rule – Definitions of Special Use Airspace (61 FR 2080; January 24, 1996).

24–1–2. DEFINITION AND PURPOSE

A warning area is airspace of defined dimensions, extending from 3 nautical miles outward from the coast of the United States that contains activity that may be hazardous to nonparticipating aircraft. The purpose of such warning areas is to warn nonparticipating pilots of the potential danger. A warning area may be located over domestic or international waters or both. (14 CFR section 1.1, General Definitions)

NOTE–
Only those pre–existing grandfathered warning areas listed in fig. FIG 24–1–2 extend over domestic waters between 3 NM and 12 NM from the shoreline. All other warning areas extend over international waters from 12 NM outward from the shoreline.

24–1–3. POLICY

Based on the provisions of Presidential Proclamation No. 5928 (See Fig 24–1–1), historical SFAR No. 53 (54 FR 260; January 4, 1989), and the Definitions of Special Use Airspace final rule (61 FR 2080; January 24. 1996), the following policies apply:

a. Forty–five existing warning areas were "grandfathered" permitting them to retain the segments overlying the domestic waters between 3 and 12 NM from the U.S. shoreline. The military training activities, non–participant aerial access, and operating procedures in the grandfathered warning areas are the same as those in the warning areas extending beyond 12 NM outward from the shoreline. No new operating restrictions were imposed on the grandfathered warning areas. (See FIG 24–1–2).

b. No new warning areas may be established in, or existing warning areas expanded into, domestic airspace overlying the waters between 3 and 12 NM from the shoreline. For new requirements that arise for SUA within 12 NM from the shoreline, the appropriate type of domestic SUA, (i.e., prohibited area, restricted area or MOA) must be designated or established.

c. Participating aircraft. Participating pilots conducting aircraft operations within a grandfathered warning area segment, (i.e., between 3 and 12 NM from the shoreline) and operating with the approval of the using agency, may deviate from the rules of Part 91, Subpart B, to the extent that the rules are not compatible with approved operations.

d. Nonparticipating aircraft. Nonparticipating VFR pilots, while not excluded from warning areas, are on notice that military activity, which may be hazardous to nonparticipating aircraft, is conducted in those areas.

24–1–4. IDENTIFICATION

Identify warning areas with the letter "W" prefix followed by a dash; a two– or three–digit number; a location; and the two–letter state abbreviation (e.g., W–291, San Diego, CA). Warning area subdivisions may be identified by a suffix consisting of a letter, a cardinal point, the terms "High" or "Low", or a combination (e.g., W–105A; W–220A High; W–13A Low). The Airspace Rules and Regulations Team, AJV–P21, assigns identification numbers.

24–1–5. JOINT–USE

Warning areas must be considered for joint–use if the area, or portions thereof, can be returned to the controlling agency during periods when it is not required for its designated purpose, and provided the warning area is located in airspace wherein the FAA exercises ATC authority under ICAO agreements. When designating a warning area for joint–use, a letter of agreement must be executed between the controlling and using agencies to define the conditions and procedures under which the controlling agency may authorize nonparticipating IFR aircraft to transit or operate within the area. Apply the provisions of paragraph 23–1–5, Joint–Use, as appropriate.

FIG 24–1–1

Presidential Proclamation No. 5928
December 27, 1988, (54 F.R. 777)

Territorial Sea of the United States of America International law recognizes that coastal nations may exercise sovereignty and jurisdiction over their territorial seas. The territorial sea of the United States is a maritime zone extending beyond the land territory and internal waters of the United States over which the United States exercises sovereignty and jurisdiction, a sovereignty and jurisdiction that extends to the airspace over the territorial sea, as well as to its bed and subsoil. Extension of the territorial sea by the United States to the limits permitted by international law will advance the national security and other significant interests of the United States.

Now, therefore, I, Ronald Reagan, by the authority vested in me as President by the Constitution of the United States of America, and in accordance with international law, do hereby proclaim the extension of the territorial sea of the United States of America, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Commonwealth of the Northern Mariana Islands, and any other territory or possession over which the United States exercises sovereignty. The territorial sea of the United States henceforth extends to 12 nautical miles from the baselines of the United States determined in accordance with international law. In accordance with international law, as reflected in the applicable provisions of the 1982 United Nations Convention on the Law of the Sea, within the territorial sea of the United States, the ships of all countries enjoy the right of innocent passage and the ships and aircraft of all countries enjoy the right of transit passage through international straits. Nothing in this Proclamation:

(a) extends or otherwise alters existing Federal or State law or any jurisdiction, rights, legal interests, or obligations derived therefrom; or

(b) impairs the determination, in accordance with international law, or any maritime boundary of the United States with a foreign jurisdiction. IN WITNESS WHEREOF, I have hereunto set my hand this 27th day of December, in the year of our Lord nineteen hundred and eighty–eight, and of the Independence of the United States of America the two hundred and thirteenth.

/s/ Ronald Reagan

FIG 24–1–2

Grandfathered Warning Areas (between 3 & 12 NM from the coast)

W–50A Dam Neck, VA
W–50B Dam Neck, VA
W–50C Dam Neck, VA
W–59B New Orleans, LA
W–72A North Carolina, NC
W–74 Beaufort, SC
W–102H Machias, ME
W–102L Machias, ME
W–103 Casco Bay, ME
W–122 Cherry Point, NC
W–135 Mayport, FL (formerly W–158E)
W–137A Charleston, SC
W–151A Valparaiso, FL
W–151B Valparaiso, FL
W–155A Pensacola, FL
W–161A Myrtle Beach, SC
W–177A Myrtle Beach, SC
W–186 Hawaii, HI
W–187 Hawaii, HI
W–188A Hawaii, HI
W–188B Hawaii, HI
W–188C Hawaii, Hi
W–189A Hawaii, HI
W–189B Hawaii, HI
W–237A Washington Coastal, WA (Note: W–237A Low and W–237B High and Low were combined in W–237A. There is no longer a B)
W–289N Point Mugu, CA
W–289S Point Mugu, CA
W–289E Point Mugu, CA
W–289W Point Mugu, CA
W–291E San Diego, CA
W–292E San Diego, CA
W–371 Ponce, PR
W–386 Virginia Capes, VA
W–412 Santa Cruz Island, CA
W–453A Gulfport, MS
W–453B Gulfport, MS
W–470A Panama City, FL
W–497A Patrick AFB, FL
W–497B Patrick AFB, FL
W–513 Point Reyes, CA
W–517 Guam
W–532N Point Arguello, CA
W–532S Point Arguello, CA
W–532E Point Arguello, CA
W–537 Santa Barbara, CA

Section 2. Processing

24–2–1. SUBMISSION OF PROPOSALS

a. Submit warning area proposals to the Service Center OSG at least 8 months prior to the desired effective date (see paragraph 21–3–3 for proposal content). The following schedule is an estimate of the minimum time needed to process proposals that require only routine coordination.

NOTE–
Proposals that are complex or controversial could require significantly longer processing time than that shown in TBL 24–2–1.

b. Effective dates must coincide with the 56–day charting dates published in FAA Order 8260.26.

c. After circularization and review of all pertinent information, Service Center OSGs must submit SUA proposals recommended for approval to the Rules and Regulations Group, AJV–P2, for final determination and processing in accordance with paragraph 21–5–7.

TBL 24–2–1

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG; processing requirements initiated in accordance with paragraph 21–5–2; nonrule circular published; circular information copy sent to the Rules and Regulations Group, AJV–P2.
D+75	Public comment period ends. Service Center OSG initiates review of all pertinent information received.
D+105	All pertinent information reviewed by the Service Center OSG; proposal determination made in accordance with paragraph 21–5–5. Submit approval recommendation to the Rules and Regulations Group, AJV–P2, in accordance with paragraph 21–5–7.
D+165	Service Center OSG recommendation and all pertinent information reviewed by the Rules and Regulations Group, AJV–P2. FAA final determination made. If approved, NFDD input drafted, coordinated and submitted to Aeronautical Information Services, AJV–A, for publication (at least 58 days prior to effective date).

24–2–2. EXECUTIVE ORDER 10854 COORDINATION

In accordance with Executive Order 10854, all warning area proposals (except changes to using/controlling agencies, and minor corrections) must be coordinated with the Departments of State and Defense. This coordination will be accomplished by the Airspace Rules and Regulations Team, AJV–P21; (see Chapter 2, FIG 2–2–1, of this Order).

24–2–3. ENVIRONMENTAL REVIEW

The designation of warning areas is considered an advisory action that is not subject to environmental review.

REFERENCE–
FAA Order 1050.1, Environmental Impacts: Policies and Procedures.

Chapter 25. Military Operations Areas

Section 1. General

25–1–1. DEFINITION

A military operations area (MOA) is airspace established outside of Class A airspace to separate or segregate certain non–hazardous military flight activities from IFR aircraft and to identify for VFR aircraft where these activities are conducted.

25–1–2. PURPOSE

MOAs are established to contain nonhazardous, military flight activities including, but not limited to, air combat maneuvers, air intercepts, low altitude tactics, etc.

25–1–3. IDENTIFICATION

Identify a MOA by a name followed by the acronym MOA and the two–letter state abbreviation (e.g., Dome MOA, AZ). MOA subdivisions may be identified by a suffix consisting of a number, letter, cardinal point, the terms "High" or "Low," or a combination (e.g., Moody 3; Gamecock B; Tiger North; Smoky High; Coastal 1 East). Either the proponent or the Service Center OSG selects MOA names.

NOTE–
Select an easily understood name. Lengthy or composite names are cumbersome and tend to be confusing in radio communications and in charting.

25–1–4. MOA FLOOR

MOAs may extend below 1,200 feet AGL if a mission requirement exists and there is minimal adverse aeronautical effect. Provisions must be made to enable aerial access to private and public use land beneath the area, and for terminal VFR and IFR flight operations. Provisions must also be made to accommodate instrument arrivals/departures at affected airports with minimum delay. The MOA must exclude the airspace 1,500 feet AGL and below within a 3 NM radius of airports available for public use. This exclusion may be increased if necessary based on unique circumstances. If the MOA floor extends below 1,200 feet AGL over a charted private airport, coordination should be effected with the airport operator to accommodate airport operations.

25–1–5. LOCATION

MOAs should be located to create minimum adverse impact on nonparticipating aircraft operations. MOAs must not be established offshore beyond the United States 12 NM territorial limit. To the extent possible, locate MOAs:

a. Within 100 miles of the user's base of flight origin.

b. Outside terminal area airspace, ATS Routes, charted terminal VFR routes, and uncharted known high volume VFR routes.

c. Within radar and communications coverage of an ATC facility or MRU.

25–1–6. JOINT USE

a. In effect, MOAs are always joint use in that VFR aircraft are not denied access, and IFR aircraft may be routed through the airspace, by agreement between controlling and using agencies, when approved separation can be provided from the MOA activity.

b. Procedures for access to the airspace by nonparticipating IFR traffic must be specified in a letter of agreement between the controlling and using agencies.

25–1–7. TEMPORARY MOAs

a. Temporary MOAs are established to accommodate the military's need for additional airspace to periodically conduct short–term exercises that supplement routine training. When existing airspace is inadequate to accommodate these short–term military exercises, temporary MOAs may be established for a period not to exceed 45 days. On a case–by–case basis, the Rules and Regulations Group, AJV–P2, may approve a longer period if the proponent provides justification for the increase.

b. Once a temporary MOA is approved, the military is responsible for publicizing the exercise within 50 miles of the affected airspace. The publicity may be accomplished through the public media, pilot forums, distribution of information bulletins to known aviation interests, etc. Additionally, the FAA will publish a graphic notice into the Federal NOTAM System (FNS) External Links on the Air Traffic Plans and Publications website early enough to provide public 28 days notification prior to the exercise start date in accordance with paragraph 21–1–15, Charting and Publication Requirements.

c. Pointer NOTAMs should be issued in accordance with FAA Order 7930.2.

d. When it is determined that the need for a temporary MOA supporting multiple short–term military exercises will occur on a regular and continuing basis each calendar year, the airspace should be considered for establishment as a permanent MOA with provisions for activation by NOTAM. Anticipated usage, supporting the short–term military exercises, must be included in the legal description times of use.

25–1–8. MOAs IN CLASS G AIRSPACE

MOAs may be established in Class G airspace. Using agencies and participating pilots operating in such MOAs should be aware that nonparticipating aircraft may legally operate IFR or VFR without an ATC clearance in this airspace. Pilots of nonparticipating aircraft may operate VFR in Class G airspace in conditions as low as 1 statute mile flight visibility and clear of clouds (see 14 CFR, § 91.155 for complete Class G airspace VFR minima). Any special procedures regarding operations within MOAs that encompass Class G airspace should be included in a letter of agreement between the controlling and using agencies.

Section 2. Processing

25–2–1. SUBMISSION OF PROPOSALS

a. Submit MOA proposals to the Service Center OSG at least 8 months prior to the desired effective date (see paragraph 21–3–3 for proposal content). The following schedule is an estimate of the minimum time needed to process proposals that are non–controversial, without significant aeronautical impact, and only require routine coordination.

NOTE–
Proposals that are complex, controversial, or require extensive environmental analysis could need additional processing time beyond that shown in TBL 25–2–1.

b. Permanent MOA effective dates must coincide with the 56–day charting dates published in FAA Order 8260.26.

c. After circularization and review of all pertinent information, Service Center OSGs must submit SUA proposals recommended for approval, including graphic notice information and the proposal package, to the Rules and Regulations, AJV–P2, for final determination and processing in accordance with paragraph 21–5–7.

TBL 25–2–1

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG; processing requirements initiated in accordance with paragraph 21–5–2; nonrule circular published; circular information copy sent to the Rules and Regulations Group, AJV–P2.
D+75	Public comment period ends. Service Center OSG initiates review of all pertinent information received.
D+105	All pertinent information reviewed by the Service Center OSG; proposal determination made in accordance with paragraph 21–5–5. Submit approval recommendation to the Rules and Regulations, AJV–P2, in accordance with paragraph 21–5–7.
D+165	Service Center OSG recommendation and all pertinent information reviewed by the Rules and Regulations Group, AJV–P2. FAA final determination made. If approved, NFDD input drafted, coordinated and submitted to AJV–A for publication (at least 58 days prior to effective date).

25–2–2. TEMPORARY MOA PROPOSALS

a. Submit temporary MOA proposals to the Service Center OSG at least 6 months prior to exercise start date (See TBL 25–2–2). Proposals should include environmental documentation in accordance with Chapter 32 of this Order. When there is a known requirement for multiple activations of the same temporary MOA within a calendar year, proponents are encouraged to combine the requests into a single proposal covering the entire period. This will provide notice to the public that is more effective and reduce administrative processing workload.

b. Temporary MOA effective dates must coincide with the exercise start date.

c. After circularization of pertinent information, Service Center OSGs must submit a recommendation memo, including graphic notice information and the proposal package to the Rules and Regulations Group, AJV–P2, for final determination and processing in accordance with paragraph paragraph 21–1–5.

d. For recurring temporary MOAs, an abbreviated proposal package may be submitted at the discretion of the Service Center OSG. See paragraph 21–3–4 of this order for details.

TBL 25–2–2

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG; processing requirements initiated in accordance with paragraph 21–5–2; nonrule circular published; circular information copy sent to Rules and Regulations Group, AJV–P2.
D+75	Public comment period ends. Service Center OSG initiates review of all pertinent information received.
D+105	All pertinent information reviewed by the Service Center OSG; proposal determination made in accordance with paragraph 21–5–5. Submit approval recommendation to the Rules and Regulations Group, AJV–P2, in accordance with paragraph 21–5–7.
D+135	Service Center OSG recommendation and all pertinent information reviewed by the Rules and Regulations Group, AJV–P2. FAA final determination made. If approved, graphic notice reviewed, coordinated and submitted to the Federal NOTAM System (FNS) External Links on the Air Traffic Plans and Publications website early enough to provide public 28 days notification.

Chapter 26. Alert Areas

Section 1. General

26–1–1. DEFINITION

An alert area is established to inform pilots of a specific area wherein a high volume of pilot training or an unusual type of aeronautical activity is conducted.

26–1–2. PURPOSE

a. Alert areas are established to inform nonparticipating pilots of areas that contain a high volume of pilot training operations, or an unusual type of aeronautical activity, that they might not otherwise expect to encounter. Pilots are advised to be particularly alert when flying in these areas.

b. Alert areas should not be established in lieu of other special use airspace expressly defined and established for nonhazardous activities (e.g., MOAs) or for activities where other approved charting symbols are more appropriate (e.g., Parachute Jumping Areas, Glider Operating Areas).

26–1–3. IDENTIFICATION

Alert areas must be identified by the letter "A" prefix followed by a dash, a two or three digit number, a location, and the two–letter state abbreviation (e.g., A–292, Pensacola, FL). A letter suffix is used to indicate subdivisions. Identification numbers are assigned by the Airspace Rules and Regulations Team, AJV–P21. Aeronautical charts must be annotated to reflect the type of activity conducted in the alert area.

26–1–4. LOCATION

Alert areas must not extend into Class A, B, C, and D airspace, or Class E airport surface areas. To the extent possible, alert areas should avoid ATS routes, major terminal areas, charted terminal VFR routes, and uncharted known high volume VFR routes. Once an alert area is established, the designation of ATS routes through such areas should be kept to a minimum.

26–1–5. ACTIVITIES

a. Only those activities that do not pose a hazard to other aircraft may be conducted in an alert area.

b. All alert area activities must be conducted in accordance with VFR and in compliance with applicable Sections of 14 CFR, without waiver.

c. Flight Service Stations may broadcast information regarding alert area activities upon request.

REFERENCE–
FAA Order JO 7110.10, Para 3–2–1, Types of Data Recorded, Subpara c.

Section 2. Criteria

26–2–1. ESTABLISHMENT

a. Alert areas may established for either military or civil aviation activities.

NOTE–
Before proposing an alert area, consider whether the publication of an advisory note on aeronautical charts near the affected location would provide satisfactory notice of the activity to nonparticipating pilots.

b. Establish of an alert area is not a prerequisite to conduct any type of flight activity and does not restrict IFR or VFR traffic.

c. Alert areas do not impose any flight restrictions or communications or ATC clearance requirements on pilots either operating within, or transiting the area.

26–2–2. TYPES OF OPERATIONS

Limit the establishment of alert areas to the following types of operations:

a. Concentrated Student Pilot Training.

1. A high volume of flight training operations at one or more airports in a given area. The volume of activity should exceed 250,000 local operations (as defined in FAA Order JO 7210.3, Chapter 13, Facility Statistical Data, Reports, and Forms) annually and be generated primarily by student pilot training in fixed–wing and/or rotary–wing aircraft.

2. A student pilot training area beyond a 20 NM radius of the airport that contains unusually intensive training operations.

b. Unusual Aeronautical Activity. There are no specific criteria established for this category. Alert areas should not be established in lieu of other special use airspace expressly defined and established for nonhazardous activities (e.g. MOAs). Each proposal will be evaluated on a case–by–case basis to determine its significance to the flying public and aviation safety.

NOTE–
One example of an alert area fitting this category is A–381, designated to identify the unusual concentration and volume of aviation activity in the U.S. Gulf Coast/Gulf of Mexico area.

Section 3. Processing

26–3–1. ALERT AREA PROPOSALS

Alert area proposals must contain all applicable items listed in Chapter 21, Section 3 of this Order, except designation of a controlling agency. Environmental and land use studies are not required.

26–3–2. SUBMISSION OF PROPOSALS

a. Submit alert area proposals to the Service Center OSG at least 7 months prior to the desired effective date (see paragraph 21–3–3 for proposal content). The following schedule is an estimate of the minimum time needed to process proposals.

b. Alert area effective dates must coincide with the 56–day charting dates published in FAA Order 8260.26.

c. After circularization and review of all pertinent information, Service Center OSGs must submit SUA proposals recommended for approval, including graphic notice information and the proposal package, to the Rules and Regulations Group, AJV–P2, for final determination and processing in accordance with paragraph 21–5–7.

TBL 26–3–1

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG; processing requirements initiated in accordance with paragraph 21–5–2; non–rule circular published; circular information copy sent to the Rules and Regulations Group, AJV–P2.
D+75	Public comment period ends. Service Center OSG initiates review of all pertinent information received.
D+105	All pertinent information reviewed by the Service Center OSG; proposal determination made in accordance with paragraph 21–5–5. Submit approval recommendation to the Rules and Regulations Group, AJV–P2, in accordance with paragraph 21–5–7.
D+145	Service Center OSG recommendation and all pertinent information reviewed by the Rules and Regulations Group, AJV–P2. FAA final determination made. If approved, NFDD input drafted, coordinated and submitted to AJV–A for publication (at least 58 days prior to effective date).

Chapter 27. Controlled Firing Areas

Section 1. General

27–1–1. DEFINITION

A controlled firing area (CFA) is established to contain activities, which if not conducted in a controlled environment, would be hazardous to nonparticipating aircraft.

27–1–2. PURPOSE

CFAs provide a means to accommodate, without impact to aviation, certain hazardous activities that can be immediately suspended if a nonparticipating aircraft approaches the area. Activities conducted in CFAs are not segregated from IFR or VFR traffic. Additionally, a CFA is not intended to be a long term supplement to hazardous activities conducted in an adjacent restricted area.

27–1–3. CRITERIA

a. CFAs should be considered only when necessary to accommodate activities that are capable of being immediately suspended, and it has been specifically determined that designation of a restricted area is not warranted. CFAs are not to be used as an interim solution while a restricted area proposal is pending.

b. The distinguishing feature of a CFA, compared to other SUA, is that CFA activities must be suspended immediately when a nonparticipating aircraft approaches the area. The responsibility lies totally with the CFA user to terminate activities so that there is no impact on aviation. There is no requirement for nonparticipating aircraft to avoid the airspace, nor are any communications or ATC separation requirements imposed.

27–1–4. CHARTING

CFAs are not depicted on aeronautical charts because the user terminates the activities when required to prevent endangering nonparticipating aircraft.

27–1–5. DIMENSIONS

Although there are no set limits to the dimensions of a CFA, the size of the area must be reasonable considering the types of activities conducted, visual surveillance, communications capabilities and activity termination requirements.

27–1–6. ACTIVITIES

a. Only those ground–based hazardous activities that can be immediately suspended on notice that a nonparticipating aircraft is approaching are appropriate for a CFA. Examples of such activities include:

1. Ordnance disposal.

2. Blasting.

3. Static testing of large rocket motors.

b. CFAs are not intended to contain aerial activities including aircraft ordnance delivery and ground–to–air fires targeting aircraft or other objects in the air. Observer or surveillance aircraft are permitted.

c. Other activities may be considered provided they can meet the criteria and comply with the safety precautions prescribed in this chapter.

d. CFAs may be established for either military or civil activities.

27–1–7. APPROVAL

The Service Center OSG is the approval authority for CFAs. For other than one–time events, CFAs should be approved for a specific period in support of the activity being conducted as determined by the Service Center OSG. An expiration date must be assigned for each CFA.

27–1–8. SUSPENSION OR REVOCATION

The Service Center OSG may suspend or revoke a CFA if a question arises about the safety of the operation, compliance with safety precautions or conditions of approval, or if unforeseen impact on nonparticipating aeronautical operations occurs.

Section 2. Processing

27–2–1. SUBMISSION REQUIREMENTS

Submit CFA proposals and renewal requests to the appropriate Service Center OSG at least 4 months prior to the desired effective date.

27–2–2. CFA PROPOSALS

CFA proposals must include the applicable items from Chapter 21, Section 3. In addition, provide the following information:

a. Justification for establishing a CFA instead of a restricted area. This justification should be included in the DoD proponent's environmental documentation drafted in accordance with FAA Order 1050.1 and of this Order when the FAA is designated cooperating agency for the DoD's proposed action that requires the use of FAA–controlled airspace.

b. Visual surveillance and safety procedures to be applied.

27–2–3. SERVICE CENTER OSG ACTION

Upon receipt of a CFA proposal, the Service Center OSG must:

a. Assign a nonrulemaking study number.

b. Determine if circularization of the proposal is required.

c. Review the proposal for justification and compliance with CFA criteria.

d. Determine if the proposed CFA would conflict with the requirements of other airspace users. Consider proximity of ATS routes, VFR flyways, etc.

e. Evaluate the adequacy of surveillance and safety procedures.

f. Determine limitations, safety precautions, or other requirements to be observed as conditions of approval.

g. Issue an approval letter to the proponent (see paragraph 27–2–4), or inform the proponent in writing if the CFA is disapproved.

27–2–4. APPROVAL LETTER

Inform the proponent in writing of the approval or renewal of the CFA. Include the following information as required:

a. CFA description (boundaries, altitudes, and times of use).

b. Activity for which the CFA is approved.

c. Using agency name.

d. Effective/expiration date(s).

e. Conditions, operating limitations, and safety precautions to be observed (see Section 3 of this chapter).

f. Additional provisions, if needed.

g. Instructions for the user to notify the operators of airports in the vicinity of the CFA of the activities to be conducted, if required.

h. Instructions and suspense date for submitting a CFA renewal request, if applicable.

Section 3. Safety Precautions

27–3–1. USER RESPONSIBILITIES

The CFA user must:

a. Ensure that the activity is confined within the CFA.

b. Maintain visual surveillance of the area in accordance with paragraph 27–3–3.

c. Cease ground–based hazardous activity immediately upon observation or notification that a nonparticipating aircraft is approaching the area. Resume the activity only after the aircraft is clear of the CFA.

d. Make provisions to ensure the safety of persons and property on the surface, if applicable.

e. Retain full legal responsibility in event of any incident resulting from the activity conducted in the CFA.

27–3–2. PRECAUTIONARY MEASURES

a. The Service Center OSG must be satisfied that adequate safety precautions are in place for each CFA. Specific precautionary measures established to protect nonparticipating aircraft and persons and property on the surface will depend on various factors such as the type of activity, terrain, CFA dimensions, etc. The following measures are considered the minimum required and are mandatory for all CFAs:

1. The user must appoint a safety officer to ensure that operations are conducted according to the requirements of this chapter and the CFA approval letter.

2. The base of the clouds must be at least 1,000 feet above the highest altitude affected by the hazardous activity.

3. Visibility must be sufficient to allow visual surveillance of the entire CFA, plus a distance of 5 miles beyond the CFA boundary in all directions.

4. The CFA must be clear of nonparticipating aircraft or personnel before starting, and while conducting hazardous activities.

5. Projectiles must not enter any cloud formation.

b. The Service Center OSG may establish increased ceiling and visibility requirements, or additional precautionary measures, as required by the specific case.

NOTE–
CFA activities are terminated to avoid conflict with nonparticipating aircraft, therefore, there is no requirement for the issuance of a NOTAM.

27–3–3. AREA SURVEILLANCE

a. Visual surveillance must be continuously maintained immediately prior to and during the time that hazardous activity is in progress.

b. Visual surveillance may be accomplished by trained ground observers, observer aircraft, surface vessels, or a combination of them. Radar may be used to supplement visual surveillance of the area, not in lieu of visual surveillance.

c. A sufficient number of trained observers must be used to ensure adequate coverage of the required area.

d. Observers must be provided with continuous, effective communications with all firing points. If at any time communication is lost, hazardous activity must cease until reliable communication is reestablished.

Chapter 28. National Security Areas

Section 1. General

28–1–1. DEFINITION

A National Security Area (NSA) consists of airspace of defined vertical and lateral dimensions established at locations where there is a requirement for increased security of ground facilities.

28–1–2. PURPOSE

An NSA is established to identify locations where voluntary flight avoidance is requested.

28–1–3. CRITERIA

An NSA may be considered when a need to request flight avoidance of national assets or an area in the interest of national security is identified. When it is necessary to provide a greater level of security, flight in an NSA may be temporarily prohibited pursuant to the provisions of 14 CFR 99.7, Special Security Instructions. Where there is a need to restrict flight operations in an NSA, the required restriction will be issued by FAA Headquarters, System Operations Security, and disseminated via NOTAM.

28–1–4. DIMENSIONS

There are no standard dimensions for an NSA. The dimensions should be the minimum necessary to promote the protection of the area identified.

28–1–5. CHARTING

NSAs are depicted on aeronautical charts to inform pilots regarding their vertical and lateral dimensions. Additionally, a note must be included for publication on the chart adjacent to the NSA stating the requested avoidance altitude.

28–1–6. REVOCATION

An NSA does not expire. However, it may be revoked upon using agency request or at the discretion of the Rules and Regulations Group, AJV–P2, after consultation with the Service Center OSG.

Section 2. Processing

28–2–1. SUBMISSION OF PROPOSALS

a. Submit NSA proposals to the Service Center OSG at least 7 months prior to the desired effective date (see paragraph 21–3–3 for proposal content). The area description only requires title, boundaries, altitudes, and using agency. The following schedule (TBL 28–2–1) is an estimate of the minimum time needed to process proposals.

b. Effective dates coincide with the 56–day chart dates.

c. After circularization and review of all pertinent information, Service Center OSGs must submit SUA proposals recommended for approval to the Rules and Regulations Group, AJV–P2, for final determination and processing in accordance with paragraph 21–5–7.

TBL 28–2–1

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG; processing requirements initiated in accordance with paragraph 21–5–2; non–rule circular published; circular information copy sent to the Rules and Regulations Group, AJV–P2.
D+75	Public comment period ends. Service Center OSG initiates review of all pertinent information received.
D+105	All pertinent information reviewed by the Service Center OSG; proposal determination made in accordance with paragraph 21–5–5. Submit approval recommendation to the Rules and Regulations Group, AJV–P2, in accordance with paragraph 21–5–7.
D+145	Service Center OSG recommendation and all pertinent information reviewed by the Rules and Regulations Group, AJV–P2. FAA final determination made. If approved, NFDD input drafted, coordinated and submitted to AJV–A for publication (at least 58 days prior to effective date).

Part 6. Miscellaneous Procedures

Chapter 29. Outdoor Laser Operations

Section 1. General

29–1–1. PURPOSE

This chapter prescribes policy, responsibilities, and guidelines for processing a Notice of Proposed Outdoor Laser Operation(s) and determining the potential effect of outdoor laser activities on users of the NAS. This includes issuing a determination and providing airmen a notification of the hazard. Determinations should not be issued for laser operations that are terminated and do not enter navigable airspace.

29–1–2. AUTHORITY

a. Title 49 of the U.S. Code (49 U.S.C.), Section 40103 gives the Administrator the authority to regulate, control, develop plans for, and formulate policies with respect to the use of the navigable airspace.

b. Regulatory authority for laser light products has been delegated to the Food and Drug Administration (FDA). Product regulations are detailed in 21 CFR, Part 1010, Performance Standards for Electronic Products, and Part 1040, Performance Standards for Light Emitting Products.

29–1–3. POLICY

a. Determinations must be based on the findings of an aeronautical review.

b. The Service Center Operations Support Group (OSG) having control jurisdiction over the airspace where laser operations are planned must conduct an aeronautical review of all proposed laser operations to be performed in the NAS to ensure that these types of operations will not have a detrimental effect on aircraft operations.

c. Full consideration must be given to national defense requirements, commercial uses, and general aviation operations that have the public right of "freedom of transit" through the NAS.

d. Accordingly, while a sincere effort must be made to negotiate equitable solutions regarding proposed laser operations in the NAS, preservation of the navigable airspace for aviation must be the primary emphasis.

29–1–4. RESPONSIBILITIES

a. The Service Center OSG is responsible for determining the effect of proposed outdoor laser operations on air traffic control operations and issuing a consolidated letter of objection or non–objection. A safety analysis is not required and no determination should be issued, if the laser operation is terminated and all light projections are contained within the venue of the operation and not projected into the NAS.

b. The Flight Standards Division, Regional NextGen Branch (RNGB), is responsible for providing a safety analysis to determine any potential effect that a proposed outdoor laser operation would have on flight crews. AFS will designate a RNGB All Weather Operations (AWO) safety inspector for specified geographical areas.

c. The office of Aerospace Medicine is responsible for providing information regarding the potential effects of laser beams on pilot vision.

29–1–5. DEFINITIONS

a. Afterimage. A reverse contrast shadow image left in the visual field after an exposure to a bright light that may be distracting and disruptive, and may persist for several minutes.

b. Center for Devices and Radiological Health (CDRH). An office of the FDA concerned with enforcing compliance with the Federal requirements for laser products including laser light shows.

c. Demonstration Laser. Any laser product designed or intended for purposes of visual display of laser beams, for artistic composition, entertainment,

and/or advertising display (Reference 21 CFR 1040.10(b) 13). Any demonstration laser in excess of 5 mW requires a variance from the CDRH.

d. Divergence. The increase in diameter of the laser beam with distance from the exit aperture. Divergence is an angular measurement of the beam spread, expressed in milliradians (mrad). In laser safety calculations, divergence is defined at the points where the irradiance is 37% of the peak irradiance.

e. Flashblindness. Generally, a temporary visual interference effect that persists after the source of illumination has ceased.

f. Visual Interference Level. A visible laser beam (normally with an irradiance less than the MPE) that can produce a visual response that interferes with the safe performance of sensitive or critical tasks by air crews or other personnel. This level varies in accordance with the particular zone where the laser is operating. "Visual interference level" is an generic term for critical level, sensitive level, or laser free level.

g. Flight Hazard Zones. Airspace areas specifically intended to mitigate the potential hazardous effect of laser radiation. See FIG 29–1–1, FIG 29–1–2, and FIG 29–1–3.

h. Glare. Obscuration of an object in a person's field of vision due to a bright light source located near the same line–of sight (e.g., as experienced with oncoming headlights).

i. Irradiance. Irradiance is a means of expressing the power of the beam per unit area, expressed in watts per centimeter squared (W/cm^2).

j. Laser. An acronym for light amplification by stimulated emission of radiation. A laser is a device that produces an intense, directional, coherent beam of visible or invisible light.

1. Continuous Wave (CW). The output of a laser which is operated in a continuous duration rather than a pulsed mode.

2. Repetitive Pulsed (RP). A laser with multiple pulses of radiant energy occurring in a sequence.

k. Laser Manufacturer. A term that refers to persons who make laser products, including those who are engaged in the business of design, assembly, or presentation of a laser light show.

l. Laser Operator. A laser operator should be a knowledgeable person present during laser operation who has been given authority to operate the laser system in compliance with applicable safety standards, subject to direction of the laser safety officer.

m. Laser Safety Officer (LSO). A designated person who has authority to monitor and enforce the control of laser hazards and affect the evaluation and control of laser hazards.

n. Safety Observer. A designated person who is responsible for monitoring the safe operation of a laser and who can immediately terminate the laser beam if necessary to ensure safety. Normally, a safety observer will view airspace in the vicinity of a laser beam to identify any potentially unsafe condition.

o. Local Laser Working Group (LLWG). A group that, when necessary, is convened to assist the service area office in evaluating the potential effect of laser beams on aircraft operators in the local vicinity of the proposed laser activity.

p. Maximum Permissible Exposure (MPE). The level of laser radiation to which a person may be exposed without hazardous effect or adverse biological change in the eye or skin. In general, MPE is expressed as mW/cm2 or mJ/cm2.

q. Nominal Ocular Hazard Distance (NOHD). The distance from the laser system beyond which the laser beam irradiance does not exceed the MPE for that laser.

r. Protection Distances. The minimum distance from the laser system beyond which the laser beams irradiance level does not exceed the following specific effective irradiance levels within the corresponding zones:

1. Laser Free Zone – $50nW/cm^2$;

2. Critical Zone – $5\mu W/cm^2$;

3. Sensitive Zone – $100\mu W/cm^2$;

4. Normal Flight Zone – MPE ($2.6\ mW/cm^2$ for CW visible lasers).

s. Radiant Exposure – A means of expressing the pulse energy of the beam per unit area, expressed as J/cm^2.

t. Reflections. Reflections can be diffuse or specular.

1. Diffuse Reflection. A reflection from a surface, which is incapable of producing a virtual

image such as is commonly found with flat finish paints or rough surfaces.

2. Specular Reflection. A mirror–like reflection that usually maintains the directional characteristics of the beam.

u. Terminated Beam. A laser beam that is blocked from entering navigable airspace.

v. Unterminated Beam. A laser beam that is directed or reflected into the navigable airspace.

w. Variance. Permission from FDA for a laser manufacturer and/or operator to deviate from one or more requirements of 21 CFR 1040 when alternate steps are taken to provide equivalent level of safety.

x. Visible Wavelengths. For the purpose of laser safety, the wavelengths of light that are visible (used for LFZ, CFZ, and SFZ calculations) range from 380 to 780 nanometers (nm).

FIG 29–1–1
Multiple Runway Laser Free Zone

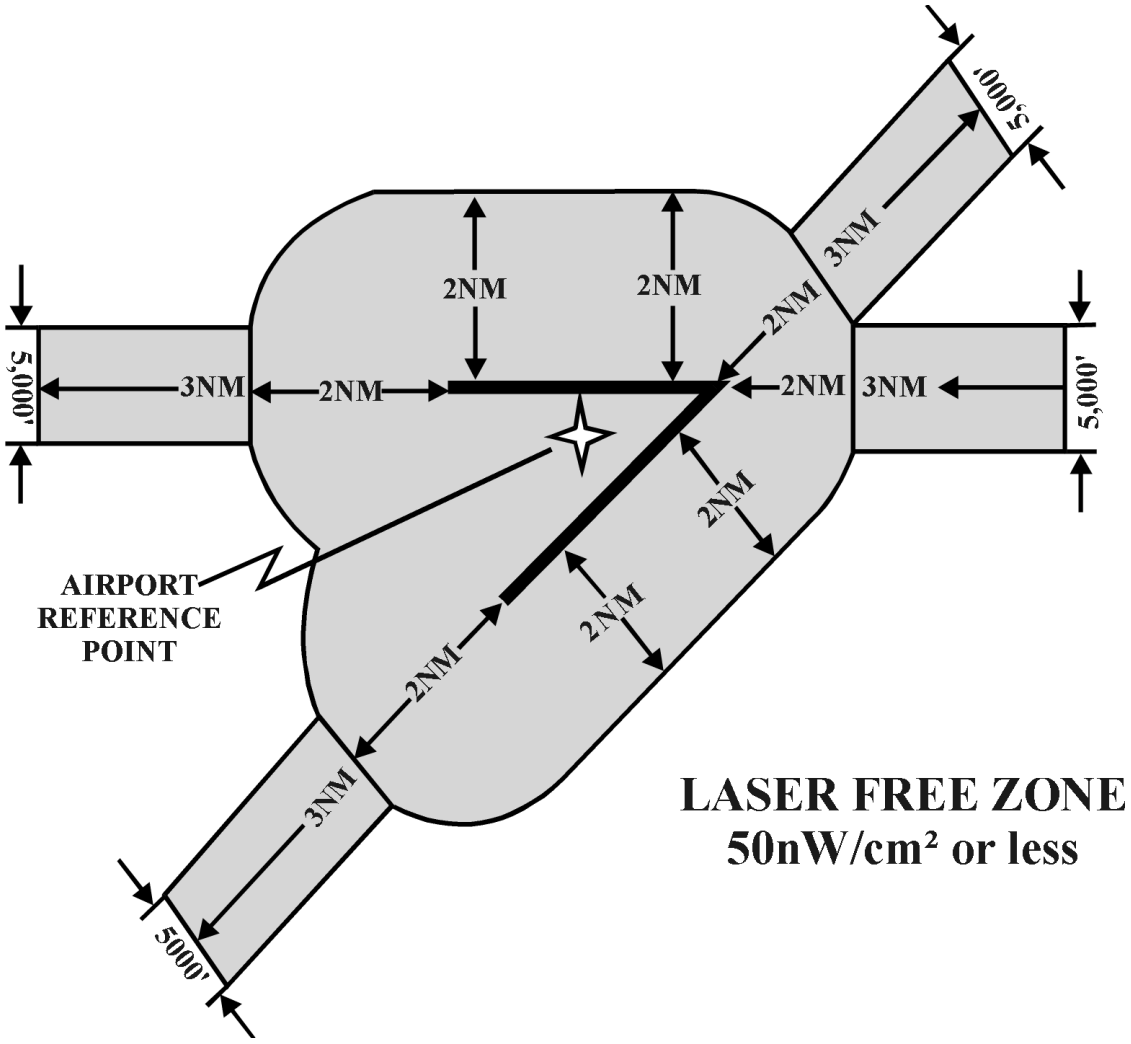
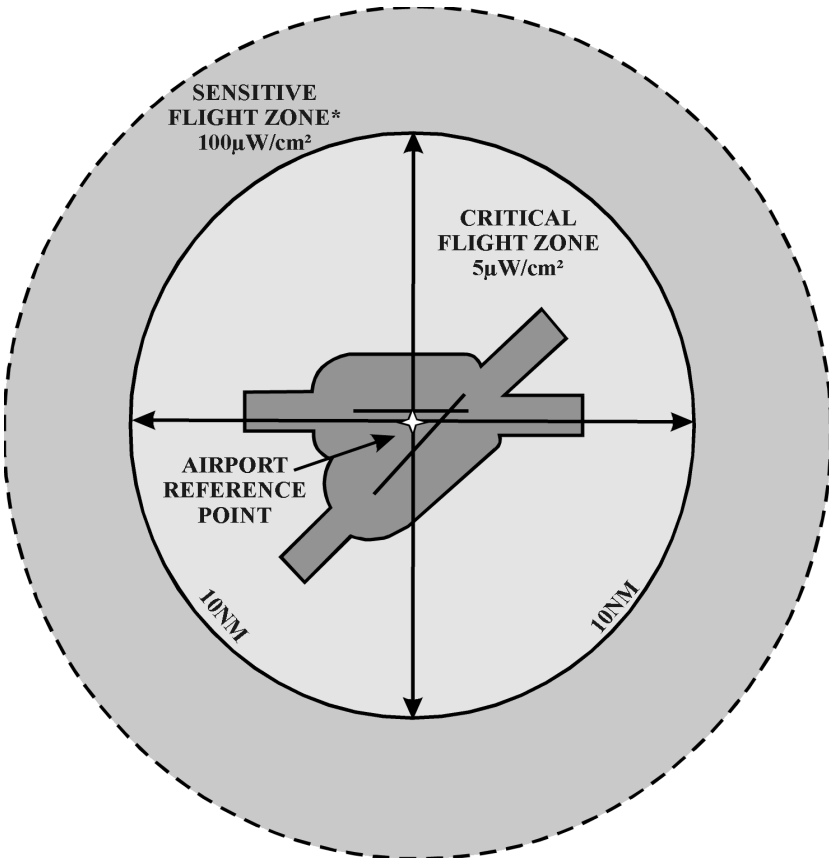


FIG 29–1–2
Airspace Flight Zones



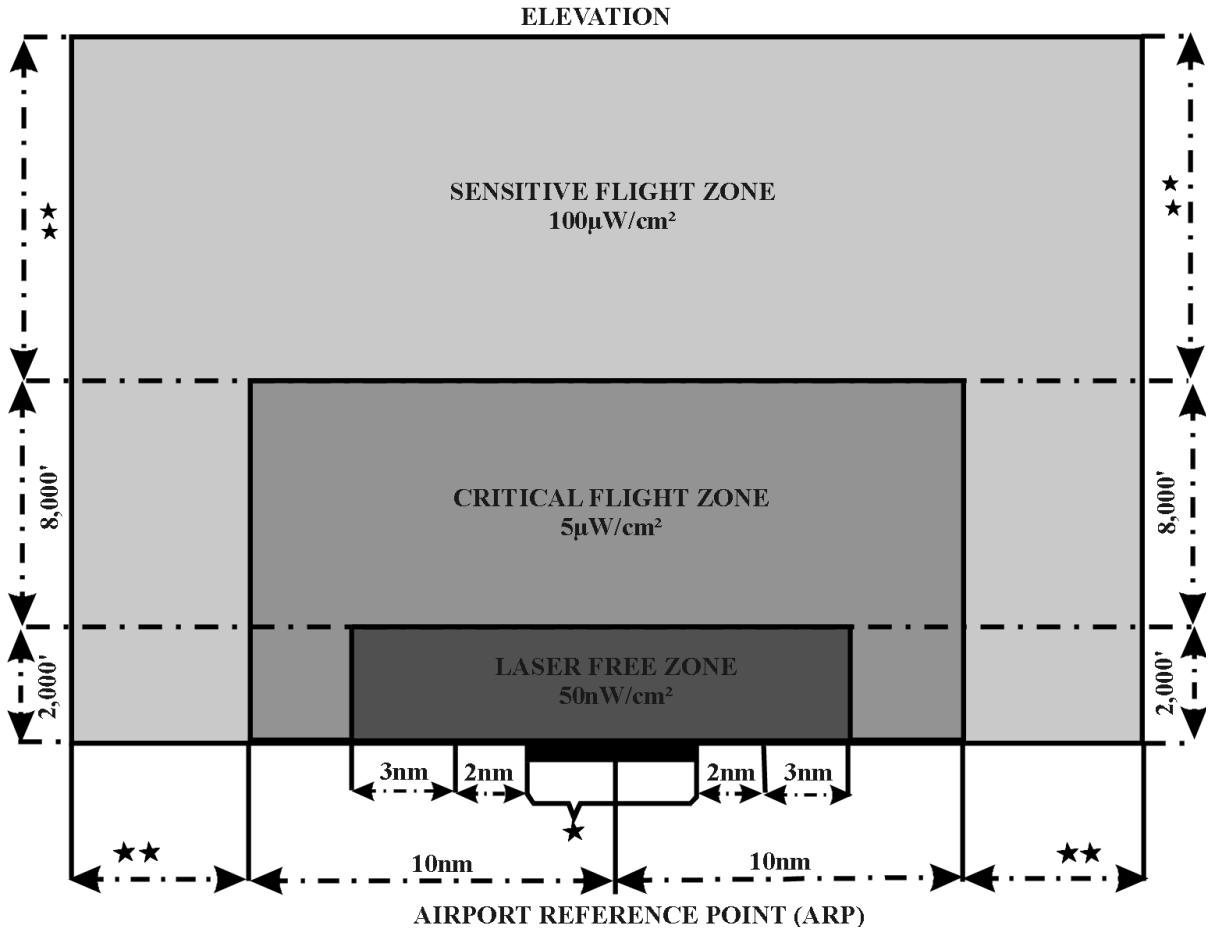
1. Laser Free Zone (LFZ). Airspace in the immediate proximity of the airport, up to and including 2,000 feet AGL, extending 2 NM in all directions measured from the runway centerline. Additionally, the LFZ includes a 3 NM extension, 2,500 feet each side of the extended runway centerline, of each usable runway surface, up to 2,000' AGL of each useable runway surface. The effective irradiance of a visible laser beam is restricted to a level that should not cause any visual distraction or disruption.

2. Critical Flight Zone (CFZ). Airspace within a 10 NM radius of the airport reference point, up to and including 10,000 feet AGL. The effective irradiance of a visible laser beam is restricted to a level that should not cause transient visual effects (for example, glare, flashblindness, or afterimage).

3. Sensitive Flight Zone (SFZ). Airspace outside the critical flight zones that authorities (e.g., FAA, local departments of aviation, military) identify to be protected from the potential visual effects of laser beams.

4. Normal Flight Zones (NFZ). Airspace not defined by the Laser Free, Critical, or Sensitive Flight Zones. As with all the above zones, the NFZ must be protected from a visible or invisible laser beam that exceeds the MPE.

FIG 29–1–3
Airspace Flight Zones



* Runway length varies per airport. AGL is based on published airport elevation

** To be determined by regional/service area office evaluation and/or local airport operations.

Section 2. Evaluating Aeronautical Effect

29–2–1. SERVICE CENTER COORDINATION

The designated Service Center (SC) Point of Contact (POC) normally serves as the single agency contact with the laser proponent. The SC POC is responsible for:

a. Reviewing the information and data submitted by a proponent for an outdoor laser proposal for completeness.

1. Coordinating with all parties affected by the proposal (for example, state or local aviation authorities, DOD, airport operators, etc.).

2. Air Traffic analysis, including any IFR and VFR flight operations that may be affected by the proposal.

b. Determining on a case-by-case basis that aspects of certain flight operations require consultation and joint analysis by the ATO and AFS to ensure safety during a proposed laser operation. The SC POC will contact the RNGB designee for assistance in those situations.

c. The Flight Standards safety analysis will be conducted by the designated RNGB AWO. AFS analysis will include reviewing potential effects on flight crews operating under IFR or VFR. Special attention will be afforded examining unique local VFR operations and special instrument procedures. The safety analysis provided to the SC POC will state any AFS objections or concerns and indicate whether mitigations, if proposed, appear adequate. The SC POC is responsible for evaluating all input from the affected Air Traffic Facilities/RNGB and resolving conflicting concerns or issues.

29–2–2. AERONAUTICAL REVIEW

a. At a minimum the following items must be studied as part of any aeronautical review:

1. Location of the proposed laser operation.

2. Aircraft operations affected by the proposed operation.

3. Air traffic flows in the proposed area of the operation.

4. An analysis of adverse effect conducted by the ATC facility having control over the affected airspace.

5. A safety analysis conducted by the Flight Standards Division regarding the effects on flight crews.

6. For visible laser systems, plot the LFZ, CFZ, and SFZ (if applicable) for all potentially affected airports and evaluate any control measures, which may mitigate any adverse effect.

7. The effective irradiance levels listed below must not be exceeded in the corresponding zones.

(a) A laser–free zone is limited to 50nW/cm^2 or less.

(b) A critical flight zone is limited to 5μW/cm^2 or less.

(c) A sensitive flight zone is limited to 100μW/cm^2 or less.

(d) A normal flight zone, as well as the above zones, is limited to the MPE or less.

EXCEPTION–
The LFZ, CFZ, and SFZ need only be considered for visible laser systems. Further, when control measures (e.g., safety observers) mitigate all hazards or other issues raised by the aeronautical review, irradiance levels may exceed the above levels.

b. Consult FDA/CDRH personnel for technical advice. (for example, regarding repetitively pulsed laser calculations)

c. Scientific/research lasers in accordance with 21 CFR § 1010.5 may be exempt from Title 49 and, in addition, may not be able to comply with the above procedures. Regardless of whether or not a proponent is exempt from the provisions, a proposal is still reviewed using the above procedures.

29–2–3. LOCAL LASER WORKING GROUP (LLWG)

When necessary, the Service Center OSG may convene and chair an LLWG to assist in evaluating proposed laser operation.

a. The Service Center OSG will forward all available information on a proposed outdoor laser operation to the appropriate parties of the LLWG.

b. Participants may include, but are not limited to, representatives from the ARTCC, TRACON, ATCTs, Flight Standards Division designee (either the assigned AWO or a designated field office representative), airport management, airspace users, city/county/state officials, other government agencies, military representatives, qualified subject experts, and laser manufacturers, etc.

c. The LLWG will identify and attempt to resolve issues regarding local laser operations.

29–2–4. PROTECTION DISTANCE CALCULATIONS

a. The laser system power range table (TBL 29–2–1) provides the applicable protection distances along the axis of the laser beam with a 1mrad divergence. This table must not be used to determine the protection distances for repetitively pulsed (RP) lasers. Proponents are required to resolve RP laser system calculations with the FDA or laser manufacture before submitting a completed Laser Configuration Worksheet to the FAA.

b. TBL 29–2–2 lists sine and cosine values to be used in determining the vertical and horizontal distances to be protected from the laser source. The distances obtained from TBL 29–2–1 are multiplied by these values to determine the appropriate vertical and horizontal distances to be protected based on the minimum and maximum vertical angles. Differences in site/ground elevations should be considered.

c. The vertical component of the protection distance may be determined by multiplying the laser distance from TBL 29–2–1 by the sine of the maximum elevation angle of the laser beam from TBL 29–2–2. For example, vertical component = protection distance x sine of the maximum elevation angle.

d. The horizontal component of the protection distance may be determined by multiplying the laser distance from TBL 29–2–1 by the cosine of the minimum elevation angle of the laser beam from TBL 29–2–2. For example, horizontal component = protection distance x cosine of the minimum elevation angle.

e. Do not reduce calculated distances for correction factor techniques unless validated by FDA/CDRH.

f. All distances must be rounded up to the next 100–foot increment. See example problems 1, 2, and 3 that follow the Vertical and Horizontal Component Table, TBL 29–2–2.

29–2–5. CONTROL MEASURES

Physical, procedural, and automated control measures, or some combination of the three, may be used to ensure that aircraft will not be exposed to levels of illumination greater than the respective maximum irradiance levels established for the various protected zones, or any additional restrictions established as a provision, condition, or limitation of a determination.

a. Physical beam stops at the system location or at a distance may be used to prevent laser light from being directed into protected zones.

b. The beam divergence, azimuth, elevation, and output power may be adjusted to meet appropriate irradiance levels.

c. Beam direction should be specified by giving bearing in the azimuth scale 0 – 360 degrees and elevation in degrees ranging from 0 – 90 degrees, where zero degrees is horizontal and +90 degrees is vertical. Bearings must be given in both true and magnetic north.

d. Manual operation of a shutter or beam termination system can be used in conjunction with safety observers. Observers must have an adequate view of the airspace surrounding the beam's paths to a distance appropriate to the affected airspace.

e. Scanning of a laser system that is designed to automatically shift the direction of the laser beam can be used. However, scanning safeguards must be found to be acceptable by the FDA and the FAA. The FDA recommendation must be included in the proposal to the FAA.

NOTE–
Scanning may reduce the level of illumination; however, it may also increase the potential frequency of an illumination.

f. Any laser operator planning to use an automated system designed to detect aircraft and automatically terminate the beam, redirect the beam, or shutter the system, must provide documentation to the Service Center OSG that validates the system's compliance with SAE International Aerospace Standard (AS) 6029, Performance Criteria for Laser Control Measures Used for Aviation Safety, before the use of the device may be accepted as a control measure and eliminate the need for safety observers.

TBL 29–2–1

LASER SYSTEM POWER RANGE TABLE
CW Laser Beam Divergence: 1 Milliradian
*** NOT TO BE USED WITH RP SYSTEMS**

W/cm^2 –––>	2.60E–03	1.00E–04	5.00E–06	5.00E–08	
CW Laser Power (W)	Nominal Ocular Hazard Distance NOHD (ft)	Sensitive Zone Exposure Distance SZED (ft)	Critical Zone Exposure Distance CZED (ft)	Laser–Free Zone Exposure Distance LZED (ft)	LZED (NM)
1	726	3701	16553	165527	27
2	1026	5234	23409	234090	39
3	1257	6411	28670	286700	47
4	1452	7403	33105	331053	54
5	1623	8276	37013	370129	61
6	1778	9066	40546	405456	67
7	1920	9793	43794	437942	72
8	2053	10469	46818	468180	77
9	2178	11104	49658	496580	82
10	2295	11704	52344	523441	86
11	2407	12276	54899	548990	90
12	2514	12822	57340	573401	94
13	2617	13345	59681	596815	98
14	2716	13849	61934	619344	102
15	2811	14335	64108	641082	106
16	2903	14805	66211	662106	109
17	2993	15261	68248	682484	112
18	3080	15703	70227	702270	116
19	3164	16134	72151	721514	119
20	3246	16553	74026	740257	122
25	3629	18506	82763	827633	136
30	3976	20273	90663	906626	149
35	4294	21897	97927	979268	161
40	4591	23409	104688	1046882	172
45	4869	24829	111039	1110386	183
50	5133	26172	117045	1170450	193
55	5383	27449	122758	1227578	202
60	5623	28670	128216	1282163	211
65	5852	29841	133452	1334518	220
70	6073	30967	138489	1384895	228
75	6286	32054	143350	1433502	236
80	6492	33105	148051	1480515	244
85	6692	34124	152608	1526079	251
90	6886	35113	157032	1570323	258
95	7075	36076	161335	1613353	266
100	7259	37013	165527	1655266	272
105	7438	37927	169614	1696143	279
110	7613	38819	173606	1736057	286
115	7784	39692	177507	1775075	292
120	7952	40546	181325	1813253	298

125	8116	41382	185064	1850643	305
130	8276	42201	188729	1887293	311
135	8434	43005	192324	1923245	317
140	8589	43794	195854	1958537	322
145	8741	44569	199320	1993204	328
150	8890	45331	202728	2027278	334
155	9037	46081	206079	2060789	339
160	9182	46818	209376	2093764	345

* The FDA may be contacted to validate data for repetitively pulsed lasers.

NOTE–
[1] To determine the NOHD for lasers having divergence values other than 1.0 mrad use the formula – NOHD @ 1.0 mrad ÷ mrad (actual divergence) = NOHD.

EXAMPLE–
Power 40W, Divergence 7 mrad
NOHD 40W @ 1.0 mrad = 4,591
4,591 ÷ 7 = 656 NOHD. Rounded up to nearest hundred feet = 700 feet.
(A beam divergence of .7 would make this calculation 7,000 feet)

* The proponent validates repetitive pulsed information with the FDA and submits a completed laser configuration worksheet.

TBL 29–2–2

VERTICAL AND HORIZONTAL COMPONENTS

VERTICAL COMPONENT

Maximum Elevation Angle	Sine (vertical component multiplier)
90	1.0000
85	.9962
80	.9848
75	.9659
70	.9397
65	.9063
60	.8660
55	.8192
50	.7660
45	.7071
40	.6428
35	.5736
30	.5000
25	.4226
20	.3420
15	.2588
10	.1737
5	.0872
0	.0000

HORIZONTAL COMPONENT

Minimum Elevation Angle	Cosine (horizontal component multiplier)
0	1.0000
5	.9962
10	.9848
15	.9659
20	.9397
25	.9063
30	.8660
35	.8192
40	.7660
45	.7071
50	.6428
55	.5736
60	.5000
65	.4226
70	.3420
75	.2588
80	.1737
85	.0872
90	.0000

LASER PROBLEM SOLUTIONS

EXAMPLE PROBLEM 1:
Laser output power = 15 watts
Laser beam divergence = 1.0 mrad
Find: Laser protection distances:
1. Find TBL 29–2–1 at 15 watts in the Laser Output Power column.
2. Proceed horizontally and read: NOHD of 2,811 feet, CFZ of 64,108 feet, SFZ 14,335 feet.
Answer: (with rounded up distances): NOHD 2,900 feet, CFZ 64,200 feet, SFZ 14,400 feet.

EXAMPLE PROBLEM 2
Laser output = 18 watts
Laser beam divergence = 1.0 mrad
Maximum elevation angle 60°
Minimum elevation angle 20°
Find:Vertical and horizontal distances to be protected:
1. Laser distance (from TBL 29–2–1) = 3,080 feet.
2. Sine of 60° maximum elevation angle (from TBL 29–2–2) = 0.8660.
3. Find altitude by multiplying 3,080 feet by 0.8660 = 2,667 feet.
4. Cosine of 20° minimum elevation angle (from TBL 29–2–2) = 0.9397
5. Find horizontal distance by multiplying 3,080 feet by 0.9397 = 2,894 feet.
Answer: Minimum required protected airspace is 2,700 feet vertically and 2,900 feet horizontally from the laser source.

EXAMPLE PROBLEM 3
Power = 25 watts
Laser NOHD at 1 mrad = 3,629 feet.
Beam Divergence = .7 mrad
Find: Actual NOHD
1. Find actual NOHD by dividing the NOHD at 1 mrad divergence (3,629 feet) by actual divergence (.7 mrad).
2. 3629 feet. ÷ .7 = 5184 feet.
Answer: NOHD 5,200 feet (rounded up)

Section 3. Aeronautical Determinations

29–3–1. FINDINGS

a. All determinations for an outdoor laser operation must be issued in writing.

b. Determinations rendered must either be objectionable or non–objectionable. A non–objectionable letter of determination (LOD) issued by the FAA is not permission nor an endorsement of the outdoor laser operation.

c. Determinations may be telephoned to the proponent and to the CDRH; however, each must be followed up with a written response.

d. Send a copy of the LOD to the military liaison offices, RNGB and geographic field office/FSDO, affected ATC facilities, and other offices as appropriate.

e. Forward a copy of objectionable LODs to Rules and Regulations Group.

f. The iOE/AAA, Laser Module may be used in lieu of sending copies when feasible.

29–3–2. CONTENT OF DETERMINATIONS

a. As a minimum, letters of non–objection determinations must:

1. Include a listing of any provisions, conditions, or limitations.

2. Inform the proponent not to incorporate change(s) into the proposed activity once a non–objection LOD has been issued unless the Service Center OSG amends the LOD change in writing.

3. Stipulate a requirement that proponents must notify the FAA designated representative of:

(a) Any changes to show "start/stop" times or cancellation 24 hours in advance.

(b) The laser light activity 30 minutes before start time and upon completion.

4. Include a statement advising the proponent that the determination is based on FAA requirements only and final approval must also be obtained from the appropriate authority.

5. Specify that the FAA determination does not relieve the sponsor or operator of compliance responsibilities related to laws, ordinances or regulation of any federal, state, or local government.

6. Include the name and telephone number of the ATC facility to be notified and other information as deemed appropriate.

7. Indicate NOTAM requirements.

b. An objectionable LOD must inform the proponent:

1. That a determination of objection is being issued.

2. Why the proposal does not satisfy FAA requirements.

3. That supplementary information may be submitted for reconsideration.

c. If negotiations to resolve any objectionable effects are not successful, the determination of objection stands.

29–3–3. PUBLICATION OF LASER OPERATIONS IN THE NAS

a. When the Service Center OSG issues a determination of non-objection, consider the time of duration (in days) of the laser activity.

b. The Service Center OSG must review these publications for currency of published laser operations bi-annually. The Service Center will initiate paperwork to delete or amend any published information that requires amending.

c. The Service Center OSG will forward to Aeronautical Information Services (AIS) AJV–A information for publication as follows:

1. Class II Publications. Temporary laser operations at a specific location that will exceed 56 days but less than 180 days.

NOTE–
Publication in the Class II publication is dependent on established cutoff dates.

2. Appropriate aeronautical charts. Laser operations at a specific location that will exceed 180 days or are considered permanent.

3. Chart Supplement U.S. Publish in the Chart Supplement U.S. laser operations that will exceed 180 days at a specific location.

Section 4. Notices to Air Missions

29–4–1. ISSUANCE OF NOTICES TO AIR MISSIONS (NOTAM)

a. To enhance safety of flight, the appropriate Service Center OSG must prepare the NOTAM, for visible lasers or if requested by the facility having jurisdiction over that airspace, and notify the United States NOTAM Office facility via telephone (540) 422-4262/4263, or fax (540) 422-4298 within seven days of a proposed laser activity.

b. The NOTAM will emphasize the potential hazardous effects and other related phenomena that may be encountered by laser light emissions. Include facility to notify, and any other information deemed appropriate.

c. The Service Center OSG may further delegate notification responsibility to the Air Traffic facility.

d. When deemed appropriate, the Service Center OSG may direct the proponent to activate or cancel the FDC NOTAM, specific to the laser activity. The Service Center OSG must explain the responsibility of the proponent concerning appropriate NOTAM actions.

e. The Service Center OSG is responsible for canceling the NOTAM except as noted above in paragraph 29–4–1.c. and d.

Section 5. Aircraft Illumination Actions

29–5–1. PROCEDURES

a. If an Air Traffic Control (ATC) field facility receives or initiates a complaint indicating that an outdoor laser operation is not performing as expected or not conforming to the conditions outlined in the Letter of Determination (LOD), the facility will:

1. Contact the proponent using the "emergency" telephone number and instruct that the laser activity be terminated or adjusted. The termination or application of additional/adjusted mitigation will be at the discretion of the ATC field facility.

2. Notify the Regional Operations Center (ROC) and file an Incident Report, FAA Form 8020-11, in accordance with FAA Order 8020.16, Chapter 3, Air Traffic and Other Initial Notification and Reporting Responsibilities.

3. Notify the Service Center POC of the expectations or conditions of the LOD which were not met.

b. The Service Center POC will notify the Mission Support Services Program Manager and the assigned geographical AWO of the incident and provide the available details of the incident and any actions taken.

c. If an ATC field facility receives information from a specialist, pilot or passenger that laser/high intensity light from an unknown source has illuminated an aircraft, the facility will comply with the requirements outlined in Advisory Circular 70-2, Reporting of Laser Illumination of Aircraft.

NOTE–
Suspected intentional illumination of an aircraft may constitute a violation of 14 Code of Federal Regulations, Part 91.11. In those situations the geographic area FSDO should be notified.

Chapter 30. High Intensity Light Operations

Section 1. General

30–1–1. PURPOSE

This chapter prescribes policy and guidelines for determining the potential effect of high intensity light activities on users of the NAS.

30–1–2. POLICY

Consideration must be given to commercial, general aviation requirements as well as to the public right of "freedom of transit" through the airspace. Accordingly, while a sincere effort must be made to negotiate equitable solutions to conflicts over the use of the NAS for non–aviation purposes, aviation must receive primary emphasis.

30–1–3. AUTHORITY

The provisions of 49 U.S.C. Sub Title VII, grants the Administrator the authority for aviation safety. That authority has been delegated to air traffic and Flight Standards with the associated responsibilities to evaluate activities that can potentially affect aviation safety in the NAS.

30–1–4. DEFINITIONS

The terms used in this chapter are defined below:

a. High Intensity Light (HIL). A lighting system other than laser light designed to penetrate the navigable airspace.

b. HIL Manufacturer. A term that refers to persons who manufactures high intensity light emitting products. This includes those who are engaged in the business of design, assembly, or presentation of a HIL activity.

c. HIL Operator. A knowledgeable person present during HIL operation who is responsible for ensuring compliance with applicable safety standards; monitoring the safe operation of a HIL operation; and can effect termination of the HIL promulgation in the event an unsafe condition becomes apparent.

Section 2. Aeronautical Review/Determinations

30–2–1. EVALUATION OF AFFECTED AIRSPACE AREAS

The following guidelines should be used in evaluating proposals received for HIL activities in the NAS. Refer to airspace zones described in chapter 29 to assist in evaluating those areas in close proximity to an airport. Reduction in the size of a specific zone may be considered when the aeronautical study to assure users of the NAS will not be effected.

30–2–2. AERONAUTICAL STUDY

a. Determination of the potential overall airspace effected by HIL operations must be conducted by the service area office. The aeronautical study, as a minimum, should include the following, as appropriate:

1. Quantities of traffic affected.

2. Location(s) of aviation activity that may be affected, including areas where low–level air traffic operations may occur (for example, helicopter operations, Flights for Life).

3. Control jurisdiction (for example, ATC facility).

4. Coordination with Flight Standards, and local officials, as necessary (for example, FAA air traffic facilities, appropriate military representatives, and airport managers).

b. Observers, when required, must be able to see the full airspace area surrounding the HIL beam's paths to a distance appropriate to the affected airspace.

c. Require the control measures that ensure aircraft will not be exposed to HIL illumination that has the potential to affect a pilot in the performance of their respective duties.

30–2–3. CONTENT OF DETERMINATION

a. After completing an aeronautical study, the service area office must prepare a Letter of Determination (LOD). Follow the guidelines published in paragraph 29–3–2 to formulate the content of the LOD. Forward a copy of the determination to the proponent of the activity, and when deemed necessary, to all affected ATC facilities, airport managers, and military liaison offices.

b. At the discretion of the service area office, issue a NOTAM to alert pilots of known HIL activity. The service area office may delegate notification responsibility to the respective flight service stations, other air traffic facilities, or require the proponents to activate or cancel the local NOTAM involving the HIL operation through that appropriate facility.

Chapter 31. Amateur Rocket and Commercial Space Operations

Section 1. General

31–1–1. PURPOSE

This chapter provides guidance, policies, and procedures for processing requests for amateur rocket, commercial launch and reentry vehicle, and commercial launch and reentry site operations in the NAS.

31–1–2. AUTHORITY

a. Title 51 of the United States Code (51 U.S.C.), National and Commercial Space Programs, is the compilation of the general laws regarding space programs. 51 U.S.C. was issued December 18, 2010, when signed ("H.R. 3237".) into law under PL 111–314.

b. Title 14 of the Code of Federal Regulations (14 CFR) Aeronautics and Space:

1. Chapter I, Subchapter F, Part 91, Air Traffic and General Operating Rules;

2. Chapter I, Part 101, Moored Balloons, Kites, Amateur Rockets, Unmanned Free Balloons, and Certain Model Aircraft;

3. Chapter III, Commercial Space Transportation, Federal Aviation Administration, Department of Transportation, Parts 400–460.

31–1–3. POLICY

a. ATO service area forwards all requests for Class II amateur rockets that will enter Class A airspace and all Class III requests to the Office of Commercial Space Transportation (AST) for additional safety analysis.

b. All proposals for development of launch or reentry sites, and the conducting of commercial space launches and reentry operations, must be immediately forwarded to AST.

c. The Federal Aviation Administration's policy is to use an interdisciplinary approach to ensure compliance with all laws and regulations. This policy requires all projects be reviewed in a timely manner by all necessary stakeholders to determine the impact to the NAS.

31–1–4. CONTROLLING FACILITY

The FAA or DOD facility having control jurisdiction over the affected airspace where the amateur rocket, launch vehicle, or reentry vehicle is projected to operate must be designated as the controlling facility. When multiple facilities may be impacted by an operation, one facility will be designated as the lead and be designated as the controlling agency. The controlling facility will be responsible for the execution of the appropriate airspace management.

31–1–5. DEFINITIONS

a. Aircraft hazard area – the predicted location and extent of the airspace potentially containing falling debris generated by an amateur rocket, launch vehicle, reentry vehicle failure, or from the planned jettison of stages or other hardware.

b. Amateur rocket – an unmanned rocket that is propelled by a motor or motors having a combined total impulse of 889,600 Newton–seconds (200,000 pound–seconds) or less; and cannot reach an altitude greater than 150 kilometers (93.2 statute miles) above the Earth's surface.

c. Amateur rocket classes:

1. Class 1 – a model rocket that uses no more than 125 grams (4.4 ounces) of propellant; uses a slow–burning propellant; is made of paper, wood, or breakable plastic; contains no substantial metal parts; and weighs no more than 1,500 grams (53 ounces) including the propellant.

2. Class 2 – a high power rocket, other than a model rocket, that is propelled by a motor or motors having a combined total impulse of 40,960 Newton–seconds (9,208 pound–seconds) or less.

3. Class 3 – an advanced high power rocket, other than a model rocket or high–power rocket.

d. Applicant – an entity that has submitted a request for waiver/authorization to Part 101 for the launch of an amateur rocket, or an entity that has submitted an application to AST for a license or permit to operate a launch vehicle, reentry vehicle, launch site, or reentry site.

e. Ground hazard a r e a – the required separation distance between the launch point and nearest people or property that are not associated with the operation.

f. Launch vehicle – a vehicle built to operate in, or place a payload in, outer space or a suborbital rocket. Chapter III requires that launch vehicle operations be licensed by AST.

g. Operator – an amateur rocket operator or an entity that has received a license or permit from AST to conduct a launch or reentry operation.

h. Reentry vehicle – a reusable launch vehicle designed to return from Earth's orbit or outer space to Earth substantially intact. The performance and maneuverability of reentry vehicles may vary depending upon the design of the vehicle, including those that descend via parachute, those that glide to a landing, and those that use rocket or jet power to land.

31–1–6. RESOURCES

a. Current regulations can be viewed at ecfr.gov.

1. Commercial space regulations can be found at 14 CFR Chapter III, Parts 400–460.

2. Amateur rocket regulations can be found at 14 CFR, Part 101.

b. The FAA's Commercial Space Transportation organization website contains information about current and planned launches, issued licenses, industry news, and announcements.

c. Additional amateur rocketry information can be found at the National Association of Rocketry (NAR) website at www.NAR.org.

d. FAA Order JO 7210.3, Facility Operation and Administration, contains guidance and policy for processing waiver/authorizations applicable to amateur rocket operations as well as commercial space letter of agreement facilitation and coordination.

e. FAA Order 7930.2, Notices to Air Missions (NOTAM), contains procedures for issuance of "Airspace," "Temporary Flight Restriction," and "ALTRV" NOTAMs.

f. FAA Order JO 7610.4 .Special Operations established authority, responsibility, and general operating procedures under the ALTRV concept for Central Altitude Reservation Function (CARF) and other concerned ATC facilities.

Section 2. Amateur Rockets

31–2–1. RESPONSIBILITIES

a. Air traffic is authorized to issue waiver/authorizations to Part 101 for amateur rocket activities and is responsible for integrating amateur rocket activities into the NAS. The appropriate service area is air traffic's point of contact for Part 101 and associated waiver/authorizations, and is responsible for coordinating certain proposals regarding airspace operations and procedures with AST.

b. AST supports the waiver/authorization process by providing Air Traffic with the results of safety analyses and recommendations pertaining to proposed amateur rocket activities.

c. AJV-P2 provides oversight and support to service areas for amateur rocket operations.

d. Communication and coordination between AST and Air traffic is paramount. Since AST personnel are not located at the regional offices, the required AST coordination occurs at FAA HQ.

31–2–2. GENERAL OPERATING LIMITATIONS

a. In accordance with Part 101, an amateur rocket must:

1. Launch on a suborbital trajectory;

2. Not cross into the territory of a foreign country unless an agreement is in place between the United States and the country of concern;

3. Be unmanned;

4. Not create a hazard to persons, property, or other aircraft.

b. In addition to the above, Class 2–High Power Rockets and Class 3–Advanced High Power Rockets, must not operate:

1. At any altitude where clouds or obscuring phenomena of more than five–tenths coverage prevail;

2. At any altitude where the horizontal visibility is less than five miles;

3. Into any cloud;

4. Between sunset and sunrise without prior authorization from the FAA;

5. Within 5 nautical miles of any airport boundary without prior authorization from the FAA;

6. In controlled airspace without prior authorization from the FAA;

7. Unless observing the greater of the following separation distances from any person or property that is not associated with the operation:

(a) Not less than one–quarter of the maximum expected altitude;

(b) 1,500 feet;

8. Unless a person at least eighteen years old is present, is charged with ensuring the safety of the operation, and has final approval authority for initiating high–power rocket flight;

9. Unless reasonable precautions are provided to report and control a fire caused by rocket activities.

31–2–3. AMATEUR ROCKET PROCESS

The applicant must submit FAA Form 7711–2, Application for Certificate of Waiver or Authorization, at least 45 days prior to the event, and must include the required information as outlined in section 101.29.

The service area is the focal point for receiving, processing, and signing waiver/authorization requests. A service area may delegate waiver/authorization processing responsibilities to a facility, in accordance with FAA Order JO 7210.3.

When a proposal overlaps service area geographical jurisdictions, the affected service area must coordinate to determine which office will serve as the lead office for processing the proposal. Coordination between service areas is also required when the affected geographical area and the ATC facility are under the jurisdiction of different service areas or facilities.

a. A waiver/authorization is required for amateur rocket operations conducted outside the operating limitations per paragraph 31–2–2. The most common reason for requesting a waiver/authorization is to operate within controlled airspace. An applicant must

submit its waiver/authorization request to the service area. If the applicant submits its request directly to AST, AST must direct the applicant to submit its request directly to the service area.

b. The service area must perform the initial review of the waiver/authorization request.

1. The service area must verify that FAA Form 7711−2 is complete and that the information required in section 101.29 has been provided. The service area must return incomplete waiver/authorization requests to the applicant for additional information. Requests that cannot be accommodated will not be coordinated beyond the service area.

2. All complete waiver/authorization requests must be assigned a unique waiver/authorization number for ease of processing. The number must consist of the three−letter service area identifier, four digits containing the year and number of the request received that year, and the contraction "RKT" (for example, WSA−1034−RKT indicates Western Service Area, the year 2010, and the 34th waiver/authorization for that year). This number must be used in all correspondence and coordination when referring to this operation.

3. No less than 30 days prior to the proposed launch date, the service area must forward requests that require AST safety analysis (all Class II intended to enter Class A airspace, all Class III requests and all requests to waive the standoff distance of section 101.25(g)) to AST and the ATO Commercial Space POC (ATO POC).

4. AST must conduct a safety analysis that determines or verifies the following:

(a) The size and location of the ground hazard area.

(b) The size and location of the aircraft hazard area(s) and the times during which the hazard area(s) must remain clear of aircraft during both normal operations and in the event of a failure.

(c) Any additional steps that the amateur rocket operator must take to ensure public safety.

5. AST must coordinate with the service area when additional information is required from the applicant.

6. No less than 10 days prior to the proposed launch date, AST must provide its safety analysis results and any related recommendations to the service area and the ATO POC.

c. The service area must coordinate with the appropriate facilitv(s) for the processing of the waiver/authorization. This coordination must include the performance of an Aeronautical Analysis, as described in paragraph 31−2−4.

d. The service area must sign and issue the waiver/authorization with appropriate terms/conditions.

1. The service area must provide a copy of the approved waiver/authorization to the applicant and facilities.

2. For any waiver/authorization requests that require review under subparagraph b.3, the service area must provide a copy of approved waiver/authorization to AST and AJV−P2.

3. The service area must archive the approved waiver/authorization and associated data for tracking purposes through a local process.

e. The facility must develop an Airspace Management strategy as described in paragraph 31−2−5.

f. Prior to each activity, the facility must develop an Electronic System Impact Report in accordance with FAA Order JO 7210.3.

g. A NOTAM must be issued per the terms of the waiver/authorization.

31−2−4. AERONAUTICAL ANALYSIS

Prior to issuing a Certificate of Waiver or Authorization for amateur rocket operations, the service area and appropriate facilities must conduct an aeronautical analysis to identify any aeronautical impacts to be resolved or mitigated. The analysis must be specific to the proposed site, and may include, but is not limited to, the following steps:

a. Gather details on the amateur rocket event, such as location, date(s), time, number of launches, and expected altitude.

b. Identify the class of rocket operations specified in the Certificate of Waiver or Authorization, as this will determine which sections of 14 CFR Part 101 apply.

NOTE−
The applicant is responsible for determining the

appropriate rocket class based on the definitions in Part 101.

c. Determine the class of airspace where the event is proposed, and consider the impact of the rocket operation to local airports, VFR aircraft and routes, IFR routes and procedures, military training routes, special use airspace, etc.

31–2–5. AIRSPACE MANAGEMENT

Per 14 CFR § 101.23, the amateur rocket operator is responsible for ensuring the safety of persons and property on the ground and of aircraft flying nearby. Facilities develop airspace management strategies, based on the operator's proposal, and/or the waiver/authorization with identified hazard areas, to maintain the safety and efficiency of the NAS.

a. Facilities should consider all available airspace management tools when developing the airspace management strategy. The following criteria is recommended or required as outlined below for implementing airspace management:

1. For launches to altitudes less than 10,000 ft MSL, no airspace management is required.

2. For launches to altitudes between 10,000 ft and 17,999 ft MSL, airspace management is recommended.

3. For launches to altitudes above 18,000 ft MSL, airspace management is required.

NOTE–
Airspace management must be implemented for Class E airspace above FL 600 if the proposed operation is above FL 600.

b. Existing special use airspace may be used only if permission has been granted by the using agency or controlling agency, as appropriate. The amateur rocket operator is responsible for obtaining the required permission.

c. A temporary flight restriction (TFR) for space flight operations as described in 14 CFR § 91.143 may be used to segregate nonparticipating aircraft from amateur rocket operations, as necessary. TFRs are the only available means for ATC facilities to restrict both IFR and VFR aircraft from identified hazard areas below 18,000 feet MSL.

d. Facilities must determine the impact of the operation to the NAS , accounting for any mitigation identified in the airspace management strategy.

e. The service area must not issue the Certificate of Waiver or Authorization until all concerns or objections have been considered.

31–2–6. WAIVER/AUTHORIZATION FORMAT AND CONTENT

a. Use FAA Form 7711–1, Certificate of Waiver or Authorization, to issue the waiver/authorization.

b. At a minimum, the waiver/authorization must contain the following:

1. Specific section of Part 101 to be waived or authorized.

2. Name, address, and telephone number of the applicant.

3. Activities approved for launch.

4. Location of the approved launch site in coordinates and description of location (for example, 30NM west of ABO VOR).

5. Approved dates and times of launch operations.

6. Advance notification requirements to the designated FAA facilities and, if desired, cancellation and termination notification.

7. Approved projected altitudes of the rocket(s).

8. Other provisions or requirements deemed necessary to maintain safety of the NAS.

c. The service area office may suspend or revoke a waiver/authorization whenever a question arises about the safety of the operation, compliance with safety precautions or conditions of approval, or if an unforeseen impact on aeronautical operations occurs.

d. Terms and conditions. In most cases, an attachment containing terms and conditions of the Certificate of Waiver or Authorization will be included. Provisions commonly addressed in terms and conditions may include, but are not limited to, the following:

1. Requirements on the operator to use ground observers ("spotters") to ensure that the airspace is clear of aircraft.

2. Additional requirements on the operator for ensuring public safety, including any requirements

pertaining to the recommendations provided by AST described in paragraph 31–2–3.

3. Deviation from CFRs applies to the specific CFR referenced in the waiver/authorization.

4. Additional requirements on the operator, beyond those listed in paragraphs 31–2–6b. and 31–2–7, for notification and communication with the ATC facility, including real time communications.

31–2–7. NOTIFICATION TO AIR TRAFFIC FACILITIES

Part 101 requires all Class 2 and 3 amateur rocket operators to notify the FAA air traffic facility nearest the place of intended operation prior to the launch. Notice of the launch must be provided to Air Traffic no less than 24 hours and no more than 3 days before the launch operation. If the operation requires a waiver/authorization, the waiver/ authorization must contain the names and phone numbers of the facilities to be notified. If required by the waiver/authorization, the operator must ensure that real time communications are available with the air traffic facility in the event of unforeseen circumstances.

31–2–8. NOTAMS

A NOTAM must be issued that includes the keywords “airspace” and “rocket launch activity,” the site description, and effective dates and times. It should also include a brief narrative describing the rocket operation, numbers and types of rockets involved, and contact information for nonparticipating pilots.

Section 3. Launch and Reentry Vehicle Operations

31–3–1. RESPONSIBILITIES

a. Operator. Prior to conducting a launch or reentry, the operator must obtain a license or permit from the Office of Commercial Space Transportation (AST). With regard to airspace management, the 14 CFR Parts 400–460 regulations for both a license and a permit require an applicant to engage AST in the pre–application consultation and to complete a letter of agreement (LOA) with the ATC facility having jurisdiction of the airspace where the launch or reentry will take place.

NOTE–
Commercial space LOAs are required for each launch site and launch and/or reentry operator for license and permit purposes in accordance with 14 CFR Parts 400–460. The FAA has 180 days to evaluate a complete license application and 120 days to evaluate a complete permit application. AST requires a draft LOA to accompany the submission of a license or permit application to ensure ATO is included in the coordination. The draft LOA submitted with the license or permit application must be acceptable to all signatories and be completed prior to the end of the application process. Each commercial space applicant must have a signed LOA prior to operation in the NAS.

b. Air Traffic. ATO Space Operations (AJR–1800) and ATC facilities have the following responsibilities:

1. ATO Space Operations is the ATO Office of Primary Responsibility for launch and reentry operations and any other activity relevant to tactical space operations in the NAS. ATO Space Operations is responsible for:

(a) Ensuring that launch and reentry operations are safely and efficiently integrated into the NAS;

(b) Working with ATC facilities to develop a memorandum of assessment of potential impacts on the NAS from the proposed site/operation and the identification of any issues or constraints;

(c) Coordinating with AST, the operator, and the affected air traffic facilities as necessary;

(d) Analyzing and evaluating data to produce and distribute an airspace management plan;

(e) Serving as the focal point for the coordination and distribution of any hazard mitigation requirements, and information relevant to launch or reentry vehicle operations to affected air traffic facilities;

(f) Monitoring, evaluating, and disseminating information in real–time regarding the status of launch and reentry vehicle operations and providing operational support as required;

(g) Hosting a mission real–time hotline when required in accordance with an LOA;

(h) Performing post launch or reentry analysis of each operation to improve future operations;

(i) Archiving captured launch and reentry data and analysis;

(j) ATO Space Operations will supply the space launch/re–entry course (expressed in magnetic degrees) to the ATC facility.

2. ATC facilities are responsible for:

(a) Working with ATO Space Operations to develop a memorandum of assessment of potential impacts on the NAS from the proposed site/operation and the identification of any issues or constraints;

(b) Determining and notifying ATO Space Operations of potential effects the launch or reentry operation may have on traffic flows and sector loading;

(c) Determining the type and level of assistance needed to support the launch or reentry operation;

(d) Developing and executing an airspace management plan in collaboration with ATO Space Operations;

(e) Working with ATO Space Operations and other affected facilities during the execution of the launch or reentry. This includes the following duties:

(1) Participating on a real–time communications hotline during the launch or reentry operation when required in accordance with an LOA;

(2) Execution of any safety hazard mitigation efforts.

c. AST. AST is responsible for:

1. Validating AHAs, THAs, and other safety and mission information to ATO Space Operations when necessary;

2. Operating as part of the Joint Space Operations Group (JSpOG), to include onsite computation of AHAs and THAs during operations and other support;

3. Evaluating all commercial space LOAs against 14 CFR Parts 400–460 requirements.

d. Federal range. The process for launches or reentries conducted at Federal ranges is similar to the process at non–Federal launch and reentry sites. Additional opportunities exist in the collaboration between the Federal range and the operator for ATO and AST to obtain necessary information to support the launch and reentry process. Further, the range generally conducts some activities necessary for the operation on behalf of the operator, including safety analyses. Federal ranges also typically have existing letters of agreements with ATC facilities.

31–3–2. NOTICE TO AIR MISSIONS (NOTAM)

a. NOTAMs issued for space launch and reentry operations will be processed in accordance with current FAA directives.

b. The NOTAM must include the key words "airspace," "space launch," or "space reentry;" the launch or reentry site description, effective dates and times, and a chart depicting the area boundaries. It should also include a brief narrative describing the launch or reentry scenario, activities, types of launch or reentry vehicle involved, and the availability of inflight activity status information for nonparticipating pilots.

c. Information regarding the methods of airspace management may also be addressed.

31–3–3. LAUNCH AND REENTRY PROCESS

a. The operator/range or designee submits a request to conduct a launch or reentry operation to ATO Space Operations, facilities and other organizations in accordance with the LOA.

b. The operator/range or designee must distribute AHAs to affected parties, per LOA.

c. Unless otherwise specified in a LOA, the operator coordinates use of airspace outside the U.S. FIR.

d. Unless otherwise specified in a LOA, the operator coordinates use of any special use airspace with the Using Agency.

e. ATO Space Operations must work with affected ATC facilities to conduct a NAS impact analysis of the proposed operation. As the ATO's POC for commercial space operations, ATO Space Operations must provide a memorandum of assessment of potential impacts on the NAS to AST.

f. ATO Space Operations and ATC facility(ies) develop a proposed plan of operation based on the NAS impact analysis and/or any local or national constraints.

g. When necessary, AST verifies the accuracy of the mission AHAs and THAs and coordinates the results with ATO Space Operations.

h. Prior to each launch or reentry, ATO Space Operations shares AHAs and THAs with affected ATC facilities.

i. ATO Space Operations notifies the affected facilities of any additional safety hazard mitigation requirements depending on the unique characteristics of the launch or reentry operation if needed.

j. Prior to each launch or reentry operation, ATO Space Operations coordinates with the ATC facility(ies) to develop and implement an airspace management plan.

k. All affected ATC facilities, ATO Space Operations, and the operator/range or their designee participate on a real–time communications hotline during the launch or reentry operation in accordance with an LOA.

l. Coordination for airspace delegation and control procedures will be conducted in accordance with the LOA.

m. The responsible authority cancels all applicable NOTAMs.

n. ATO Space Operations complete a post–operator analysis of actual space operation impact.

Chapter 32. Environmental Matters

Section 1. General Information

32–1–1. PURPOSE

This section provides guidance and establishes policy and procedures to assist air traffic personnel in applying the requirements of FAA Order 1050.1, Environmental Impacts: Policies and Procedures, to proposed air traffic actions. The guidance in this chapter will assist air traffic personnel in determining the level of environmental study appropriate for a proposed action and in preparing the required environmental documentation.

The policies and procedures set forth in this chapter are intended to supplement the requirements of FAA Order 1050.1 and other Department of Transportation and FAA directives.

Further, this chapter outlines the approach for considering environmental issues and helps reduce the complexity of the review process, while ensuring that the environmental process associated with proposed air traffic actions is thoroughly and properly documented.

32–1–2. POLICY

It is air traffic policy to use an interdisciplinary approach to ensure compliance with all environmental laws and regulations. This policy requires that all projects be reviewed as early as possible to determine if there is potential to impact the quality of the human environment as defined by the National Environmental Policy Act of 1969, as amended (NEPA). All units of Air Traffic Services and Mission Support Services must adhere to the requirements in FAA Order 1050.1.

Additionally, all units must comply with the guidelines and directions detailed in this chapter whenever reviewing regulatory and non–regulatory airspace actions.

32–1–3. BACKGROUND

a. FAA Order 1050.1 establishes policies and procedures and assigns responsibility for ensuring FAA compliance with NEPA and its implementing regulations issued by the Council on Environmental Quality (CEQ) (40 CFR Parts 1500–1508), the Department of Transportation (DOT) Order 5610.1, FAA Order 1050.1, and other related statutes and directives.

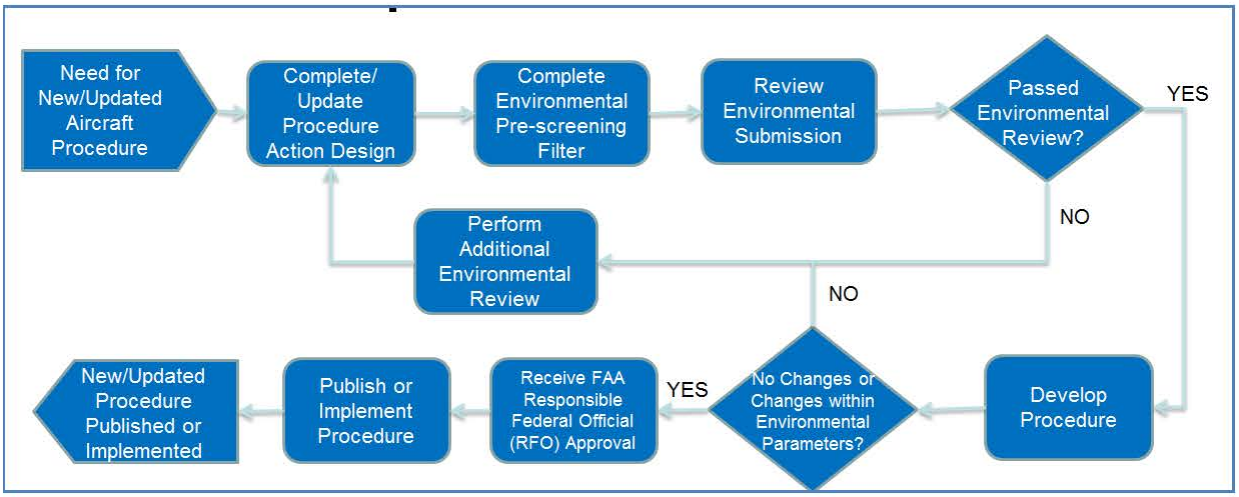
b. The complexity of environmental issues associated with some air traffic actions necessitates a systematic and uniform approach to the environmental review process. This process must assess all impacts, as well as provide sufficient data for preparing all required environmental impact analyses and supporting documentation.

c. FAA Order 1050.1 provides the procedures and guidance for the FAA's environmental compliance and documentation responsibilities for all applicable FAA actions. It is the intent of this chapter to complement, and not repeat in its entirety, what is already contained in FAA Order 1050.1. However, there are issues addressed in FAA Order 1050.1 that require further detailed analyses for air traffic actions or additional impact review requirements to ensure they are properly analyzed and documented.

d. The environmental review process for Instrument Flight Procedures (IFPs) and other air traffic actions requires completion of a pre–screening filter and, in certain cases, eliminates the need to complete the Air Traffic Initial Environmental Review (IER) form (see Appendix 5), the checklist in support of a Categorical Exclusion (CATEX) Determination, and the CATEX Memo. The re-engineered environmental review process is depicted in FIG 32–1–1.

e. This chapter is designed to address these unique airspace actions (for example, special use airspace proposals) and provide additional detail necessary for air traffic to conduct a thorough and legally sufficient environmental review.

FIG 32–1–1
IFP Re–Engineered Environmental Review Process



32–1–4. DELEGATION OF AUTHORITY

The Approving Official for Environmental Assessments (EAs), Findings of No Significant Impact (FONSIs) and Environmental Impact Statements (EISs) is the FAA official with signature authority for these documents. The FAA official with signature authority to approve a Record of Decision (ROD) is the decision–maker (see Order 1100.154A, Delegation of Authority).

a. The air traffic facility manager has signature authority for memoranda related to administrative actions listed in FAA Order 1050.1, paragraph 2–1.2.d. and advisory actions discussed in FAA Order 1050.1, paragraph 2–1.2.b.

b. The Service Center Directors have signature authority for CATEXs and, as delegated by the Vice President for Mission Support Services, for EA/FONSI and EIS/ROD documents which are exclusively within the scope of a single Service Center; and may delegate this authority to the Operations Support Group Manager within that Service Center. For Special Use Airspace (SUA) actions that require approval at the Headquarters level, the associated environmental document also requires approval and signature at the Headquarters level. See FAA Order 1050.1, paragraph 8–2 (Adoption of Other Agencies' National Environmental Policy Act Documents).

c. The Vice President for Mission Support Services has signature authority for EAs, FONSIs, EISs, and RODs that are beyond the scope of authority of a single Service Center. This authority cannot be delegated.

d. The Service Center Directors are responsible for air traffic environmental compliance for proposed actions within the jurisdiction of air traffic facilities within their respective service areas.

e. The Mission Support, Rules and Regulations Group is responsible for coordinating environmental processes that cross service area boundaries.

f. The Service Center Operations Support Group (OSG) Flight Procedures Team (FPT) must assist the Service Center Environmental Specialist in preparing CATEXs based on the results of the re-engineered environmental review process for IFPs unless it is routed to an OSG Environmental Specialist, at which time it is subject to the authority and responsibilities described above in this Order.

32–1–5. RESPONSIBILITIES

The order of delegated authority for air traffic environmental processes is as follows:

a. Mission Support, Policy, Rules and Regulations Group. The Rules and Regulations Group has been delegated authority to direct and implement environmental policy and procedures for air traffic actions. It must design and initiate training programs to educate air traffic personnel in Headquarters, in the Service Centers, Air Traffic Services Service Areas, and in air traffic field facilities on environmental

laws, regulations, policies, and processes related to the implementation or revision of air traffic airspace and procedures.

The Rules and Regulations Group must direct and implement training for air traffic Environmental Specialists in the use of environmental screening and modeling tools (see Subparagraph 32–1–5.b, Service Center Directors). Additionally, the Rules and Regulations Group must serve as the air traffic focal point for the Headquarters Environmental Network chaired by the Office of Environment and Energy (AEE).

b. Service Center Directors.

1. The Service Center Directors have the final responsibility for ensuring that all appropriate environmental documentation within their area of jurisdiction is prepared accurately and completely.

2. The Service Center Directors are responsible for designating at least one person to serve as the Environmental Specialist within his/her service center to address air traffic environmental issues. Funding for training associated with the duties of the Environmental Specialist must also be the responsibility of the Service Center Director (or his/her designee).

3. The Service Center Director (or his/her designee) must appoint a representative to serve as the focal point for his/her service center on Regional Environmental Networks within his/her service center. The representative must coordinate any environmental compliance and documentation activities in his/her service center with the Rules and Regulations Group, as appropriate.

4. The Service Center Directors must ensure that the Environmental Specialist attends the following training or equivalent, as soon as practical after his/her appointment to the position:

(a) FAA Academy Course #50019, Airspace and Procedures.

(b) Electronic Learning Management System (eLMS) Course #60000076, Mission Support Services' National Environmental Policy Act (NEPA) & Air Traffic Applications.

(c) Electronic Learning Management System (eLMS) course NEPA for Airspace Actions.

(d) Environmental Review Process for IFPs and the Environmental Pre–Screening Filter.

(e) Environmental screening tools (pre–screening filter, noise screening guidance document, and/or TARGETS Environmental Plug–in, or other FAA–approved modeling tool).

(f) Environmental Modeling Tools (Aviation Environmental Design Tool (AEDT) or other FAA–approved modeling tool).

NOTE–
Recurrent training to supplement these minimums should be provided, as appropriate. Additionally, when members of the FPT or other specialists have duties that include the use of the Pre-Screening Filter, they must complete training on the Filter, NEPA for Airspace Actions.

c. OSG Manager.

The OSG manager must act as the FAA environmental point of contact when another Federal agency (for example, Department of Defense (DOD)) requests FAA participation as a Cooperating Agency on air traffic or airspace actions.

NOTE–
When a request for Cooperating Agency status is received from the DOD related to Special Use Airspace (SUA), a copy of Appendix 2 and Appendix 3, (flow charts for SUA environmental and aeronautical non–rulemaking and rulemaking actions, respectively) along with a copy of Appendix 4 (a summary of FAA procedures for processing DOD SUA actions), will be attached to the response. A copy of the response, which will also identify the Service Center Environmental Specialist, will be provided to the appropriate Service Center.

d. Service Center Environmental Specialist.

1. Center, TRACON, and ATCT facility managers are responsible for participating in the development of all appropriate environmental documentation for proposed air traffic actions within their jurisdiction, and assisting the Service Center Environmental Specialist in ensuring that such documentation is prepared accurately and completely.

The facility managers must designate at least one facility staff specialist within their scope of operations to coordinate with the Service Center Environmental Specialist when addressing environmental issues and concerns. The facility specialist may be required to perform his/her environmental duties on a full–time or collateral basis. The decision about the need for a full–time Environmental

Specialist at a field facility must be made by the facility manager.

2. The Service Center Environmental Specialist is responsible for the preparation of CATEXs, Environmental Assessments (EA), Environmental Impact Statements (EIS), Adoption NEPA documents, Written Reevaluations, Findings of no Significant Impact (FONSI), Records of Decision (ROD), and supporting documentation for air traffic actions unless it is a CATEX prepared based on the results of the IFP Environmental Pre–Screening Filter that does not require additional environmental review. In that case, the OSG FPT is responsible. (See paragraph 32–1–5e.) When the results of the Pre–Screening Filter indicate that additional environmental review is needed, the Service Center Environmental Specialist is responsible for additional review and preparation of the appropriate NEPA documentation. The Service Center Environmental Specialist is also responsible for posting these documents to the appropriate KSN site.

3. The Service Center Environmental Specialist must provide guidance in the use of the IFP Environmental Pre-Screening Filter.

4. The Service Center Environmental Specialist must provide guidance in and oversee the preparation of the Air Traffic Initial Environmental Reviews (IERs) (see Appendix 5).

5. The Service Center Environmental Specialist is responsible for reviewing environmental studies and forwarding written concurrence to the air traffic facilities that originate the environmental documentation.

6. The Service Center Environmental Specialist must review environmental compliance documentation initiated by Technical Operations in the Service Centers.

7. The Service Center Environmental Specialist must coordinate with Airport District Offices or the Airports Division, within his/her jurisdiction, on the preparation of environmental compliance documents and 14 CFR, Part 150, Airport Noise Planning, Land Use Compatibility Guidelines (Part 150) studies undertaken by these offices. Review and comments by the Service Center Environmental Specialist must be directed to those matters affecting the operation of the air traffic program. Comments must be forwarded to the appropriate organization in the Office of Airports. The Service Center Environmental Specialist may also be requested to attend public meetings or hearings to provide support to the facility, regional office, service center, or other lines of business convening the meetings or hearings.

8. The Service Center Environmental Specialist must review other agencies' environmental documentation when applicable (for example, when the FAA is considering adopting another agency's environmental documentation).

9. In the case of SUA actions, the Service Center Environmental Specialist must review environmental studies in accordance with paragraph 32–2–3.

10. The Service Center Environmental Specialists must coordinate with each other and with their counterparts in other agencies, as appropriate. Service Center Environmental Specialists are encouraged to engage in early coordination with AGC when working on a project that is complex, involves novel issues, or is expected to elicit public opposition.

e. OSG Flight Procedures and Airspace Specialist (FPT/AT)

1. The responsibility to coordinate and consult with the Service Centers' EPSs for environmental analysis and documentation rests with the following flight procedures and airspace specialists as applicable and defined in FAA Order 8260.19 and JO 7100.41.

(a) The OSG Flight Procedures Team is responsible for IFP establishment, change and cancellation requests to IFPs.

(b) The OSG Airspace Teams are responsible for the establishment, change or cancellation requests to airway routes (as applicable) and assisting with IERs.

(c) AJV–A is responsible for IFP establishment or change requests to AFS assigned special procedures and AJV–A initiated maintenance actions.

(d) AFS–400 is responsible for IFP Non–FAA Service Provider procedures (also referred to as "third–party developed flight procedures").

2. The respective flight procedure or airspace specialist must provide the Environmental Specialist information and data concerning the flight procedure being analyzed by the EPS for potential environmen-

tal impacts, and that will support the EPS preparation of a CATEX and other related environmental documentation as necessary. When the results of the Pre–Screening Filter indicate that additional environmental review is needed, the Service Center Environmental Specialist is responsible for completing that additional review and preparing the appropriate environmental compliance documentation. If additional information about the flight procedure is necessary to complete a sufficient environmental analysis, the EPS and flight procedure designer(s) are responsible to determine what additional information is necessary to complete the environmental document.

f. Air Route Traffic Control Center (ARTCC), Terminal Radar Approach Control (TRACON), and Airport Traffic Control Tower (ATCT) facility managers.

1. ARTCC, TRACON, and ATCT facility managers are responsible for coordinating and consulting with the Service Center Environment Specialist to ensure that all appropriate environmental documentation for proposed air traffic actions within their jurisdiction is prepared accurately and completely. For procedures reviewed through the IFP Environmental Pre–Screening Filter, these managers must ensure that the results of the Filter are reviewed by appropriate FAA personnel, and with the Service Center Environmental Specialist, as appropriate and necessary.

(a) For actions that require additional environmental review, these managers are responsible for consulting with the Service Center Environmental Specialist who recommends the appropriate level of environmental review.

(b) For actions other than Advisory or Emergency Actions (as defined in FAA Order 1050.1), and actions that require additional environmental review beyond the IFP Environmental Pre–Screening Filter, the facility manager must ensure that, at a minimum, an Air Traffic Initial Environmental Review (IER) (see Appendix 5) is prepared and submitted, with supporting information, to the Service Center Environmental Specialist along with a description of the proposed action (see Paragraph a, Determination of Appropriate Environmental Documentation). Under some limited circumstances, the Service Center Environmental Specialist may waive the need for completion of the IER by substituting an appropriate level of documentation, such as a memorandum to the file.

(c) For IFP actions reviewed through the IFP Environmental Pre–Screening Filter, the OSG FPT must assist the Service Center Environmental Specialist in determining the appropriate level of environmental documentation after reviewing the results from the Filter. The Service Center Environmental Specialist must then prepare the Categorical Exclusion Declaration (if appropriate) for signature by the Service Center Director (or his/her designee). If preparation of an EA or EIS requires the use of contractor funds and staff, the field facility must forward that recommendation to the Service Center Director for approval and action.

2. The ATCT facility manager should be involved early in the design phase of a proposed IFP action, and any other applicable air traffic action, to ensure that a full understanding of tower/airport operations is included in the alternatives development for the description of the proposed action. The facility manager is responsible for ensuring that information provided to the ARTCC and/or TRACON is complete and accurate.

3. Facility managers are also responsible for designating at least one facility staff specialist within their scope of operations to address environmental issues, and for coordinating with the Service Center Environmental Specialist.

(a) The facility specialist may be required to perform his/her environmental duties on a full–time or collateral basis. The decision about the need for a full–time Environmental Specialist at a field facility must be made by the facility manager.

(b) Facility managers must ensure that the specialist who performs environmental duties on a full–time basis attends the training specified in paragraph 32–1–5b. above, as soon as practical.

(c) The environmental screening and modeling tools training is also recommended, but is not mandatory. Additionally, where other facilities have, or are authorized to have, an operations specialist (for example, Plans and Programs Specialist or Procedure Specialist) to conduct environmental activities as a collateral duty, it is recommended that these specialists attend the above–referenced training.

4. Facility managers must ensure that their facility is represented at meetings of the Office of

Airports and other lines of business, such as environmental compliance and Part 150 process meetings, where decisions rendered could affect air traffic operations in their area of responsibility.

(a) Facility managers are responsible for working with operating divisions, airport sponsors, and contract support personnel in the environmental review processes. Air traffic attendance at these meetings does not necessarily constitute air traffic endorsement or sanction of the proposed action.

(b) Environmental compliance and Part 150 studies must receive thorough review at the facility level. Review and comments on Office of Airports documents must be directed to those matters that affect the operation of the air traffic program. Facility comments must be forwarded to the Service Center Environmental Specialist, not more than 15 days after receipt of the document or study. (Requests for longer periods of review must be coordinated with the Service Center Environmental Specialist on an as needed basis.) Prior to a facility submitting comments directly to other operating divisions, or airport sponsors, the facility point of contact must discuss relevant and applicable airspace and/or air traffic issues with the Service Center Environmental Specialist.

5. Facility managers (or their designees) must not make or recommend a proposed flight track, route, or air traffic flow as a preferred action for the sole purpose of noise abatement. They may, however, indicate if the proposed action is operationally feasible or safe (within the context of aircraft separation standards). The airport sponsor (operator) is solely responsible for the recommendation of noise abatement procedures.

Section 2. Environmental Processing

32–2–1. THE PROCESS

The ARTCC, TRACON, and ATCT facilities, in coordination with the Service Center and Service Center Environmental Specialist, must conduct environmental compliance actions for any proposed air traffic action under their jurisdiction with the potential to impact the human environment. Examples of air traffic actions include, but are not limited to, flight procedure changes that create new flight tracks over noise sensitive areas, flight procedure changes that alter existing flight tracks over noise sensitive areas, lowering altitudes of routes or procedures utilized by aircraft, establishment or modification of certain SUA, and actions affecting operational changes (for example, changes in runway use percentages or headings). Environmental documentation for such actions must be completed prior to approval and implementation. (See Appendix 1, Environmental Study Process Flow Chart, for the steps from action concept to implementation.)

a. Questions to ask when considering the potential environmental impact of flight procedures or other air traffic actions may be, but are not limited to:

1. Are there aircraft currently flying over the area of change?

2. Are route altitudes increasing or decreasing?

3. Are the routes moving laterally, and if so, how far from the baseline route?

4. Will the number of operations increase?

5. Are there projected changes in runway use?

6. Will the types of aircraft change?

7. Will nighttime operations increase?

If the FAA is not the proponent of the proposed air traffic action (for example, the Department of Defense or an Airport Sponsor [the proponent] requests the FAA to take the action) then the proponent is responsible for funding and preparation of environmental documentation associated with the proposed action. FAA Order 1050.1, paragraph 2–2.2 discusses the responsibility for preparation of EAs or EISs (respectively) where FAA must approve the project. Signature authority for the environmental documents discussed in this section must be in accordance with paragraph 32–1–4, Delegation of Authority, of this chapter.

The FAA or non–FAA proponent must prepare and submit the associated environmental documentation in conjunction with the proposed air traffic action, as follows:

b. Determination of Appropriate Level of Environmental Documentation. The appropriate level of environmental documentation required must be determined by the Service Center Environmental Specialist after all portions of a proposed action have undergone the Air Traffic Initial Environmental Review (IER) (see Appendix 5). The IER form must be completed for all projects that:

1. Require the use of computer–based noise screening or modeling tools, or

2. Require Headquarters–level funding for completion of environmental impact analysis and documentation.

For those projects not requiring the use of computer–based noise screening or modeling tools or that are not being funded at the Headquarters level, completion of the IER is optional. Facility personnel and the Service Center Environmental Specialist must coordinate completion of the IER form.

If someone other than the Service Center Environmental Specialist completes the IER form, the completed IER form, along with a recommendation as to whether the proposed action warrants no further environmental review, a CATEX, or preparation of an EA or an EIS, must be forwarded to the Service Center Environmental Specialist for review and incorporation of the proposed project information into the NEPA document. Field personnel must consult FAA Order 1050.1 before recommending the appropriate level of environmental review for a proposed action to the Service Center Environmental Specialist.

For IFP or other actions reviewed through the IFP Environmental Pre–Screening Filter, the OSG FPT should assist the Environmental Specialist in determining the appropriate level of environmental documentation after reviewing of the results from the Filter. If the Filter results indicate that a CATEX is warranted, the OSG FPT must assist the Environmental Specialist in the preparation of a CATEX by

providing information about the action to help ensure that the action is appropriately and thoroughly described in the CATEX. After the CATEX is approved, the action may be implemented.

c. The following are specific sections of FAA Order 1050.1 that must be reviewed:

1. Advisory Actions, paragraph 2–1.2b. A memorandum to the file may be the only documentation necessary.

2. Emergencies, paragraph 5–6.1a.

3. Extraordinary Circumstances, paragraph 5–2.

4. Categorical Exclusions (CATEXs), paragraph 5-6.5, and Extraordinary Circumstances, Paragraph 5-2. Only those categorical exclusions listed in FAA Order 1050.1 may be cited. However, the categorical exclusion referenced in AEE's Guidance Memo #5 dated December 6, 2012, Guidance for Implementation of the Categorical Exclusion in Section 213(c)(1) of the FAA Modernization and Reform Act of 2012 (known as CATEX 1), (see FAA Order 1050.1, paragraph 5-6.5.q) may also be used.

A review of Categorical Exclusion Documentation, paragraph 5–3, will assist in determining the appropriate level of environmental documentation required for a CATEX (see Appendix 6 of this order for a "Sample Categorical Exclusion Declaration").

5. Chapter 6 of FAA Order 1050.1 addresses EAs and FONSIs. A review of this chapter will assist in determining when to prepare these documents. The FAA may adopt, in whole or in part, an EA prepared by another Federal agency. Consult FAA Order 1050.1 paragraphs 6–3.c and 8–2 to determine if the other agency's EA meets the criteria for FAA adoption.

6. Chapter 7 of FAA Order 1050.1 addresses EISs and RODs. A review of this chapter will assist in determining when and how to prepare these documents.

7. A review of FAA Order 1050.1, Appendix B, will assist in determining whether a noise analysis is warranted and if so, what type of analysis should be conducted. A noise analysis requires several different types of input data including radar data. This data is available to FAA and other Federal Government personnel. Request for the data should be made through the Service Center Environmental Specialist assigned to the proposal.

d. Requests for the FAA to release radar data, to other than FAA personnel, for use in noise studies or environmental compliance documents should be via FAA Order 1200.22, External Requests for National Airspace System (NAS) Data, or the Freedom of Information Act (FOIA) process. It may be simpler and more expedient to utilize the FOIA process, as FOIA does not require use of the Data Release Review Committee or a Memorandum of Agreement between the FAA Field Facility and an Environmental Contractor. Consult with the Service Center Environmental Specialist should occur if radar data is needed.

e. Preparation of Environmental Documents. The following are various levels of environmental review and documentation that may be prepared:

1. Actions Not Subject to NEPA Review. See FAA Order 1050.1, paragraph 2–1.2, for a list of actions that do not require an environmental study.

2. No Further Environmental Review Required. Some air traffic actions are subject to NEPA review, but require no further environmental action after the initial environmental review (IER) is completed. These actions involve modifications to airspace and/or procedures and may fit some or all of the following criteria. Special purpose environmental requirements may still apply to airspace and/or procedures that fit some or all of these criteria. No further environmental review is required if the proposed change:

(a) Is over 18,000 ft above ground level (AGL). Currently, there is no need to analyze aircraft noise above 18,000 ft AGL. However, greenhouse gas requirements may require analysis of fuel burn and carbon dioxide (CO2) impacts.

(b) Is over 7,000 AGL for arrivals, and/or over 10,000 ft AGL for departures and/or overflights.

(1) Any decision to analyze aircraft noise over 10,000 ft AGL is an exception and should be coordinated with the ATO Airspace Policy Group at FAA headquarters at the earliest possible time.

(2) Proposed flight procedure changes between 10,000 ft and 18,000 ft AGL should be analyzed for potential impacts when there is a national park or wildlife refuge in the study area that has a quiet setting that is a generally recognized

purpose and attribute, and also in situations when the flight procedure change is likely to be highly controversial.

(c) Is over a non−noise sensitive area(s).

(d) Does not alter the current noise footprint.

(e) Does not cause the following noise level change over noise sensitive areas, as defined in FAA Order 1050.1, paragraph 11-5 (10): +1.5 dB for 65 DNL and higher.

For IFP actions reviewed through the IFP Environmental Pre-Screening Filter, most of these determinations will be made automatically based on the information input into the Filter.

NOTE−
An FAA-approved environmental screening tool or model must be used to confirm the noise data when the project is not processed through the IFP Environmental Pre-Screening Filter.

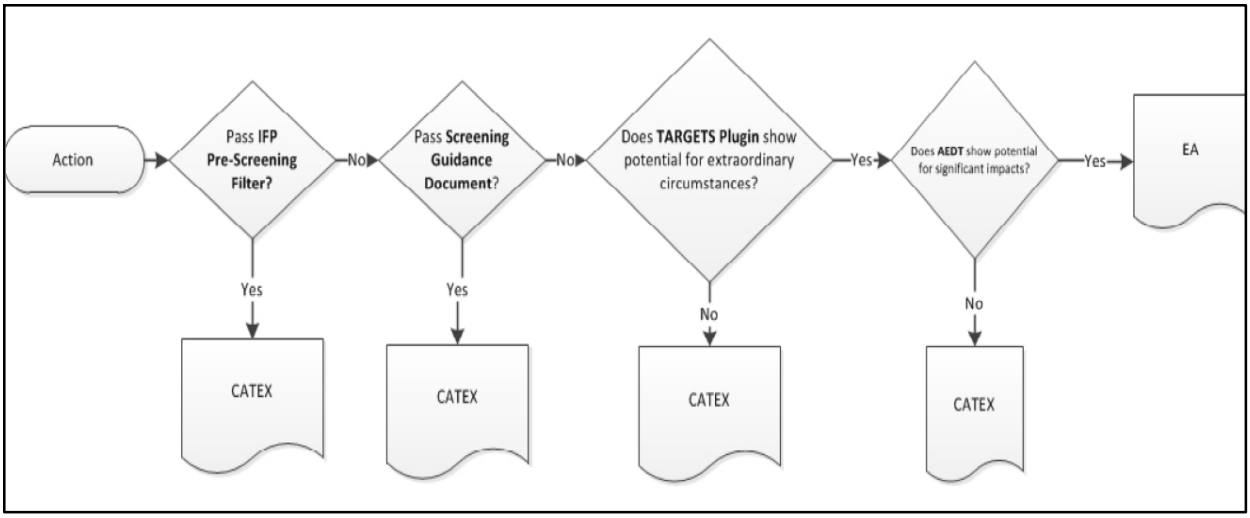
3. Actions Not Requiring a Noise Analysis. (See FAA Order 1050.1, Appendix B, Paragraph B-1.)

4. Following review and consultation, the field facility manager and Service Center Environmental Specialist may agree that no further environmental review is required. When this occurs, the originating facility must prepare a memorandum to the file and attach any supporting documentation, which indicates the basis for the determination (such as a copy of the proposed action that includes references to the above criteria, results of the noise review, etc.).

The memorandum must include, if applicable, references to the provisions of FAA Order 1050.1 that support the determination (for example, whether the proposed action is administrative or advisory in nature).

5. Actions Requiring Environmental Modeling for NEPA Compliance. FIG 32−2−1 shows the levels of environmental screening and modeling that are required for NEPA compliance.

FIG 32−2−1
Levels of Environmental Screening and Modeling for NEPA Compliance



6. Non-FAA proponents and third party developers. To meet the requirements of NEPA and other applicable environmental requirements, potential environmental impacts of flight procedures submitted by third party procedure developers must be considered. A proposed procedure development package submitted by a third party developer to an environmental specialist must include (at a minimum) the following information:

(a) Draft Initial Environmental Review (IER) in accordance with process outlined in Appendix 5 of this this Order.

(b) Documentation (email or letter) from the responsible FAA facility to the proponent indicating concurrence with the proposed development of the procedure(s).

7. The Service Center Environmental Specialist will review the documentation to determine if a categorical exclusion is applicable. If the procedure qualifies for a categorical exclusion, the Environmental Specialist will prepare a Categorical Exclusion Declaration and process it in accordance with the requirements of Appendix 6 of this Order.

(a) If necessary, the Service Center Environmental Specialist must use the MITRE Screening Guidance Document referenced in paragraph 32-3-3, below, to assist in determining if the CATEX is applicable.

(b) The Service Center Environmental Specialist must contact the proponent if any additional information is needed to support the CATEX.

8. If the Guidance for Noise Screening of Air Traffic Actions indicates that additional review is required, the Service Center Environmental Specialist will use one of the following tools, as appropriate, to perform the next level of screening to determine if the CATEX is applicable:

(a) Terminal Area Route Generation Evaluation and Traffic Simulation (TARGETS) tool with the Environmental "Plug–in," or other FAA approved noise screening tool.

(b) If that level of screening indicates that a CATEX is applicable, the Environmental Specialist will prepare a CATEX declaration (Appendix 6 of this order) with results from the above screening tool(s) attached.

(c) If screening of a flight procedure(s) indicates that a CATEX is not applicable, then an Environmental Assessment (EA) should be completed. Flight procedures requiring an EA will be returned to the proponent for additional information that will enable the Service Center Environmental Specialist to conduct an EA level of environmental impact analysis and documentation.

(1) A "focused" EA with required noise analysis may be appropriate in this situation. In coordination and consultation with the Service Center Environmental Specialist, preparation of the EA and any related environmental analysis will be the responsibility of the proponent, and must be completed in accordance with all applicable environmental regulations and requirements.

(2) The Service Center Environmental Specialist is responsible for providing advice and assistance to the proponent during the EA preparation; independent review and EA completion; and preparation and completion of a FONSI or decision that an EIS is required.

9. Categorical Exclusions. If someone other than an EPS completes an IER (when applicable), the completed IER form, and any other documentation describing the proposed action, must be forwarded to the Service Center Environmental Specialist for review and incorporation into the NEPA document.

(a) The Service Center Environmental Specialist must then prepare the CATEX declaration. If the IFP Environmental Pre-Screening Filter is used, then the environmental data is gathered electronically instead of through the IER, and it is forwarded to the appropriate next step in the IFP process.

(b) A CATEX does not apply to a proposal if extraordinary circumstances, as described in FAA Order 1050.1, paragraph 5-2, Extraordinary Circumstances, exist.

10. Environmental Assessments. Although the facility manager must make a recommendation on the level of environmental review, the Service Center Environmental Specialist must make the final determination as to whether the proposed action warrants preparation of an EA or an EIS. For proposed actions that warrant an EA level of review, the Service Center Environmental Specialist may need to request additional resources, funding, and information to support the proposal.

(a) Consultation with the Airspace Policy Group regarding projects at this stage is recommended.

(b) If an independent contractor is to prepare the EA, the Service Center Environmental Specialist must oversee the preparation to ensure compliance with FAA Order 1050.1, Chapter 6, Environmental Assessments and Findings of No Significant Impact.

(c) Chapter 6 of FAA Order 1050.1 summarizes and supplements requirements of the Council on Environmental Quality (CEQ) regulations for EAs. The CEQ regulations do not specify a required format for an EA; however, FAA Order 1050.1, paragraph 6-2.1, contains a sample format that will facilitate preparation of an EA, and integrate compliance with other environmental laws, regulations, and Executive Orders with NEPA review.

(d) All EAs must be focused and concise in accordance with CEQ and AEE guidance. As defined in the CEQ regulations implementing NEPA, an EA is a "concise public document" that "briefly provides sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact."

(1) 40 CFR §1508.9(a). An EA must include "brief discussions" of the need for the proposed action, alternatives to the proposed action, and the potential environmental impacts of the proposed action and alternatives.

(2) 40 CFR §1508.9(b). In addition to these specific directions for EAs, the CEQ regulations also contain guidelines regarding the importance of reducing paperwork (for example, by "discussing only briefly issues other than significant ones") and reducing delay (for example, by setting time limits for deciding whether to prepare an EIS.) (See 40 C.F.R. §§ 1500.4(c), 1500.5, 1501.8(b)(2)(i)).

11. These concepts are also emphasized in other CEQ guidance, as well as in DOT and FAA orders, and guidance for implementing NEPA actions. To achieve a focused and concise EA, the following must be considered:

(a) Where there are anticipated effects to a resource, but those effects are clearly below thresholds of significance as defined in FAA Order 1050.1, briefly document that fact with an explanation that thresholds would not be reached or exceeded.

(b) Do not address impact categories that the action has no potential to impact, such as construction, farmland, and water quality.

(c) Scale the NEPA review process to the nature and level of the expected environmental impact. Include only what is absolutely necessary in the document and include any additional required supporting data in an appendix.

(d) Do not include information in the document (not even in an appendix) that can be incorporated by reference to a related proposed action analyzed in a previous NEPA document, and made available on a publicly accessible website.

12. Findings of No Significant Impact. If an EA reveals that a proposed air traffic action would not cause significant adverse impacts, the Service Center Environmental Specialist must prepare a FONSI.

(a) FAA Order 1050.1, paragraph 6-3, Finding of No Significant Impact, summarizes and supplements CEQ requirements for FONSIs. The CEQ regulations do not specify a format for FONSIs, but FONSIs must contain the information discussed in 40 CFR 1508.13. The FONSI may be attached to an EA, may be combined with the EA in a single document, or may be a stand–alone document.

(b) Paragraph 6-3 should be reviewed in detail prior to completion of a FONSI to assist in determining the type of document to prepare.

(1) If the FONSI is not combined with, or attached to an EA, it must include a summary of the EA and note any other environmental documentation related to it.

(2) If the FONSI is attached or included with the EA, the FONSI does not need to repeat any of the discussions in the EA but may incorporate them by reference.

(3) All documentation relied upon must be made available to the public upon completion of the environmental process.

(c) If mitigation of potential impacts is included as a requirement in the FONSI, the appropriate follow–up actions must be taken to ensure that the required mitigation is implemented. The Service Center preparing the FONSI is responsible for ensuring that the required mitigation actions are implemented.

13. Environmental Impact Statement. If a proposed action requires preparation of an EIS, the Service Center Environmental Specialist must advise the Area Director when there is a need to seek funding and/or resources for the EIS. Consultation with the Rules and Regulations Group regarding projects at this stage is highly recommended.

(a) The FAA, or a contractor it selects, will prepare an EIS for projects that potentially may cause significant environmental impacts (40 CFR Part 1506.5(c)).

(b) If an independent contractor is to prepare the EIS, the Service Center Environmental Specialist must oversee the preparation to ensure compliance with FAA Order 1050.1, paragraph 7-1.2, Environmental Impact Statement Process.

NOTE–
The Service Center Environmental Specialist will ensure that all EAs and any subsequent EISs for proposed air traffic action within his/her area of jurisdiction meet the requirements of FAA Order 1050.1. The originating facility is responsible for the accuracy of operational data and assumptions contained therein.

14. Record of Decision. For all proposed air traffic actions that have been the subject of an EIS, the Service Center Environmental Specialist must prepare a ROD in accordance with FAA Order 1050.1, paragraph 7–2.

(a) For proposed air traffic actions for which a FONSI is prepared, the Service Center Environmental Specialist should consider preparing a ROD in accordance with FAA Order 1050.1, paragraph 7–2.

(b) If an independent contractor prepares the EIS, that contractor may also support preparation of the ROD; the ROD documents the agency's decision on the Federal action and remains the responsibility of the FAA.

32–2–2. ENVIRONMENTAL REVIEW OF FLIGHT PROCEDURES AND OTHER AIR TRAFFIC ACTIONS

a. "Procedures." The term "procedures" in FAA Order 1050.1 refers to published flight procedures (conventional, PBN IFPs, visual, and others appearing in the FAA's Instrument Flight Procedures (IFP) Information Gateway web page) and radar tracks, which are the actual flight paths.

b. Performance–Based Navigation (PBN) Procedures: Refers to satellite–based navigation procedures known as Area Navigation/Required Navigation Performance (RNAV/RNP) procedures. Establishing and implementing a new or revised PBN Instrument Flight Procedure (IFP) constitutes a federal action under NEPA. Accordingly, the FAA must consider environmental impacts before it can take steps to implement a PBN IFP. There are several CATEXs in FAA Order 1050.1, paragraph 5–6.5, that may apply to these flight procedures and other air traffic action, which preclude the need to prepare an EA or EIS for new or revised PBN IFPs.

c. Categorical Exclusions for Flight Procedures and Other Air Traffic Actions: FAA Order 1050.1 includes several CATEXs that normally apply to flight procedures (provided no extraordinary circumstances apply). See FAA Order 1050.1, subparagraphs 5-6.5g, 5-6.5i, and 5-6.5 p. These CATEXs apply to procedures that:

1. Use overlays of existing flight procedures (paragraph 5-6.5g).

2. Are conducted at 3,000 feet AGL or more (paragraph 5-6.5 i).

3. Are conducted below 3,000 feet AGL, but do not cause traffic to be routinely routed over noise-sensitive areas (paragraph 5-6.5 i).

4. Are modifications to currently approved IFPs conducted below 3,000 feet AGL that do not significantly increase noise over noise-sensitive areas, or involve increases in minimum altitudes or landing minima (paragraph 5-6.5 i).

5. Are new flight procedures that routinely route aircraft over non-noise-sensitive areas (paragraph 5-6.5 p).

6. Are published flight procedures, but do not change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks (paragraph 5-6.5 k).

NOTE–
FAA Order 1050.1 also recognizes that increasing the concentration of aircraft over existing noise–sensitive areas below 3,000 feet AGL and introducing new traffic on a routine basis over noise–sensitive areas below 3,000 feet AGL may cause a significant noise increase that would preclude the use of a CATEX (see FAA Order 1050.1, subparagraphs 5–6.5i and 5–6.5k).

d. Conducting Environmental Review of Proposed Flight Procedures. Additional environmental analysis is needed in some cases to determine the appropriate level of NEPA review for proposed flight procedures. A determination of whether a proposed flight procedure that would normally be categorically excluded, but requires an EA or EIS, depends on whether the proposed action involves "extraordinary circumstances." (See FAA Order 1050.1, paragraph 5-2).

1. If additional analysis shows that extraordinary circumstances do not exist, then the procedure can be categorically excluded from further environmental review under NEPA.

2. If analysis shows that extraordinary circumstances exist, then the procedure does not qualify for a CATEX, and an EA or EIS is required. Extraordinary circumstances exist when the proposed action involves any of the conditions described in FAA Order 1050.1, paragraph 5−2, and also may have a significant effect on the environment.

3. Circumstances listed in FAA Order 1050.1 that are most likely to require additional analysis with respect to a proposed procedure include:

(a) An impact on noise levels of noise-sensitive areas (paragraph 5-2 b (7)).

(b) Effects on the quality of the human environment that are likely to be highly controversial on environmental grounds (paragraph 5-2 b (10)).

(c) An adverse effect on cultural resources protected under the National Historic Preservation Act of 1966, as amended (subparagraph 5-2 b (1)).

(d) An impact on properties protected under section 4(f) of the Department of Transportation Act (subparagraph 5-2 b (2)).

4. If any of the circumstances described in FAA Order 1050.1, paragraph 5-2, exist for a proposed new or modified flight procedure, additional analysis is required to determine the potential for significant environmental effects.

e. Noise Focusing. The term used to characterize the concentration of noise is "noise focusing." The actual flight tracks of aircraft flown on conventional IFPs using ground−based Navigational Aids (NAVAIDs) show broad dispersion around the trajectory of the defined flight procedures. The aircraft noise dispersion is typically based on the performance characteristics of individual aircraft types and pilot technique. In contrast, FAA's experience with satellite−based navigation procedures shows that actual flight tracks and RNAV/RNP PBN procedures converge to a much greater degree. Therefore, aircraft flying RNAV/RNP procedures and the associated noise are concentrated over a smaller area than would be the case for the same operations using conventional, non−RNAV/RNP IFPs.

f. Screening Requirements. Due to concerns with noise focusing as described above, it is particularly important to conduct appropriate noise screening to determine whether or not extraordinary circumstances exist that warrant preparation of an EA or EIS for PBN IFPs that would normally be categorically excluded.

1. Noise screening must be done for PBN IFPs over noise-sensitive areas below 10,000 feet AGL to determine the potential for extraordinary circumstances that may preclude use of a CATEX.

2. PBN IFPs that are not over noise−sensitive areas do not require noise screening; however, a CATEX declaration should be prepared in accordance with subparagraph 32−2−1e9(a).

3. Noise screening is also required between 10,000 feet and 18,000 feet AGL if a procedure would result in operational changes at an altitude that could increase aircraft noise in an area within a national park, national wildlife refuge, historic site (including a traditional cultural property), or similar area where quiet is an attribute and the noise increase is likely to be highly controversial. (See FAA Order 1050.1, Appendix B, paragraph B-1.5 and paragraph 32-2-1b2(e) of this chapter.) Such screening is used to determine if aircraft flying these procedures would cause increased noise over noise-sensitive areas, and if so, the magnitude of the increase.

4. There are several tools that the FAA has developed to screen for the level of change in noise exposure between the existing condition and a proposed procedure (see paragraph 32−3−3).

g. Obstacle Departure Procedures (ODPs). According to FAA Order 8260.46, Departure Procedure (DP) Program, paragraph 2-1-1b(4), there are two types of ODPs: Textual and Graphic. They are defined as:

1. Textual ODP. A relatively simple ODP may be published textually unless a graphical depiction is required for clarity. Textual ODP instructions that exceed a maximum of one turn, one altitude change, and one climb gradient must be published graphically.

(a) A Textual ODP does not define a specific route nor have a name or computer code assignment, but only advises the operator how to avoid potential obstacles.

(b) This type of action is not considered a major Federal action under NEPA; therefore, FAA Order 1050.1, Paragraph 2-1.2 b, Advisory Actions, applies.

2. Graphic ODP. Complex ODPs require a visual presentation to clearly communicate the departure instructions and desired flight paths. If the ODP is depicted graphically, it must be clearly stated on FAA Form 8260–15A, Takeoff Minimums and Textual Departure Procedures (DP), in the Departure Procedure section; for example, "USE JONES DEPARTURE." The decision to graphically publish ODPs rests within AeroNav Products.

(a) A Graphic ODP has a repeatable ground track, has the same naming conventions and computer code assignments, looks almost the same on a chart, and is processed the same as a standard instrument departure (SID). (See FAA Order 8260.46, Departure Procedure (DP) Program, Appendix A).

(b) A Graphic ODP is considered a major Federal Action under NEPA just like an SID. FAA Order 1050.1, Paragraph 5-6.5, Categorical Exclusions for Procedural Actions, should be reviewed to determine if a CATEX applies. FAA Order 1050.1, Appendix B, Paragraph B-1.1, Aircraft Noise Screening, should also be reviewed to determine if noise screening or analysis would be required.

32–2–3. SPECIAL USE AIRSPACE (SUA)

The purpose of this section is to ensure that air traffic personnel and SUA proponents are aware of the need to comply with NEPA and CEQ requirements for evaluating the environmental impacts of proposed SUA actions. (For example, see FAA Order 1050.1, paragraph 3–1.2.b (14). This section supplements the airspace processing requirements contained in Part 5. of this Order.

Normally, SUA is designated to support DOD requirements. The FAA/DOD Memorandum of Understanding (MOU) in Appendix 7 sets forth procedures and responsibilities for the evaluation of the environmental impacts of DOD SUA proposals. It designates when DOD is the lead agency and when FAA is the cooperating agency for NEPA compliance on SUA proposals.

Appendix 8, FAA Special Use Airspace Environmental Processing Procedures, establishes air traffic environmental document development and processing procedures for proposed SUA actions. In the case of SUA proposals submitted by non–DOD Federal agencies, the responsibility for preparation of an EA or EIS, if required, rests with the proponent (i.e., the requesting Federal agency). However, the FAA retains responsibility under NEPA to ensure that its SUA actions are supported by adequate environmental documentation.

In accordance with FAA Order 1050.1, Paragraph 8–2, Adoption of Other Agencies' National Environmental Policy Act Documents, the FAA may adopt, in whole or in part, draft or final EAs, EISs, or the EA portion of another agency's EA/FONSI, or EIS in accordance with 40 CFR Sec. 1506.3, independently evaluate the information contained in the EA or EIS, take full responsibility for the scope and content that address FAA actions, issue its own FONSI and/or ROD, and, if applicable, provide notification to EPA that the FAA has adopted an EIS.

32–2–4. CFR PART 150 STUDIES

a. Airport sponsors (Operators) may choose to conduct a 14 CFR Part 150, Airport Noise Planning, Land Use Compatibility Guidelines study to analyze the operation of an airport, identify compatible and and non–compatible land uses, and assess the costs and benefits of noise mitigation techniques.

b. Noise Compatibility Programs that result from Part 150 studies often recommend modifications to air traffic routes and/or procedures to accomplish noise abatement. The FAA does not normally make changes in air traffic routes and/or procedures solely for the purpose of noise abatement.

1. Under Part 150, the FAA can approve flight procedures to reduce noise that are recommended in a Noise Compatibility Plan.

2. If modifications to air traffic routes and/or procedures are recommended, air traffic will evaluate those recommendations as to feasibility and provide input to the appropriate organization in the Office of Airports.

c. Preparation of a Part 150 study does not necessarily invoke NEPA; however, the potential implementation of recommended noise abatement measures, such as alternative air traffic procedures, is subject to the environmental review process by the air traffic program.

1. During the Part 150 process, facility managers must keep the Airports Division or Airports District Office representative and the Service Center Environmental Specialist advised of

any alternative air traffic control procedures that have the potential to require a NEPA review.

2. Facility managers are responsible for ensuring that current operational data and assumptions (furnished to the entity completing the Part 150 process) are accurate and that future operational data and assumptions reflect reasonable conditions. (Operational data in this context relates to flight track and profile data and/or documentation.)

d. The facility environmental representative and the Service Center Environmental Specialist must coordinate with the Airports Division or Airports District Office representative throughout the Part 150 process. This coordination should ensure that assumptions and data used are reviewed at each phase and results can be verified early in the process. Early coordination will allow for adjustments to any operational assumptions prior to completion of the study.

e. The Service Center Environmental Specialist must coordinate with the Airports Division or Airports District Office personnel to furnish any data necessary for use in the Part 150 study. Additionally, air traffic participation in the process does not constitute air traffic approval for a Part 150 action.

f. During other noise studies conducted by the airport sponsor, facility managers and Service Center Environmental Specialists must work with the airport sponsor and the Office of Airports personnel on the exchange of information as described above.

Section 3. Environmental Impact Categories and Other Topics

Chapter 4 of FAA Order 1050.1, "Impact Categories, Significance, and Mitigation," summarizes the requirements and procedures for environmental impact analyses according to the resource impact category. Executive Orders, DOT and FAA orders, handbooks, memoranda, and guidance documents described in FAA Order 1050.1, paragraph 1−10.13, Environmental Impact Categories, may also contain requirements.

Although all resource impact categories may receive the same level of review and analysis, the level of detail of review and analysis for a particular resource is dependent upon the potential for impact. The following paragraphs address those impact categories that may be required as part of the environmental review for proposed air traffic actions.

32−3−1. ENVIRONMENTAL IMPACT CATEGORIES TO BE INCLUDED IN ANALYSIS

a. The following environmental resource categories or sub−categories could be impacted by a proposed flight procedure, flight procedure change, or other air traffic related action. Accordingly, they must be included in an EA or EIS for further detailed analysis. For proposed actions that qualify for a categorical exclusion, certain impact categories or sub−categories may still need to be analyzed to achieve compliance with special purpose environmental laws, regulations, and other state and federal requirements. (See FAA Order 1050.1, paragraphs 4−2 f, 4−3.2, and 5−2 b.)

1. Air Quality

2. Compatible Land Use

3. DOT Act; Section 4(f)

4. Biological Resources; particularly avian species like birds and bats. As necessary, conduct impact analyses related to bird and bat strikes, as well as noise and light emissions−related impacts to avian and nocturnal avian species.

5. Biological Resources: Other Species. If the proposed action increases the number of aircraft flights, changes the origins or destinations of flights, the proposed action may also need to be analyzed for the potential for an invasive species to be introduced into the study area (GSA).

A significant impact could occur if the U.S. Fish and Wildlife Service or the National Marine Fisheries Service determines that the action could jeopardize the continued existence of a federally listed threatened or endangered species, or would result in the destruction or adverse modification of federally designated critical habitat. Compliance with Section 7 of the Endangered Species Act may be required.

6. Historical, Architectural, Archeological, and Cultural Resources (*Historical and Cultural Resources only*). Review the potential for adverse effects related to the introduction of visual, atmospheric, or audible elements that diminish the integrity of the significant historic or cultural features that qualify the property for inclusion in the National Register or other federal protections.

7. Light Emissions and Visual Impacts. In certain cases, a proposed action may require an analysis of light emissions for potential impacts to avian and nocturnal avian species.

8. Natural Resources and Energy Supply (*aircraft fuel burn analysis only*). Review Council on Environmental Quality (CEQ) June 21, 2019 Draft National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions. (Refer to the official version on the Government Printing Office's govinfo website https://www.govinfo.gov/app/collection/fr and on Regulations.gov website at: https://regulations.gov in Docket No. CEQ−2019−0002.) Until further FAA guidance is provided, continue to calculate aircraft fuel burn in accordance with the methodology referenced in AEE−400 Guidance Memo #3, dated January 12, 2012, Considering Greenhouse Gases and Climate Under the National Environmental Policy Act (NEPA): Interim Guidance, and other currently used tools such as AEDT, to analyze fuel burn.

9. Noise. Calculate day-night sound level (DNL) exposure levels for population centroids and unique grid points. For California analyses, CNEL may be provided as a supplemental metric. Use of

other supplemental metrics requires coordination with the Rules and Regulations Group, AJV-P2. Change analysis must be conducted as directed in FAA Order 1050.1, Appendix B.

b. A proposed flight procedure(s) or other air traffic action would create a significant noise impact if it would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe.

1. For example, an increase from DNL 65.5 dB to 67 dB is considered a significant impact, as is an increase from DNL 63.5 dB to 65 dB. (See FAA Order 1050.1, Appendix B, Paragraph B-1.5, Significance Determination).

2. If the noise screening shows that the proposed procedure(s) would cause such an impact, a CATEX cannot be used, and an EA or EIS must be prepared.

3. If the flight procedure(s) or other air traffic action can be modified to reduce the noise below the significance threshold, an EA and mitigated Finding of No Significant Impact (FONSI) may be prepared. (See FAA Order 1050.1, paragraphs 2-3.6, 4-4, and 6-2.3).

4. If the noise screening shows that aircraft noise over a noise–sensitive area would increase by 5 dB or more, within the DNL 45–60 dB noise range; or would increase by 3 dB or more within the DNL 60–65 dB noise range, further analysis may be required to determine the potential for the flight procedure(s) to be highly controversial because of the potential noise impacts.

5. The determination of the appropriate level of additional analysis should be made in consultation with Mission Support, Policy, Rules and Regulations Group.

c. If the noise screening shows that none of the above increases would occur, the results of the noise screening with these conclusions should be attached to the CATEX Declaration and uploaded into the current document management database. (See FAA Order JO 7400.2, Appendix 6.)

32–3–2. ENVIRONMENTAL IMPACT CATEGORIES EXCLUDED FROM ANALYSIS

a. The following environmental resource categories or sub–categories would not normally be affected by a proposed flight procedure or air traffic related action because the resource either does not exist within the study area, or the types of activities associated with a proposed air traffic or air traffic related action would not affect them. Accordingly, the following impact areas and resource categories would not be included in an EA or EIS for further analysis.

1. Coastal Resources (Coastal Barriers and Coastal Zones).

(a) Coastal Barriers. The Proposed Action is not expected to involve any actions (physical changes or development of facilities) that would be inconsistent with management of designated Coastal Barrier Resource System (CBRS) areas. However, if there are coastal zones within the study area, management plans must be reviewed to ensure there are no activities related to aircraft overflight noise in the management plan.

(b) Coastal Zones. The Proposed Action is not expected to directly affect shorelines or change the use of shoreline zones, or be inconsistent with a NOAA–approved state Coastal Zone Management Plan (CZMP). However, if there are coastal zones within the study area, the CMZP should be reviewed to confirm.

2. Construction Impacts. The implementation of new air traffic procedures or other air traffic actions does not normally involve construction activity or ground–based impacts.

3. Farmland. The Farmland Protection Policy Act (FPPA) (7 CFR Part 658) regulates federal actions with potential to convert farmland to non–agricultural uses. Implementation of proposed flight procedures or air traffic actions does not normally involve the development of land regardless of use, nor do they have the potential to convert farmland to non–agricultural uses.

4. Biological Resources (habitat).

(a) Air traffic, airspace, and flight procedure changes do not involve ground disturbing activities. They do not normally impact critical habitats.

(b) The proposed flight procedure or air traffic action would not normally affect habitat for non–avian animals, fish, or plants.

5. Floodplains. The proposed flight procedure or air traffic action would not involve the construction of facilities. Therefore, it would not impact nor be affected by locations designated as a 100–year flood event area as described by the Federal Emergency Management Agency (FEMA), and no further analysis is required.

6. Hazardous Materials, Pollution Prevention, and Solid Waste. The proposed flight procedure or air traffic action would not involve construction or development, or any physical disturbances of the ground. Therefore, the potential for impact from hazardous materials, pollution, or solid waste is not anticipated, and no further analysis or pollution prevention actions would be required.

7. Historical, Architectural, Archeological, and Cultural Resources (*except Historical and Cultural*).

(a) Archeological. The proposed flight procedure or air traffic action would not involve any construction, development, or any physical disturbance of the ground, or excavation that could impact archaeological resources on Federal, State, or Indian lands, and therefore, would not impact cultural resources, or affect the physical integrity or access to American Indian sacred or culturally significant sites.

(b) Architectural. The proposed flight procedure or air traffic action would not involve any construction, development, or any physical disturbance of the ground. Therefore, the potential for impact in relation to architectural compatibility with the character of a surrounding historic district or property is not anticipated. However, in certain circumstances, some analysis of the potential for impacts related to aircraft noise may be required.

8. Light Emissions and Visual Impacts (*except Visual Impacts*). There are no special purpose laws for light impacts and visual impacts. Aviation lighting is required for security, obstruction clearance, and navigation and is the chief contributor to light emissions from airports.

(a) An impact analysis is necessary when projects introduce new airport lighting that may affect residential or other sensitive land uses.

(b) In certain circumstances, for example, when high intensity lights shine directly into a residence or have the potential to impact avian or other species, is the effect of light emissions considered potentially significant enough to warrant impact analysis and planning to reduce or mitigate such effects.

(c) The proposed flight procedure or air traffic action will not normally involve aviation lighting. Therefore, no further analysis is required.

9. Natural Resources and Energy Supply (*except fuel burn*). The proposed flight procedure or air traffic action would not normally involve the use of natural resources or materials. Therefore, no further analysis is required.

10. Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks (*except Environmental Justice*). Potential impacts in this category as a result of disproportionally high adverse noise and/or air quality impacts are dealt with in the noise and air quality impacts sections, respectively.

(a) Socioeconomic Impacts. The proposed flight procedure or air traffic action would not involve acquisition of real estate, relocation of residents or community businesses, disruption of local traffic patterns, loss in community tax base, or changes to the fabric of the community.

(b) Children's Environmental Health and Safety Risks. The proposed flight procedure or air traffic action would not affect products or substances that a child would be likely to come into contact with, ingest, use, or be exposed to, and would not result in environmental health and safety risks that could disproportionately affect children.

11. Water Quality. The proposed flight procedure or air traffic action would not involve any discharges or changes to existing discharges to water bodies, create a new discharge that would result in impacts to water quality, or modify a water body. Therefore, the proposed flight procedure or air traffic action would not result in any direct or indirect impacts to water quality, and no further analysis is required.

12. Wetlands. The proposed action would not involve the construction of facilities or infrastructure and would therefore not impact wetlands or navigable waters. Therefore, no further analysis is required.

13. Wild and Scenic Rivers. If there are no Wild and Scenic River segments (http://www.rivers.gov/rivers/) located in the study area, the proposed flight procedure or air traffic action would not adversely impact any wild, scenic, or recreational status of a river or river segment included in the Wild and Scenic River System and therefore, no further analysis is required.

32–3–3. ENVIRONMENTAL SCREENING AND MODELING TOOLS

a. Screening. FAA Order 1050.1 contains a list of air traffic actions which normally do not result in significant impacts to the environment, are identified as categorically excludable actions (CATEX), and therefore, do not require the preparation of an EA or an EIS. One of the requirements for a CATEX determination is to ensure that there are no extraordinary circumstances as defined in FAA Order 1050.1.

1. The environmental screening process provides a uniform and consistent approach to identify air traffic actions that qualify for categorical exclusion from full environmental impact review in an EA or EIS, and also identifies extraordinary circumstances and/or the potential for significant impacts associated with proposed air traffic actions. The screening process is based on currently approved FAA impact analysis tools and policies.

2. A proponent of an air traffic action can perform a series of relatively simple tests prior to contacting a Service Center Environmental Specialist based on the location of the action (e.g., airport location) that will indicate if a CATEX is applicable.

3. Actions that pass the screening tests (see paragraph 32–3–3c1) would normally be eligible for a CATEX, but could still require compliance with special purpose environmental laws, regulations, and requirements such as National Historic Preservation Act (NHPA) Section 106 requirements.

b. Passing the environmental screening process indicates that the potential for significant impacts and/or extraordinary circumstances due to aircraft noise is minimal or negligible, and a CATEX is appropriate. The environmental screening documentation should be used by the Service Center Environmental Specialist to support the CATEX determination.

c. The recommended practice is to start with simple NEPA document determination tools, switching to more complex ones only if the proposed flight procedure or other air traffic action fails the test for CATEX eligibility. In general, the simple tools evaluate isolated changes to the proposed action with the goal of achieving quick but conservative results and require input of a minimal amount of data. The more complex tools evaluate multiple interdependent changes and require input of a more comprehensive set of data.

1. The following are the available tools that can screen proposed flight procedures or other air traffic actions for noise and/or fuel burn and carbon dioxide (CO_2) impacts as indicated:

(a) Pre–Screening Filter. The Environmental Pre–screening Filter was developed to guide users through initial analysis of a flight procedure or other air traffic action to achieve applicability of a CATEX. Using a series of simple questions, the pre–screening filter collects and analyzes flight procedure information to determine the next steps in completing the NEPA process. The filter provides the Service Center Environmental Specialist with information to identify an appropriate CATEX or if additional environmental review is required.

(b) Noise Screening Guidance Document. Using a series of look-up tables, the document guides users through the process to determine if a CATEX is appropriate or if additional environmental review is required.

(c) Terminal Area Route Generation Evaluation and Traffic Simulation (TARGETS) Environmental Plug-in. The TARGETS Plug-in allows specialists to design procedures for the terminal environment and assess alternative concepts leading to final designs that consider both operational noise and air emissions constraints. Once the user has performed the analysis, the TARGETS Plug-in provides results detailing any potential increase or decrease in noise due to the proposed air traffic action. The TARGETS Plug-in also leverages the technology of AEDT and provides the capability to conduct tradeoff analysis between noise, fuel burn, and CO_2.

2. Modeling. If the result of screening indicates that additional analysis is required, then a more complex modeling tool will need to be used. FAA environmental modeling has evolved to a single tool

that allows analysis of noise, emissions, and climate impacts and their interdependencies:

(a) Aviation Environmental Design Tool. AEDT is a software system that dynamically models aircraft performance in space and time to produce fuel burn, emissions and noise. Full flight gate-to-gate analyses are possible for study sizes ranging from a single flight at an airport to scenarios at the regional, national, and global levels.

(b) AEDT is currently used by the U.S. government to consider the interdependencies between aircraft-related fuel burn, noise, and emissions.

(c) The AEDT initially replaced the Noise Integrated Routing System (NIRS) that was used for the noise analysis of large regional study areas that included multiple airports. AEDT has subsequently also replaced the Integrated Noise Model (INM) and the Emissions and Dispersion Modeling System (EDMS).

32–3–4. RECORDS RETENTION

Records retention must be in accordance with the appropriate paragraph(s) in FAA Order 1350.15, Records Organization, Transfer, and Destruction Standards.

NOTE–
Although chapter 10 of FAA Order 1350.15 contains Air Traffic–specific information, guidance for retention of environmental documentation is contained in that portion of the order specific to the Airports Division.

a. Environmental record–keeping should receive special attention at the field facility level. If an action requires preparation of an EA or an EIS, the Service Center Environmental Specialist must maintain an Administrative File for every proposed action. The Administrative File is important in the environmental process because it is a compilation of all the information relied upon by FAA in the decision–making process.

b. Since some environmental projects may extend over several years, the Administrative File becomes a history of events. In the event of a legal challenge, the Administrative File will be used to develop the Administrative Record. The Administrative Record will be reviewed by the U.S. Court of Appeals to determine if the FAA complied with environmental requirements. The data and documentation contained in the File can also be used as the starting point for any follow–on environmental studies.

c. Field facility personnel must consult with their Service Center Environmental Specialist to obtain guidance on what should or should not become part of the Administrative File. Regional counsel or AGC–620, as appropriate, should also be consulted on this. Federal court rules provide that when an FAA action is challenged in court, the agency has 40 days to compile the Administrative Record, make necessary copies, and file an index to the Record with the court. Therefore, it is preferable to begin development of the Administrative Record by maintaining an accurate Administrative File from the earliest stages of a project, instead of waiting until a lawsuit is filed.

Section 4. Air Traffic–Specific Environmental Guidance and Requirements

32–4–1. DEPARTMENT OF TRANSPORTATION (DOT) ACT SECTION 4(f) (RECODIFIED AS 49 USC SECTION 303(c))

Air Traffic personnel need to consult with all appropriate Federal, state and local officials having jurisdiction over affected Section 4(f) resource when determining whether project–related noise impacts would constitute a use of those resources.

FAA Order 1050.1, Appendix B, provides guidance on matters relevant to Section 4(f). (See also Appendix 9, Noise Policy for Management of Airspace Over Federally Managed Lands.)

32–4–2. ENVIRONMENTAL JUSTICE (TITLE VI/NEPA)

a. Environmental Specialists need to know the process and requirements for environmental justice compliance.

b. DOT Order 5610.2, Environmental Justice, requires analysis of impacts of proposed FAA actions to ensure that minority and low–income population groups are not disproportionately affected. Additionally, FAA Order 1050.1, Appendix B, paragraph B-1.5; Chapter 2, paragraphs 2-2.1.b(2)(a), 2-5.2.b, and Chapter 4, paragraph 4-1, summarize the requirements and procedures to be used in environmental impact analysis related to environmental justice, as well as other socioeconomic impacts and children's environmental health and safety risks.

c. Environmental Specialists should identify who potentially benefits and who is potentially adversely impacted by the proposed actions, while noting impacts on specific subgroups.

32–4–3. COMMUNITY INVOLVEMENT

a. Community involvement is the process of engaging in dialogue and collaboration with communities affected by FAA actions. Collaboration means all parties taking responsibility to engage in meaningful dialogue with their counterparts. This includes making a genuine effort to ensure that the interests of all have been identified and as many as possible have been addressed before an outcome is determined.

b. The FAA is committed to open dialogue with communities and regards community input as an important consideration in decisions that affect the airspace. Because the FAA must prioritize the safe and efficient operation of the National Airspace System, community involvement does not guarantee outcomes that satisfy everyone. However, decisions that take community input into consideration are more likely to reflect the collective public interest, receive broader community acceptance, and experience fewer implementation and post–implementation problems.

REFERENCE–
FAA Community Involvement Manual, February 2016, Section 1.1 "Background."

c. Therefore, ATO personnel should reference the following materials to determine the type and extent of community involvement, if any, for a project or action:

1. *FAA Order 1050.1*

2. *FAA Community Involvement Manual (CIM)*

3. *FAA Air Traffic Organization Community Involvement Plan (ATO CIP)*

4. *FAA Community Involvement Performance Based Navigation Desk Guide (CIPDG)*

5. *FAA Order JO 7400.2, Appendix 10, FAA's "Community Involvement Policy" statement.*

6. *FAA Scenario–Based Guidance for Community Engagement.*

d. Community involvement should be considered early in the project development process. Note that the type of community involvement (workshops, airport meetings, roundtables, presentations, etc.) must be determined on a case–by–case basis.

32–4–4. SEGMENTATION, INDEPENDENT UTILITY, AND CUMULATIVE IMPACTS

a. Environmental Specialists must ensure that projects that do not have independent utility are not separated into smaller components (segmented) in

order to avoid analyzing the overall impact of the project. A project has independent utility when it can reasonably satisfy the agency's purpose and need for the project even if no other project (or related portion of the project) is implemented. In contrast, projects are connected actions if they would not exist without the other project. Environmental Specialists should ensure that a project does not involve actions by multiple FAA LOB/SOs. Connected actions, as defined in FAA Order 1050.1F, Paragraph 2–3.2 (b)(1), must be considered together to prevent dividing a project into several smaller actions, each of which might have an insignificant impact when considered in isolation, but that taken as a whole, could have a substantial impact.

b. Environmental Specialists must ensure that cumulative impacts are appropriately addressed in all EAs or EISs for air traffic actions.

1. Cumulative impacts are those that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal and non–Federal) or person undertakes such other actions.

2. Cumulative impacts may result from individually minor, but collectively significant actions taking place over a period of time. (See FAA Order 1050.1, paragraph 4-2.d (3) and also "Considering Cumulative Effects Under the National Environmental Policy Act (1997).")

32–4–5. DIVERSE VECTOR AREAS (DVA)

a. According to FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS), a DVA is an area established to avoid obstacles.

1. A DVA is used by air traffic control (ATC) radar facilities to allow the radar vectoring of aircraft below the minimum vectoring altitude (MVA), or for en route facilities, the minimum instrument flight rules altitude (MIA).

2. A DVA consists of designated airspace associated with a departure runway where the use of the applicable departure criteria, specified in FAA Order 8260.3, and this order have been applied to identify and avoid obstacles that penetrate the departure obstacle clearance surface (OCS).

3. Avoidance of obstacles is achieved through the application of a sloping OCS within the boundaries of the DVA. Since a sloping OCS is applicable to climb segments, a DVA is valid only when aircraft are permitted to climb uninterrupted from the departure runway to the MVA/MIA (or higher). A DVA is not applicable once an aircraft's climb is arrested.

b. Since DVAs generally do not define a specific route to avoid potential obstacles, this type of action is not considered a major Federal action under NEPA and therefore, FAA Order 1050.1, paragraph 2-1.2.b, Advisory Actions, applies.

c. In accordance with FAA Order 1050.1, paragraph 2–1.2.b, the establishment of a DVA could result in subsequent action that may be subject to NEPA. Facility and Service Center specialists working on these subsequent actions must consult with their environmental specialist to determine if that action is subject to NEPA. (See questions in paragraph 32–2–1.)

32–4–6. NATIONAL SECURITY AREAS (NSAs)

a. According to paragraph 28-1-1, Definition, a National Security Area (NSA) consists of airspace of defined vertical and lateral dimensions established at locations where there is a requirement for increased security of ground facilities. Pilots are requested to voluntarily avoid flying through an NSA. When it is necessary to provide a greater level of security, flight in an NSA may be temporarily prohibited pursuant to the provisions of 14 CFR 99.7, Special Security Instructions.

b. In accordance with paragraph 28-2-1,NSA Proposals, NSAs do not require environmental analysis; therefore, this type of action is not considered a major Federal action under NEPA, and FAA Order 1050.1, paragraph 2-1.2.b, Advisory Actions, applies.

32–4–7. PROHIBITED AREA AND ALERT AREA DESIGNATIONS

In accordance with paragraph 21–1–9, Environmental Analysis, prohibited area and alert area designations are actions that are neither permissive nor enabling, and therefore, environmental assessments or statements are not required when designating these areas.

32–4–8. RECORDS RETENTION

Records retention must be in accordance with the appropriate paragraph(s) in FAA Order 1350.15, Records Organization, Transfer, and Destruction Standards.

NOTE–
Although chapter 10 of FAA Order 1350.15 contains Air Traffic–specific information, guidance for retention of environmental documentation is contained in that portion of the order specific to the Airports Division.

a. Environmental record–keeping should receive special attention at the field facility level. If an action requires preparation of an EA or an EIS, the Service Center Environmental Specialist must maintain the Administrative File. The Administrative File is important in the environmental process because it is a compilation of all the information relied upon by FAA in the decision–making process.

b. Since some environmental projects may extend over several years, the Administrative File becomes a history of events. In the event of a legal challenge, the Administrative File will be used to develop the Administrative Record. The Administrative Record will be reviewed by the U.S. Court of Appeals to determine if the FAA complied with the requirements of NEPA. The data and documentation contained in the File can also be used to initiate any subsequent environmental studies.

c. Field facility personnel must consult with their Service Center Environmental Specialist to obtain guidance on what should or should not become part of the Administrative File. Regional counsel or AGC–620, as appropriate, should also be consulted on this. Federal court rules provide that when an FAA action is challenged in court, the agency has 40 days to compile the Administrative Record, make necessary copies, and file an index to the Record with the court. Therefore, it is preferable to begin development of the Administrative Record by maintaining an accurate Administrative File from the earliest stages of a project, instead of waiting until a lawsuit is filed.

32–4–9. APPENDICES

a. Appendix 1. Environmental Study Process Flow Chart.

b. Appendix 2. Special Use Airspace Aeronautical Processing Flow Chart

c. Appendix 3. Special Use Airspace Environmental Processing Flow Chart

d. Appendix 4. FAA Procedures for Processing SUA Actions Summary Table

e. Appendix 5. Air Traffic Initial Environmental Review (IER)

f. Appendix 6. Sample Categorical Exclusion Declaration.

g. Appendix 7. FAA/DOD Memorandum of Understanding.

h. Appendix 8. FAA Special Use Airspace Environmental Processing Procedures.

i. Appendix 9. Noise Policy for Management of Airspace Over Federally Managed Lands.

j. . Community Involvement Policy.

32–4–10. MEMORANDUMS AND EMAILS SUPERSEDED BY THIS ORDER

The following guidance memorandums (memos) and emails have been incorporated and therefore cancelled.

a. ATA-1 Memo dated January 17, 2001, Change in Air Traffic Noise Screen Policy (Federal Register/Vol. 65, No. 235/Wednesday, December 6, 2000/Notices, p. 76339).

b. ATA-300 Memo dated September 15, 2003, Altitude Cut-Off for National Airspace redesign (NAR) Environmental Analyses.

c. AJR-34 Memo dated August 21, 2009, Environmental Guidance for Actions Involving Propeller-Driven Aircraft.

d. AJR-34 Memo dated August 21, 2009, Guidance Regarding the Number of Procedures for Noise Screening.

e. AJV-1 Memo dated December 15, 2010, Guidance for Conducting Environmental Review of Proposed Performance Based Navigation (PBN) Flight Procedures.

f. AEE-400 Guidance Memo #1 dated December 20, 2010, Clarification of CATEXs 311g and 311i for Procedural Actions; FAA Order 1050.1E.

g. AEE-400 Memo #2 dated January 10, 2011, Guidance on Preparing Focused, Concise and Timely Environmental Assessments.

h. AEE-400 Guidance Memo #4 dated March 21, 2012, Guidance on Using AEDT2a to Conduct Environmental Modeling for FAA Air Traffic Airspace and Procedure Actions.

i. D. Warren email dated March 23, 2012; In accordance with FAA Order 1050.1, National Security Areas (NSAs) are considered Advisory Actions and do not require environmental analysis.

j. D. Warren email, dated May 8, 2012, CATEXs for Departure.

k. AJV-114 memo dated July 17, 2012, Interim Guidance: Using the Lateral Movement Tests (LAT Tests) for Noise Screening of Air Traffic Actions.

l. AJV-11 memo dated January 4, 2013, Authorized Use of the MITRE Noise Screening Guidance Document, dated December 2012.

m. D. Warren email dated March 11, 2013, Diverse Vector Areas (DVAs).

n. AJV-0 Memo dated March 21, 2013, Signature Authority and Process for Environmental Findings and Decision Documents Related to Performance Based Navigation and Airspace Redesign.

o. AJV-0 Guidance Memo dated September 19, 2013, Implementation of the Re-engineered Environmental Review Process for Instrument Flight Procedures: FAA Order JO 7400.2J.

Chapter 33. Parasail Operations

Section 1. General

33–1–1. PURPOSE

This chapter provides guidance, policies, and procedures for processing requests for parasail operations in the NAS.

33–1–2. AUTHORITY

a. Title 49 of the U.S. Code (49 U.S.C), Section 40103 gives the Administrator the authority to regulate, control, develop plans for, and formulate policies with respect to the use of the navigable airspace.

b. Title 14 of the Code of Federal Regulations (14 CFR) Part 101 prescribes in part, rules governing the operation of kites in the United States.

33–1–3. POLICY

a. The FAA's Office of General Counsel has determined that parasail operations are subject to the requirements for kites under Part 101.

b. The FAA's primary mission is to mitigate impacts to the NAS from parasail operations. The FAA has no authority regarding the parasail vessel, or the rigging of the parasail itself.

c. Waiver requests should be processed in accordance with the guidance contained in FAA Order JO 7210.3, Chapter 19, Waivers, Authorizations and Exemptions.

d. ATO Service Centers must provide all issued waivers for parasail operations to the Flight Standards District Office nearest the location of the proposed operation.

33–1–4. CONTROLLING FACILITY

The FAA or DOD ATC facility having control jurisdiction over the affected airspace where the parasail operation is projected to operate must be designated as the controlling facility. When an operation may impact multiple facilities, one facility will be designated as the lead and be designated as the controlling facility. The controlling facility will be responsible for the execution of the appropriate airspace management.

33–1–5. RESOURCES

a. FAA Order JO 7210.3, Facility Operation and Administration, contains guidance and policy for processing waiver/authorizations and is applicable to waiver/authorizations issued for parasail operations.

b. ASTM F3099-14, Standard Practices for Parasailing, contains guidelines for the operation, maintenance, and inspection of parasail vessels, equipment, and associated activities including crew training and flying passengers aloft in a parasail.

Section 2. Waivers

33–2–1. RESPONSIBILITIES

a. Air Traffic is authorized to issue waiver/authorizations to Part 101 for parasail operations, and is responsible for integrating those activities into the NAS. The appropriate Service Center is air traffic's point of contact for Part 101 and associated waiver/authorizations, and is responsible for coordinating certain proposals regarding airspace operations and procedures with Flight Standards.

b. The Airspace Policy Group provides oversight and support to Service Centers for parasail operations.

c. Service Centers must provide approved parasail waivers to the appropriate Flight Standards District Office (FSDO).

33–2–2. GENERAL OPERATING LIMITATIONS

a. In accordance with Part 101, a parasail must not operate:

1. Less than 500 feet from the base of any cloud.

2. More than 500 feet above the surface of the earth.

3. From an area where the ground visibility is less than three miles.

4. Within five miles from the boundary of an airport.

5. In a manner that creates a hazard to persons or property.

6. In such a manner to allow an object to be dropped, if such action creates a hazard to other people or their property.

b. Parasail operators must operate in accordance with the provisions of 14 CFR § 101.7. Due to the limited maneuverability of the parasail and its towing vessel, it is inadvisable to place requirements on parasail operators to give way to aircraft. Aircraft operators are expected to comply with 14 CFR § 91.119(c) to ensure minimum distance from parasail operations.

33–2–3. WAIVERS

a. a. A waiver/authorization is required for parasail operations conducted outside the requirements defined in 14 CFR Part 101. An applicant must submit its waiver/authorization request to the ATO Service Area operations Support Group (OSG) office. If the applicant submits its request directly to an air traffic facility, the air traffic facility must direct the applicant to submit its request directly to the Service Center.

b. The Service Center OSG office must perform the initial review of the waiver/authorization request.

1. The Service Center OSG office must verify that FAA Form 7711-2, Application for Certificate of Waiver or Authorization (COA), is complete and that the information required in 14 CFR § 101.15, Notice Requirements, has been provided. The Service Center OSG office must return incomplete waiver/authorization requests to the applicant for additional information.

2. Requests that cannot be accommodated will not be coordinated beyond the Service Center.

33–2–4. WAIVER PROCESS

a. The applicant must submit FAA Form 7711-2 at least 45 days prior to the event, and must include the required information as outlined in 14 CFR § 101.15.

b. The Service Center OSG office is the focal point for receiving, processing, and signing waiver requests.

c. When a proposal overlaps Service Center geographical jurisdictions, the affected Service Centers must coordinate to determine which office will serve as the lead office for processing the proposal. Coordination between Service Centers is also required when the affected geographical area and the ATC facility are under the jurisdiction of different Service Centers or facilities.

d. Service Centers must provide approved parasail waivers to the appropriate FSDO.

33–2–5. AERONAUTICAL ANALYSIS

Prior to issuing a COA for parasail operations, the Service Center and appropriate facilities must conduct an aeronautical analysis to identify any aeronautical impacts to be resolved or mitigated. The analysis must be specific to the proposed site, and may include, but is not limited to, the following steps:

a. Details on the parasail operation, such as location, date(s), time, number of operations, and expected altitude.

b. Identify the operations specified in the COA, as this will determine which sections of 14 CFR Part 101 apply.

c. Determine the class of airspace where the event is proposed and consider the impact of the parasail operation to local airports, VFR aircraft and routes, IFR routes and procedures, military training routes, special use airspace, etc.

33–2–6. FACILITY COORDINATION

a. Per 14 CFR § 101.7, the parasail operator is responsible to operate in a manner that does not create a hazard to other persons, or their property.

b. Facilities should determine impact, if any; meet with the sponsor, if possible; and discuss notification requirements to the flying public to maintain the safety and efficiency of the NAS.

33–2–7. WAIVER/AUTHORIZATION FORMAT AND CONTENT

a. Use FAA Form 7711-1 to issue the waiver/authorization.

b. At a minimum, the waiver/authorization must contain the following:

1. Specific section of Part 101 to be waived or authorized.

2. Name, address, and telephone number of the applicant.

3. Location of the approved parasail operating area in coordinates or description of location (for example, west of Pier A).

4. Approved dates and times of operations.

5. Advance notification requirements to the designated FAA facilities and, if desired, cancellation and termination notification.

6. Approved projected altitudes of the parasail(s).

7. Other provisions or requirements deemed necessary to maintain safety of the NAS. Waivers for parasail operations should be unique and specific to each environment where parasails are operating.

c. The Service Center office may suspend or revoke a waiver/authorization whenever a question arises about the safety of the operation, compliance with safety precautions or conditions of approval, or if an unforeseen impact on aeronautical operations occurs.

d. Terms and conditions. In most cases, an attachment containing terms and conditions of the COA will be included. Provisions commonly addressed in terms and conditions may include, but are not limited to, the following:

1. Cancellation of COA if the operator fails to comply with the conditions or requirements as provided in Part 101.

2. Any special altitude restrictions specific to the operating area.

3. The COA must be carried aboard the parasail vessel at all times, and operators briefed on its contents and requirements.

4. Recommendation to attend an annual operator safety meeting, if available.

5. The parasail vessel operator is responsible for obtaining current weather information from the nearest air traffic facility.

6. Operations must not be conducted between sunset and sunrise.

7. Prior to conducting parasail operations, contact the nearest ATC facility to advise of the proposed area of operation, duration of the activity, and altitude of the parasail.

8. Any restrictions designed to avoid protected departure or arrival areas to nearby airports, as necessary.

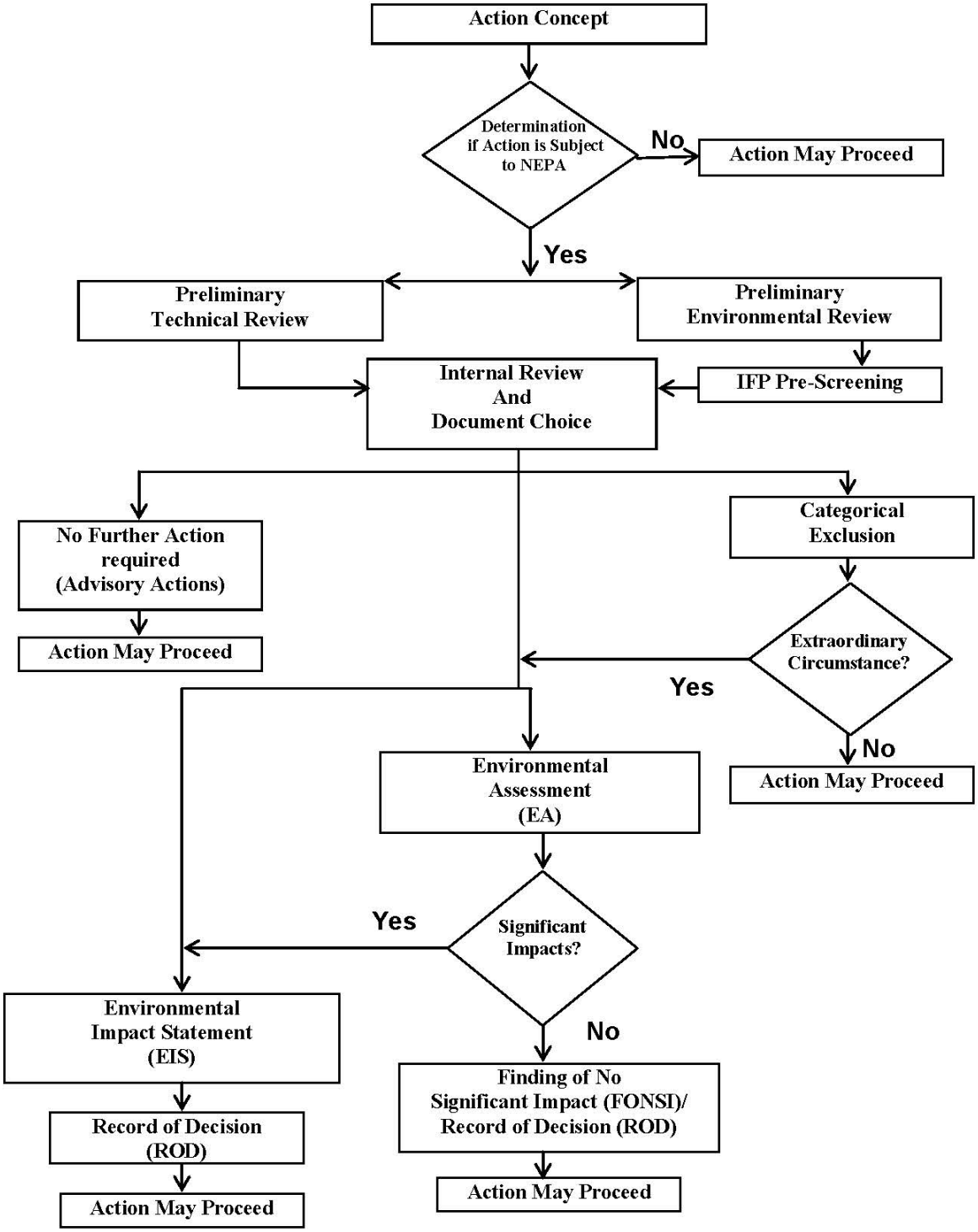
9. Recommendation for the operator to use ground observers (“spotters”) to maintain operator awareness of nearby aircraft activity.

10. Parasail operators must ensure that the parasail is marked and lighted in compliance with 14 CFR § 101.17(b).

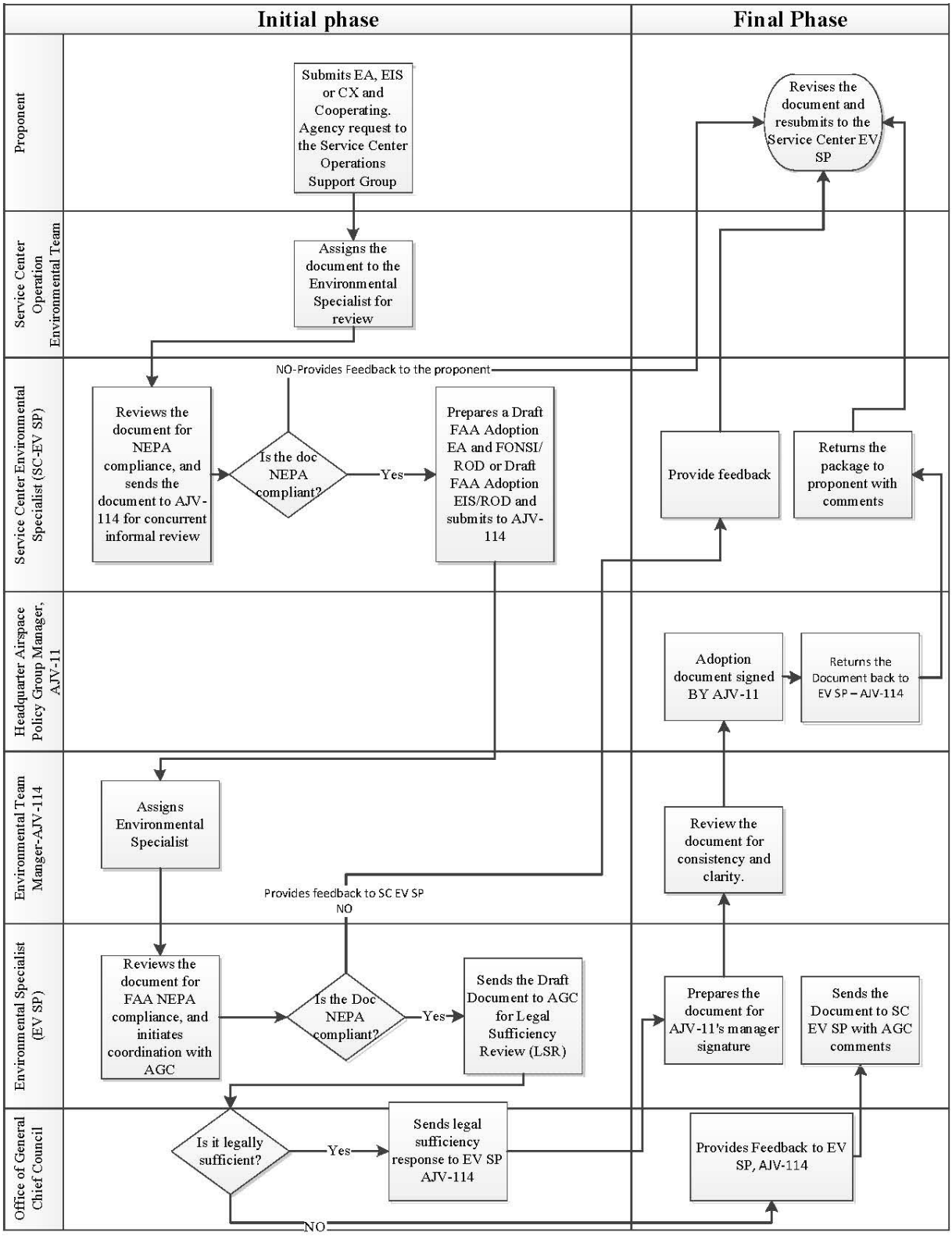
11. Additional requirements on the operator for ensuring public safety.

12. Include a statement that, in accordance with 14 CFR § 101.7(a), "A parasail operator may not operate in a manner that creates a hazard to other persons or their property."

Appendix 1. Environmental Study Process Flow Chart

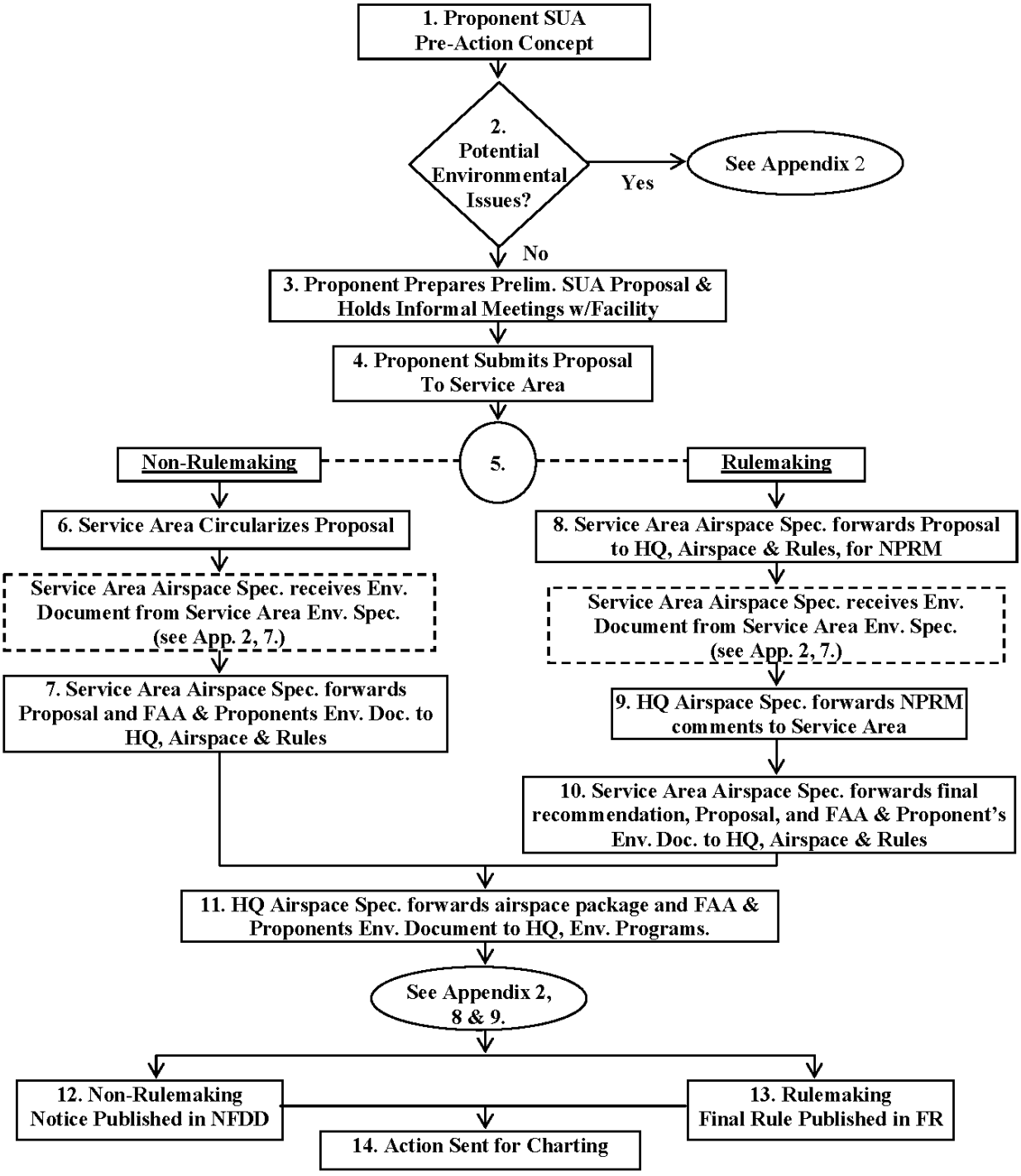


Appendix 2. FAA Procedures for Processing SUA Actions



Appendix 3. Procedures for Processing SUA Actions Aeronautical Process Flow Chart

(This Appendix is for use with Appendix 4 and the numbers correlate to the numbers in the Aeronautical column of that table.)



Appendix 4. FAA Procedures for Processing SUA Actions: Aeronautical and Environmental Summary Table

The aeronautical and environmental processes may not always occur in parallel.
This appendix is for use with Appendix 2 and Appendix 3, and the numbers correlate to numbers on those charts.

AERONAUTICAL	ENVIRONMENTAL
Pre–SUA Proposal **1.** Proponent must coordinate with locally affected ATC facilities and military units to discuss the concept (for example, new/revisions to SUA needed or required).	**1.** The DoD Proponent must coordinate an environmental review of its proposal (for both rulemaking and non–rulemaking actions) with the appropriate FAA Service Center OSG Manager and Environmental Specialist early in the Proponent's environmental documentation process to determine the potential for environmental impacts associated with the airspace portion of the DoD proposal. The Service Center Environmental Specialist is the FAA primary point of contact throughout the development of required environmental document reviews and required FAA adoption documentation. He/she is also responsible for ensuring DoD NEPA documents and FAA adoption NEPA documents comply with FAA Order 1050.1, paragraph 1–10.23, and Chapter 32, Environmental Matters, of this order.
2. Service Center Airspace Specialist coordinates with the Service Center Environmental Specialist to discuss the proposal's environmental review requirements.	**2.** If there is the potential for airspace environmental impacts[1], Proponent must make a request to the FAA for a Cooperating Agency (CA) status when Proponent decides to initiate the NEPA documentation process. Proponent forwards a request for Cooperating Agency Status to the Director of Mission Support, Policy (AJV–P). Rules and Regulations Group Manager (AJV–P2) and the AJV–P21 Environmental Specialist will prepare and forward the response to the DoD Proponent and coordinate the action for tracking by the Mission Support Environmental Policy Team (AJV–P21) which sends a courtesy copy of FAA's Acceptance of Cooperating Agency Status to the responsible Service Center Environmental Specialist.

[1] Establishment of new SUA, or changes to the dimensions, times of use, type of aircraft, or aircraft mix flown in SUA present the potential for environmental effects and must be properly analyzed for potential environmental impacts per FAA Order 1050.1 and Chapter 32, Environmental Matters, of this order.

3. Proponent meets with the ATC facility having jurisdiction over the affected airspace area to discuss mission requirements and desired SUA parameters.	**3.** Proponent submits a Preliminary Draft EA or Draft EIS (or other relevant environmental documentation), along with the aeronautical information package, to the Service Center Mil Rep, who shares it with the Environmental Specialist for review and comment. For previously reviewed and revised SUA actions, or proposals for re−activation of previously established SUA, the Service Center Environmental Specialist should request, and DoD Proponent should submit, previous environmental analysis documentation to the Service Center Environmental Specialist who will review and incorporate updated SUA information in the FAA Adoption document. **4.** The Service Center Environmental Specialist must provide comments, in consultation with the Service Center Airspace Specialist and the Headquarters Airspace and Rules Team (AJV−P21), back to Proponent via the Service Center's Mil Rep and or other appropriate DoD project POC.
4. Proponent submits the SUA proposal to the FAA Service Center for review and processing by the Airspace Specialist.	**5.** After the Service Center Environmental Specialist reviews the DoD Proponent's draft environmental document to ensure that all airspace and other pertinent and applicable environmental issues were addressed per FAA Order 1050.1, the Service Center Environmental Specialist then forwards the DoD Proponent's draft environmental document to the FAA Headquarters Environmental Team (AJV−P21) for review and comment by the Headquarters Environmental Specialist and the Office of Chief Counsel (AGC−600) to begin Legal Sufficiency Review (LSR). **6.** The Service Center Environmental Specialist then prepares a draft FAA Adoption EA or Adoption EIS of the DoD Proponent's airspace portion of the proposed action, and sends it to AJV−P21 for policy compliance review and to AGC for LSR.

5. The Service Center Airspace Specialist, in accordance with this order, determines the type of airspace action(s) necessary, either Non−Rulemaking or Rulemaking. FAA service center determines if Informal Airspace Meetings are required.	**7.** The DoD proponent reviews the FAA's comments on their Draft EA/FONSI or Draft EIS and prepares responses to comments, in consultation with FAA and other cooperating agencies as necessary, and in accordance with chapter 32 of this order. Proponent then incorporates FAA's comments into their NEPA document and prepares a Draft EA or EIS with a 30 to 45−day public comment period.
	8. Proponent prepares and submits their Final EA/FONSI or EIS/ROD to the Service Center Environmental Specialist.
	9. The Service Center Environmental Specialist amends, as necessary the Draft FAA Adoption EA−FONSI/ROD or Draft FAA Adoption EIS and ROD and submits the FAA's Adoption document to AJV−P21 for airspace review and to AGC for a final LSR.
	10. AGC's comments are incorporated into the final FAA Adoption EA/FONSI or Adoption EIS/ROD by the Service Center Environmental Specialist in coordination with the AJV−P21 Environmental Specialist.
	11. The AJV−P21 Environmental Specialist prepares a signature copy of the final FAA Adoption EA/FONSI or Adoption EIS/ROD and submits it for signature by the Headquarters Rules and Regulations Group Manager (AJV−P2). The AJV−P21 Environmental Specialist submits signed copies of the document(s) to the DoD Proponent's POC, to AJV−P21 for final rulemaking action, and to the Service Center Environmental Specialist for their records.
	12. The Service Center Environmental Specialist submits the signed Final FAA Adoption EA and FONSI or Adoption EIS and FONSI/ROD with the Proponent's Final EA/FONSI or EIS/ROD to the Service Center Airspace Specialist for inclusion with the airspace proposal package, and provides a courtesy copy of the FAA's final Adoption document to the Service Center Mil Rep.

FOR NON−RULEMAKING	
AERONAUTICAL	**ENVIRONMENTAL**
6. The Service Center Airspace Specialist: **a.** Tasks the ATC facility to conduct an aeronautical study of the proposal; **b.** Sends a circularization with a 45−day public comment period. The Service Center Airspace Specialist reviews and prepares, in consultation with the DoD Proponent, responses to the aeronautical comments from the aeronautical study and circularization in accordance with chapter 21 of this order. **c.** Coordinates with the Service Center Environmental Specialist regarding environmental documentation.	See process above. The environmental documentation review and development process is the same for non−rulemaking as for rulemaking.
7. The Service Center Airspace Specialist sends the completed package containing the aeronautical proposal, Aeronautical study, copies of comments, response to comments, DoD Proponent's Final EA/FONSI, and the Draft FAA FONSI/ROD, and a recommendation for final action to the Headquarters Airspace Policy Group.	

FOR RULEMAKING	
AERONAUTICAL	**ENVIRONMENTAL**
8. The Service Center Airspace Specialist: **a.** Tasks the ATC facility to conduct an aeronautical study of the proposal; **b.** Sends the proposal to the Airspace Policy Group who then prepares a Notice of Proposed Rulemaking (NPRM). The Headquarters Airspace Policy Group submits the NPRM for publication in the Federal Register with a 45–day comment period in accordance with chapter 2 of this order. The Airspace Specialist receives the environmental document from the Service Center Environmental Specialist.	See process above. The environmental documentation review and development process is the same for non–rulemaking as for rulemaking.
9. The Service Center Airspace Specialist reviews the comments on www.regulations.gov and coordinates with the proponent, as required, to resolve aeronautical impacts.	
10. The Service Center Airspace Specialist then sends the completed package containing the aeronautical study, response to comments, final Service Center recommendation, the proposal, Proponent's Final EA/FONSI or EIS/ROD, and the Draft FAA FONSI/ROD or Draft FAA Adoption Document/ROD to the Headquarters Airspace Policy Group (AJV–P21) for preparation of the Final Rule.	
11. The Service Center Airspace Specialist, in accordance with this order, determines the type of airspace action(s) necessary, either Non–Rulemaking or Rulemaking. FAA service center determines if Informal Airspace Meetings are required.	**9.** The Headquarters Environmental Specialist (AJV–P21) reviews the draft final rulemaking and draft Federal Register Notice for compliance with FAA Order 1050.1; chapter 32 of this order and this appendix; drafts the environmental compliance paragraph for the Federal Register Notice; then, as necessary, submits the changes to the environmental documentation to AGC–600 for legal sufficiency review.
	10. AGC's comments are incorporated into the rulemaking document, returned to the AJV–P21 Environmental Team for a final review, and forwarded back to the AJV–P21 Airspace and Rules Team.

10. For Non−rulemaking: The Airspace Specialist submits the non−rulemaking action to the Aeronautical Information Services (AIS) for publication in the National Flight Data Digest (NFDD). **11. For Rulemaking:** The Airspace Specialist submits the Final Rule for publication in the Federal Register. The Final Rule will contain a reference to the decision rendered and location of documentation for the associated environmental process.	

Consult the following documents throughout the process for further information:

A. Council on Environmental Quality Regulations for Implementing the National Environmental Policy Act (NEPA), 40 C.F.R. Parts 1500−1508.
B. FAA Order 1050.1, Environmental Impacts: Policies and Procedures
C. FAA Order JO 7400.2, Procedures for Handling Airspace Matters, Part 5, Special Use Airspace
D. FAA Order JO 7400.2, Chapter 32, Environmental Matters, and the associated appendices (for specific SUA environmental documentation directions).

NOTE−
The documentation time periods below are approximations only, and are for non−controversial aeronautical proposals and associated environmental processes. The documentation time periods are for FAA review/processing only. Documentation schedules for DOD proponent and/or environmental contract support processing must be accounted for during overall document coordination scheduling between FAA and the DOD proponents.

ENVIRONMENTAL: Estimated time of completion for EA processing is 12 to 18 months or, for EIS processing, 18 to 36 months.

AERONAUTICAL (Non−Rulemaking): A minimum time period of 8 months is required from submission of the Formal Airspace Proposal by the Proponent to the Service Center through completion of the charting process.

AERONAUTICAL (Rulemaking): A minimum time period of 10 months is required from submission of the Formal Airspace proposal by the Proponent to the Service Center through completion of the charting process.

Appendix 5. Air Traffic Initial Environmental Review (IER)

Facility:_____ Date:_____

Prepared by: _____ Phone: _____

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NOTE: *This IER provides basic information about the proposed action to better assist in preparing for the environmental analysis phase of a proposed action. Although it requests information in several categories, not all the data may be available initially; however, it does represent information, in accordance with FAA Order 1050.1, Environmental Impacts: Policies and Procedures, which ultimately will be needed for preparation of the appropriate environmental document. If the Instrument Flight Procedure (IFP) Environmental Pre−Screening Filter is used for initiating the environmental review process, and it passes the initial screening, then the IER is unnecessary. Additional guidance on the identification of potential environmental impacts by environmental category is available in the 1050.1 Desk Reference.*

Section 1. Proposed Project Description

Describe the proposed project. Include general information identifying procedure(s) and/or airspace action(s) to be implemented and/or amended. Identify the associated airports and/or facilities.

1.1. Describe the operational and/or environmental benefits that may result if the proposed action is implemented.

1.1.1. Is a reduction of fuel cost and/or energy consumption anticipated as a result of the proposed action?

Yes No N/A

1.1.1.a. If so, can it be quantified, and how?

Yes No

1.1.1.b. If not quantifiable, describe the approximate anticipated benefits in lay terms.

1.1.2. Describe any additional operational and/or environmental benefits that may result from the proposed action.

1.2. Describe the existing procedure(s) (the no action alternative) in full detail. Provide the necessary chart(s) depicting the current procedure(s). Describe the typical fleet mix, including (if possible) the number and types of aircraft on the route (both annually and average day) and depict their altitude(s) along the route.

1.3. Describe the proposed action, providing the necessary chart(s) depicting changes. Describe anticipated changes to the fleet mix, numbers of aircraft on the new routes and their altitude(s), if any.

1.3.1. Has airspace modeling been conducted using Sector Design Analysis Tool (SDAT), Aviation Environmental Screening Tool (AEST), Terminal Area Route Generation, Evaluation, and Traffic Simulation (TARGETS), or another airspace/air traffic design tool?

Yes. Model: _____ No

If yes, provide a summary of the output from the modeling.

1.3.2. Will there be actions affecting changes in aircraft flights between the hours of 10 p.m. – 7 a.m. local?
Yes No
Describe:

1.3.3. Are any noise abatement programs presently in effect for the affected airport(s), formal or informal?
Yes No
Describe:

1.3.4. Will airport preferential runway configuration use change as a result of the proposed action?
Yes No
Explain:

1.3.5. Is the proposed action primarily designed for Visual Flight Rules (VFR), Instrument Flight Rules (IFR) operations, or both?
VFR IFR Both

If the proposed action specifically involves a charted visual approach (CVA) procedure, provide a detailed local map indicating the route of the CVA, along with a discussion of the rationale for how the route was chosen.

1.3.6. Will there be a change in takeoff power requirements?
Yes No

If so, what types of aircraft are involved, i.e., general aviation propeller–driven versus large air carrier jets?

1.3.7. Will all changes occur over 3,000 feet above ground level (AGL)?
Yes No

1.3.8. What is the lowest altitude on newly proposed routes or on existing routes that will receive an increase in operations?

1.3.9. Will there be actions involving civil jet aircraft arrival procedures between 3,000–7,000 feet AGL or departures between 3,000–10,000 feet AGL?
Yes No

Section 2. Purpose and Need

2.1. Describe the purpose and need for the proposed action. Present the problem being addressed and describe what the FAA is trying to achieve with the proposed action. The purpose and need for the proposed action must be clearly explained and stated in terms that are understandable to individuals who are not familiar with aviation or commercial aerospace activities. If detailed background information is available, summarize here and provide a copy as an attachment to this review.

2.1.1. Is the proposed action the result of a user or community request or regulatory mandate?
Community Request Regulatory Mandate User Request

2.1.2. If not, describe what necessitates this proposed action:

Section 3. Alternatives

3.1. Are there alternatives to the proposed action?
Yes No

If yes, describe any alternatives to the proposed action.

3.2. Please provide a summary description of eliminated alternatives and the reasons for their elimination.

Section 4. Environmental Review and Evaluation

The determination of whether a proposed action may have a significant environmental effect is made by considering requirements applicable to the specific environmental impact categories discussed below (see FAA Order 1050.1, appendix B).

4.1. Describe the Affected Environment

4.1.1. Describe the existing land use, including noise sensitive areas (if any) in the vicinity of the proposed action.

4.1.2. Will the proposed action introduce air traffic over noise sensitive areas not currently affected?
Yes No
Describe:

4.2. Environmental Consequences

As stated in FAA Order 1050.1, paragraph 5−2. b., extraordinary circumstances exist when a proposed action meets both of the following criteria:

4.2.a. Involves any of the following circumstances below; and

4.2.b. May have a significant impact (see 40 CFR 1508.4).

4.2.1. Air Quality

Has research been conducted to identify areas of concern or communication with air quality regulatory agencies to determine if the affected area is a non−attainment area (an area which exceeds the Clean Air Act (CAA) National Ambient Air Quality Standards (NAAQS) for the following criteria air pollutants: ozone, carbon monoxide, lead, particulate matter, sulfur dioxide, or nitrogen dioxide) or maintenance area (an area which was in non−attainment but subsequently upgraded to an attainment area) concerning air quality?
Yes No
Comment:

Evaluation: Will implementation of proposed action result in an impact on air quality or a violation of local, state, tribal, or federal air quality standards under the Clean Air Act amendments of 1990? (See FAA Order 1050.1, paragraph 5−2. b. (8), the Air Quality Handbook, and 1050.1 Desk Reference, chapter 1, for details on how to make the determination.)
Yes No
Comment:

4.2.2. Biological Resources (including Marine Mammals; Wildlife and Waterfowl; Endangered/Threatened Species; Critical Habitat)

4.2.2.1. Are wildlife and/or waterfowl refuge/management areas, protected or critical habitats within the affected area of the proposed action?
Yes No
Identify:

4.2.2.2. If so, has there been any communication with the appropriate wildlife management regulatory agencies (federal or state) agencies to determine if endangered or protected species inhabit the area?
Yes No
If yes, identify endangered or protected species.

4.2.2.3. At what altitude would aircraft overfly these habitats?

4.2.2.4. During what times of the day would operations be more/less frequent?

Evaluation: Will implementation of the proposed action result in an impact on natural, ecological or biological resources of federal, tribal, state, or local significance (for example, federally listed or proposed endangered, threatened, or candidate species or proposed or designated critical habitat under the Endangered Species Act)? (See FAA Order 1050.1, paragraph 5−2. b. (3), and 1050.1 Desk Reference, chapter 2, for details on how to make the determination.)

4.2.2.a. Yes
Comment:

4.2.2.b. No. An impact to biological resources is not anticipated.

4.2.3. Climate

NOTE: *The FAA has not established a significance threshold for climate. The Council on Environmental Quality (CEQ) has noted that "…it is not currently useful for the NEPA analysis to attempt to link specific climatological changes, or the environmental impacts thereof, to the particular project or emissions; as such direct linkage is difficult to isolate and to understand."[1] Accordingly, it is not useful to attempt to determine the significance of such impacts. (See FAA Order 1050.1, Desk Reference, chapter 3.)*

4.2.4. Coastal Resources

NOTE: *Coastal resources include both coastal barriers and coastal zones.*

4.2.4.1. Are there designated coastal resources in the affected area?
Yes No
Identify:

4.2.4.2. Will implementation of the proposed action result in any construction or development or any physical disturbances of the ground with the potential to affect coastal resources?
Yes No

Evaluation: Will implementation of the proposed action result in an impact in to coastal resources? (See FAA Order 1050.1, paragraph 5−2. b. (4), and 1050.1 Desk Reference, chapter 4, for details on how to make the determination.)

[1] Draft NEPA Guidance on *Consideration of the Effects of Climate Change and Greenhouse Emissions*, CEQ (2010). http://ceq.hss.doe.gov/nepa/regs/Consideration_of_Effects_ofGHG_Draft_NEPA_Guidance_FINAL_02182010.pdf

4.2.4.a. Yes
Comment:

4.2.4.b. No. An impact to coastal resources is not anticipated.

4.2.5. Department of Transportation Act, Section 4(f)

4.2.5.1. Are there cultural or scenic resources, of national, state, or local significance, such as national parks, publicly owned parks, recreational areas, and public and private historic sites in the affected area?
Yes No
Identify:

4.2.5.2. If so, during what time(s) of the day would operations occur that may impact these areas?

Evaluation: Will implementation of the proposed action result in an impact to properties protected under Section 4(f) of the Department of Transportation Act? (See FAA Order 1050.1, paragraph 5−2. b. (2), and 1050.1 Desk Reference, chapter 5, for details on how to make the determination.)

4.2.5.a. Yes
Comment:

4.2.5.b. No. Section 4(f) impacts are not anticipated.

4.2.6. Farmlands
Are the following resources present: National Resources Conservation designated prime and unique farmlands or, state, or locally important farmlands including pastureland, cropland, and forest?
Yes No
Identify:

Evaluation: Will the implementation of the proposed action involve the development of land regardless of use, or have the potential to convert any farmland to non−agricultural uses? (See FAA Order 1050.1, paragraph 5−2. b. (4), and the 1050.1 Desk Reference, chapter 6, for details on how to make the determination.)

4.2.6.a. Yes
Comment:

4.2.6.b. No. An impact to farmland resources is not anticipated.

4.2.7. Hazardous Material, Solid Waste, and Pollution Prevention
Will implementation of the proposed action result in any construction or development or any physical disturbances of the ground in an area known to contain hazardous materials, hazardous waste, solid waste, or other forms of pollution or contamination?
Yes No

Evaluation: Is implementation of the proposed action likely to cause contamination by hazardous materials, hazardous waste, or likely to disturb existing hazardous materials, hazardous waste site, or other area of contamination? (See FAA Order 1050.1, paragraph

5−2. b. (12), and the 1050.1 Desk Reference, chapter 7, for details on how to make the determination.)

4.2.7.a. Yes
Comment:

4.2.7.b. No. An impact to existing areas of hazardous material, hazardous or solid waste, or pollution prevention activities, is not anticipated; and implementation of the proposed action is not anticipated to result in the production of hazardous material, hazardous or solid waste. .

4.2.8. National Historic Preservation Act of 1966 (NHPA)
NOTE: *Section 106 of the NHPA applies to actions that have the potential to affect historic properties in a way that alters any of the characteristics that make the property significant, including changes in noise where a quiet setting is an attribute of significance. Direct effects include the removal or alteration of historic resources. Indirect effects include changes in noise, vehicular traffic, light emissions, or other changes that could interfere substantially with the use or character of the resource.*

4.2.8.1. Are there historic resources protected under Section 106 of the NHPA in the study area of the proposed action ?
Yes No
Identify:

4.2.8.2. Will the proposed action include removal or alteration of historic resources (direct effect)?
Yes No

4.2.8.3. Do any of the historic resources identified have quiet as a generally recognized feature or attribute?
Yes No
If yes, explain:

4.2.8.4. Will the proposed action substantially interfere with the use or character of the resource (indirect effect)?
Yes No
Explain:

Evaluation: Will the proposed action result in an adverse effect on resources protected under the National Historic Preservation Act of 1966, as amended? (See FAA Order 1050.1, paragraph 5−2. b. (1), and the 1050.1 Desk Reference, chapter 8, for details on how to make the determination.)

4.2.8.a. Yes
Comment:

4.2.8.b. No. An impact to resources subject to Section 106 review is not anticipated.

4.2.9. Land Use
The compatibility of existing and planned land uses with an aviation or aerospace proposal is usually associated with noise impacts. In addition to the impacts of noise on land use compatibility, other potential impacts of FAA actions may affect land use compatibility. The

impact on land use, if any, should be analyzed and described under the appropriate impact category.

Evaluation: The determination that significant impacts exist in the Land Use impact category is normally dependent on the significance of other impacts. (See 1050.1 Desk Reference, chapter 9, for details on how to make the determination.)

4.2.10. National Resources and Energy Supply

NOTE: *This resource category excludes fuel burn.*

Will the proposed action have the potential to cause demand or strain on a natural resource(s) or material(s) that exceeds current or future availability of these resources? (See FAA Order 1050.1, paragraph 5−2. b. (4).)

Yes No

If yes, explain:

Evaluation: Will implementation of the proposed action result in an impact in relation to natural resources and energy supply?

4.2.10.a. Yes

Comment:

4.2.10.b. No. An impact to natural resources and materials and/or energy supply is not anticipated.

4.2.11. Noise and Noise−Compatible Land Use

The significance threshold for noise is whether the proposed action would increase noise by Day−night average sound level (DNL) 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level; or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB increase, when compared to the No Action alternative for the same timeframe.

NOTE: *An area is noise sensitive if aircraft noise may interfere with the normal activities associated with the use of the land. See FAA Order 1050.1, paragraph 11−5. b. (10), for the full definition of noise sensitive areas.*

Noise compatibility or non−compatibility of land use is determined by comparing the proposed action DNL values to the values in the 14 CFR Part 150, Appendix A, Table 1, Land−Use Compatibility guidelines. (See FAA Order 1050.1 and the 1050.1 Desk Reference, section 11.)

NOTE: *14 CFR Part 150 guidelines are not sufficient to address the effects of noise on some noise sensitive areas.*

4.2.11.1.1. Will the proposed action introduce air traffic over noise sensitive areas *not* currently affected?

Yes No

Comment:

4.2.11.1.2. Do the results of the noise analysis indicate that the proposed action would result in an increase in noise exposure by DNL 1.5 dB or more for a noise sensitive area

that is exposed to noise at or above the DNL 65 dB noise exposure level?
Yes No

4.2.11.1.3. If yes, are the results of the noise analysis incompatible with one or more of the Land Use Compatibility categories? (See FAA Order 1050.1, Desk Reference Exhibit 11−3.)
Yes No
If yes, explain:

4.2.11.1.4. Do the results of the noise analysis indicate a threshold of significance over noise sensitive areas *not* listed under the Land Use Compatibility categories (for example, national parks, wildlife/waterfowl refuges)?
Yes No
If yes, explain:

4.2.11.2. Do the results of the noise analysis indicate a change in noise meeting threshold criteria considered "reportable"?

i. For DNL 60 dB to <65 dB: + 3 dB Yes No

ii. For DNL 45 dB to <60 dB: + 5 dB Yes No

Evaluation:

4.2.11.a. Will the proposed action result in a significant noise impact over noise sensitive land use? (See FAA Order 1050.1, paragraph 5−2. b. (7), and the 1050.1 Desk Reference, chapter 11, for details on how to make the determination.)
Yes
If yes, explain:

4.2.11.b. No. The results of the noise analysis indicate that no significance threshold noise criteria are reached as a result of the implementation of the proposed action.

4.2.11.c. Will the proposed action result in a significant noise impact over noise sensitive areas? (See FAA Order 1050.1, paragraph 5−2. b. (7), and the 1050.1 Desk Reference, chapter 8, for details on how to make the determination.)
Yes
If yes, explain:

4.2.11.d. No. The results of the noise analysis indicate that no reportable noise impacts are expected to result from the implementation of the proposed action.

4.2.12. Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risk

4.2.12.1. Socioeconomics

4.2.12.1.a. Will the proposed action result in a division or disruption of an established community; a disruption of orderly, planned development; or an inconsistency with plans or goals that have been adopted by the community in which the proposed action is located? (See FAA Order 1050.1, paragraph 5−2. b. (5).)
Yes No

4.2.12.1.b. Will the proposed action result in an increase in congestion from surface transportation, by causing a decrease in the Level of Service below the acceptable level determined by the appropriate transportation agency? (i.e., a highway agency) [See FAA Order 1050.1, paragraph 5−2 b. (6).)
Yes No

Evaluation: Will implementation of the proposed action result in an impact to socioeconomics? (See the 1050.1 Desk Reference, chapter 12, for details on how to make the determination.)

4.2.12.a. Yes
Comment:

4.2.12.b. No. The proposed action is not anticipated to involve acquisition of real estate, relocation of residence or community business, disruption of local traffic patterns, loss of community tax base, or changes to the fabric of the community.

4.2.12.2.Environmental Justice

NOTE: *FAA has not established a significance threshold for Environmental Justice. Impacts to Environmental Justice in the context of other impact categories should be considered.*

Evaluation: Will the proposed action have the potential to lead to a disproportionally high and adverse impact to an environmental justice population, (i.e., a low income or minority population) due to significant impacts in other environmental impact categories or impacts on the physical or natural environment that affect an environmental justice population in a way that the FAA determines are unique to the environmental justice population and significant to that population? (See the 1050.1 Desk Reference, chapter 12, for details on how to make the determination.)

4.2.12.2.a. Yes
Comment:

4.2.12.2.b. No. An impact related to environmental justice is not anticipated.

4.2.12.3.Children's Environmental Health and Safety Risk

NOTE: *FAA has not established a significance threshold for Children's Environmental Health and Safety Risk. Impacts to Children's health and safety in the context of other impact categories should be considered.*

Evaluation: Will the proposed action have the *potential* to lead to a disproportionate health or safety risk to children due to significant impacts in other environmental impact categories? (See the 1050.1 Desk Reference, chapter 12, for details on how to make the determination.)

4.2.12.3.a. Yes
Comment:

4.2.12.3.b. No. An impact related to children's environmental health and safety is not anticipated.

4.2.13.Visual Effects

NOTE: *There are no special purpose laws for light impacts and visual impacts. Impacts from light emissions are generally related to airport aviation lighting.*

4.2.13.1. Will implementation of the proposed action create annoyance or interfere with normal activities from light emissions?
Yes No
Explain:

4.2.13.2. Will implementation of the proposed action affect the visual character of the area including the importance, uniqueness, and aesthetic value of the affected visual resources?
Yes No
Explain:

Evaluation: Will the proposed action result in an impact to visual resources? (See FAA Order 1050.1, paragraph 5−2. b. (5), and 1050.1 Desk Reference, chapter 13, for details on how to make the determination.)

4.2.13.a. Yes
Comment:

4.2.13.b. No. The proposed action is not anticipated to interfere or have an effect on the visual resources.

4.2.14. Water Resources (including Wetlands, Flood Plains, Surface Waters, Groundwater, and Wild and Scenic Rivers)

4.2.14.1. Are there wetlands, flood plains, and/or Wild and Scenic Rivers in the proposed action study area?
Yes No

4.2.14.2. Are there reservoirs or other public water supply systems in the affected area?
Yes No

4.2.14.3. Will implementation of the proposed action result in any construction or development or any physical disturbances of the ground?
Yes No

4.2.14.4. Will implementation of the proposed action result in any changes to existing discharges to water bodies, create a new discharge that would result in impacts to water quality, or modify a water body?
Yes No

If yes, is there a potential for an impact to water quality, sole source aquifers, a public water supply system, federal, state or tribal water quality standards established under the Clean Water Act and the Safe Drinking Water Act?
Yes No

Evaluation: Will the proposed action result in an impact to water resources? (See FAA Order 1050.1, paragraph 5−2. b. (9), and 1050.1 Desk Reference, chapter 14, for details on how to make the determination.)

4.2.14.a. Yes
Comment:

4.2.14.b. No. The potential for impact to water resources is not anticipated.

4.2.15. Effects on the Quality of the Human Environment that are Likely to be Highly Controversial on Environmental Grounds.

NOTE: *The term "highly controversial on environmental grounds" means there is a substantial dispute involving reasonable disagreement over the degree, extent, or nature of a proposed action's environmental impacts or over the action's risks of causing environmental harm. Mere opposition is not sufficient for a proposed action or its impacts to be considered highly controversial on environmental grounds. Opposition on environmental grounds by a federal, state, or local government agency or by a tribe or a substantial number of the persons affected by the action should be considered in determining whether or not reasonable disagreement regarding the impacts of a proposed action exists.*

NOTE: *If in doubt about whether a proposed action is highly controversial on environmental grounds, consult the Line of Business/Staff Office (LOB/SOB) headquarters environmental division, AEE, Regional Counsel, or AGC for assistance. (See FAA Order 1050.1, paragraph 5−2. b. (10).)*

4.2.15.1. Will implementation of the proposed action result in the likelihood of an inconsistency with any federal, state, tribal, or local law relating to the environmental aspects of the proposed action. (See FAA Order 1050.1, paragraph 5−2. b. (11).)

Yes No

If yes, explain:

Evaluation: Is there likelihood for the proposed action to be highly controversial based on environmental grounds?

4.2.15.a. Yes

Comment:

4.2.15.b. No. The potential for controversy is not anticipated.

Section 5. Mitigation

Are there measures which can be implemented that might mitigate any of the potential impacts, i.e., GPS/FMS plans, NAVAIDS, etc.?

Yes No N/A

Describe:

Section 6. Cumulative Impacts

What other projects (FAA, non−FAA, or non−aviation) are known, planned, have been previously implemented, or are ongoing in the affected area that would contribute to the proposed project's environmental impact?

Section 7. Community Involvement

Community involvement is the process of engaging in dialog and collaboration with communities affected by FAA actions. The appropriate level of community involvement and public engagement will vary to some degree depending on the project scope and affected communities. (See FAA Order JO 7400.2, appendices 10 and 11, and the Community Involvement Performance Based Navigation Desk Guide, and/or AEE's Community Involvement Manual, or other available Community Involvement guidance for further information.)

7.1. Are the airport proprietor and/or users providing general support for the proposed action?
Yes No N/A

7.2. Are local community leaders or groups who could have an interest in FAA activity (i.e., aviation roundtables, historical preservation society, etc) due to their location or by their function in the community been notified, consulted, or otherwise informed of this proposed action?
Yes No Not Known

7.2.1. Are any opposed to or supporting it? Not Known

7.2.2. Identify the parties and indicate whether they are in opposition or in support of the proposed action.

7.2.3. If they are opposed, what is the basis of their opposition?

7.3. Are local citizens aware of the proposed action?
Yes No Not Known

7.3.1. Are any opposed to or supporting it? Not Known

7.3.2. Identify the parties and indicate whether they are in opposition or in support of the proposed action.

7.3.3. If they are opposed, what is the basis of their opposition?

7.4. Has the FAA received one or more comments objecting to the proposed project on environmental grounds from local citizens or elected officials?
Yes No

7.4.1. If so, state the nature of the comment and how the FAA was notified (for example, resolution, Congressional, Public meeting/workshop, etc.).

7.4.2. How is the comment(s) being responded to? Can the comment(s) be mitigated through changes in design?

7.5. Is the proposed project consistent with local plans and development efforts?
Yes No

7.6. Has there been any previous aircraft–related environmental or noise analysis, including a FAR Part 150 Study, conducted at this location?
Yes No

7.6.1. If so, was the study reviewed as a part of this initial review?
Yes No N/A

Section 8. References/Correspondence

Attach written correspondence, summarized phone contacts using Memorandums for the File, etc.

Section 9. Additional Preparers

The person(s) listed below, in addition to the preparer indicated on page 1, are responsible for all or part of the information and representations contained herein:

Name: _____

Title: _____

Facility: _____

Telephone Number: _____

Specific Area of Responsibility: _____

Section 10. Facility/Service Area Conclusions

This initial review and analysis indicates that no extraordinary circumstances or other reasons exist that would cause the responsible federal official to believe that the proposed action might have the potential for causing significant environmental impacts. The undersigned have determined that the proposed action qualifies as a categorically excluded action in accordance with FAA Order 1050.1, and on this basis, recommend that further environmental review need not be conducted before the proposed project is implemented.

The undersigned have determined that the proposed action may not qualify as a categorically excluded action in accordance with FAA Order 1050.1, and on this basis, recommend that further environmental review be conducted before the proposed action is implemented.

The undersigned recommend that the proposed action be submitted for environmental funding for preparation of an EA EIS Not sure – more analysis is needed.

Facility Manager Review/Concurrence

Signature: _____ Date: _____

Name: _____

Title: _____

Address: _____

Phone: _____ Email: _____

Service Area Environmental Specialist Review/Concurrence

Signature: _____ Date: _____

Name: _____

Title: _____

Address: _____

Phone: _____ Email: _____

Service Area Director Review/Concurrence, if necessary

Signature: _____ Date: _____

Name: _____

Title: _____

Address: _____

Phone: _____ Email: _____

Appendix 6. Sample DOT FAA Categorical Exclusion Declaration

SAMPLE

Federal Aviation Administration

Categorical Exclusion Declaration

Procedure Proponent: _____ Date: ___/___/___
Title: _____
Organization: _____

Procedure Request Description:

Declaration of Exclusion: The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1.

Basis for this Determination: This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1.

The applicable categorical exclusion(s) is/are:

Recommended by: _____

_____
Name – Title of Facility Manager

Concurrence/Reviewed By: _____ Date: ___/____/_____

Title: _____

The above flight procedure has been developed within the accepted parameters.

Title: _____ Date: ___/____/____

Approved by: _____ Date: ___/____/____

Title: _____

Appendix 7. FAA/DOD Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING BETWEEN
THE FEDERAL AVIATION ADMINISTRATION AND
THE DEPARTMENT OF DEFENSE
FOR
ENVIRONMENTAL REVIEW OF SPECIAL USE AIRSPACE ACTIONS

I. Definitions.[1]

In addition to definitions in the Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA) (40 CFR Part 1508), the following definitions also apply to this Memorandum of Understanding (MOU):

"DoD" means the Department of Defense or one or more components thereof, depending on the context.

"SUA" means "special use airspace," as defined in FAA Order JO 7400.2.

"DoD SUA Action" means a DoD activity for which the FAA determines an FAA SUA Action is required or otherwise warranted.

"Environmental Review Process" means all activities that are necessary for compliance with the following and must be completed before DoD and FAA SUA Actions can be implemented: the National Environmental Policy Act (NEPA); the CEQ Regulations; DoD and FAA NEPA–implementing procedures; and other federal environmental laws, regulations, executive orders, and administrative directives.

"Proponent" means: (1) DoD for FAA SUA Actions for which the FAA requires submission of a proposal by DoD; and (2) the FAA for other FAA SUA Actions.

"FAA SUA Action" means the FAA's establishment, designation, or modification of SUA for which a component of DoD is the "using agency," as defined in FAA Order JO 7400.2.

II. Purpose and Scope.

The purpose of this MOU is to describe guidelines for efficiently conducting the Environmental Review Process for DoD and FAA SUA Actions by avoiding unnecessary duplication of effort and reducing delay through effective coordination and cooperation between the agencies.

This MOU applies "lead agency" (40 CFR §1501.5) and "cooperating agency" (40 CFR §1501.6) concepts and requirements to Categorical Exclusions (CATEXs), Environmental Assessments (EA), Environmental Impact Statements (EIS), and other related or supporting documents for DoD and FAA SUA Actions.

1. Terms defined in this section are capitalized throughout the document.

III. Designation of Lead and Cooperating Agencies (40 CFR §1508.16 and §1508.5).

A. Introduction. DoD and FAA SUA Actions can be subject to different levels and scope of environmental impact analyses pursuant to NEPA, as implemented by the CEQ regulations and by the DoD's and the FAA's agency–specific NEPA–implementing procedures. The CEQ regulations encourage designation of a lead agency where related actions by several Federal agencies are involved.

Either the DoD or the FAA may be the lead or cooperating agency for a NEPA review addressing both DoD and FAA SUA Actions. The lead agency, in such instances, is responsible for consultation with other agencies, for early and continuing coordination of appropriate environmental evaluations and analyses, and, in coordination with the cooperating agency, for making and documenting determinations under other applicable environmental laws and regulations (e.g., the Endangered Species Act and the National Historic Preservation Act) and incorporating such documentation into the appropriate NEPA document. The lead agency will invite other federal agencies having jurisdiction by law or special expertise with respect to any environmental issue that should be addressed in the NEPA process to become a cooperating agency (40 CFR §§1501.6, 1508.5).

Both the FAA and the DoD acknowledge the purposes of NEPA (40 CFR §1500.1), and the need to both eliminate unnecessary duplication and reduce delay. Accordingly, the FAA and the DoD will integrate NEPA considerations and requirements of both agencies into the SUA project planning process as early as possible in their respective project planning schedules. The agencies will also strive cooperatively to coordinate development of environmental documents that meet the standards for adequacy in accordance with both agencies' NEPA implementing procedures, thereby expediting completion of the Environmental Review Process.

B. Designation of lead agency. The Proponent will serve as the lead agency (40 CFR §1501.5).

C. Designation of cooperating agency. The DoD and the FAA will ensure designation of the cooperating agency early in the NEPA process (40 CFR §1501.6). Upon request of the lead agency, the DoD or the FAA will serve as a cooperating agency.

Written requests by the FAA and the DoD will be directed to:

Federal Aviation Administration	
Rules and Regulations Group (AJV–P2)	OSG Manager of the applicable FAA Service Center
Air Force	
Deputy Assistant Secretary of the Air Force for Installations (SAF/IEI) 1665 Air Force Pentagon Rm 4B941 Washington, DC 20330–1665	cc: AF/A3TI – Airspace Policy Rm 5D756 1480 AF Pentagon Washington, DC 20330–1480 (703) 692–7752 HQ AF/A4CP Installation Strategy and Plans Division Rm 4D950 1260 Air Force Pentagon Washington DC, 20330–1260 (703) 614–0237

Navy	
Director Chief of Naval Operations (N45) 2000 Navy Pentagon (Rm 2E259) Washington, DC 20350–2000	cc: Chief of Naval Operations will direct to appropriate code
Marine Corps	
MCICOM (Attn: NEPA) Headquarters Marine Corps 3000 Marine Corps Pentagon Room 2D153A Washington, DC 20350–3000	
Army	
Asst. Chief of Staff for Installation Management Installation Services, Environmental (DAIM–ISE) 600 Army Pentagon (5A120–1) Washington, DC 20310–0600	Cc: Deputy Assistant Secretary of Army, Environmental Safety and Environmental Health (DASA(ESOH)) Headquarters, U.S. Army Aeronautical Services Agency (Attn: Airspace Branch) 9325 Gunston Road, Suite N319, Fort Belvoir, Virginia 22060
Major Range and Test Facility Base (MRTFB)	
Director, Test Resource Management Center (TRMC) 4800 Mark Center Dr., Suite 07J22 Alexandria, VA 22350	

*The MRTFB is managed by the TRMC and includes Army, Navy, and Air Force test ranges and associated airspace as designated by annual issuance. The TRMC will coordinate with the lead or cooperating agency as necessary.

IV. Documentation.

A.General. To eliminate unnecessary duplication, reduce paperwork, and reduce delay, the FAA and the DoD will cooperatively develop necessary environmental documentation. The agencies will share and may use, as allowed by their respective regulations/directives, background data and impact analysis prepared by either agency in support of a DoD or FAA SUA Action. Documentation will be developed and processed in accordance with applicable FAA Orders, DoD directives and regulations, and established cooperating agency relationships (40 C.F.R. §1506.1).

The lead agency will provide, within scope (40 C.F.R. §1508.25), project–specific related data supporting the proposed action, alternatives, and impact analyses to the cooperating agency to facilitate the development of a legally defensible NEPA document and support appropriate determinations.

The lead and/or cooperating agency will independently evaluate any information or analysis before using it to support a NEPA review. The intent of the lead and cooperating agency relationship is to ensure mutually adequate documentation that complies with both the lead and cooperating agencies'

NEPA−implementing procedures. Deficiencies in information, analysis, or other issues covered within the scope of the documentation will be addressed and corrected during cooperating agency concurrent review(s).

B. Categorical Exclusions.

The DoD and the FAA will address the availability of CATEXs early in the development of DoD and FAA SUA Actions. CATEXs are not interchangeable between the agencies. If the Proponent decides to rely on a CATEX for its action and the cooperating agency cannot rely on a CATEX for its action, the Proponent will provide information and analysis the cooperating agency identifies as necessary for the cooperating agency's NEPA review. To the extent consistent with the cooperating agency's NEPA−implementing procedures, the cooperating agency may request that the Proponent prepare an EA or fund the preparation of an EA or EIS.

V. General Guidance

A.Scheduling. To help avoid unnecessary delay in the Environmental Review Process, the DoD and the FAA will establish a mutually agreed−upon schedule that reflects appropriate time limits to ensure that required actions are taken on a timely basis, consistent with the cooperating agency designation (ref. III.C.). The schedule will accommodate both agencies' requirements (e.g., DoD mission requirements, FAA requirements for processing SUA proposals, both agencies' NEPA−implementing procedures). Each agency will promptly notify the other of any difficulty with meeting scheduled deadlines or any need to revise the schedule.

B.Administrative Records. The FAA and the DoD, as either lead or cooperating agency, agree to develop and maintain an administrative record of each SUA project in accordance with their agency's respective administrative record and document retention rules and requirements. In the event either agency's action is timely challenged, the other agency will make its administrative record available to the agency whose action has been challenged.

C.Resolution of disagreements. If the FAA and the DoD fail to reach agreement at the normal working level on any issue relating to environmental processing of proposed SUA Actions, the matter will be referred, in ascending order, as outlined in the table below. At any time, the FAA's Office of the Chief Counsel and the Office of the General Counsel of the Service Department involved shall be consulted for assistance with legal issues.

Equivalent Levels of Responsibility for Resolution of Disagreements	
FAA Administrator	DoD Policy Board on Federal Aviation (PBFA) Chairman
FAA Chief Operating Officer, Air Traffic Organization	DoD PBFA Executive Director Principal Member
FAA VP, Mission Support Services	DoD PBFA Deputy Executive Director
FAA Director, Policy	DoD PBFA Airspace and Procedures Subgroup Chair

D.Funding. Agency budget constraints may delay processing and implementation of DoD and FAA SUA Actions. As part of the lead agency−cooperating agency relationship, the DoD and the FAA will determine responsibilities, consistent with this MOU, for funding the preparation of NEPA documentation (40 CFR §1501.6(b)(5)) and, if appropriate, decision implementation measures (40 CFR §1505.3).

E.Amendments. If either party determines that it is necessary to amend this MOU, it will notify the other party in writing of the specific change(s) desired, with proposed language and the reason(s) for the amendment. The proposed amendment will become effective upon written agreement of both parties.

VI. Effective Date.

This MOU is effective from the last signature date below until rescinded or amended.

SIGNED:

DATE: 30 Sep 2019

SCHATZ.ROWAYNE.A.JR.1177943386 Digitally signed by SCHATZ.ROWAYNE.A.JR.1177943386 Date: 2019.09.30 18:45:49 -04'00'

Executive Director, DoD Policy Board
On Federal Aviation

DATE: OCT 17 2019

ANGELA RENEE MCCULLOUGH Digitally signed by ANGELA RENEE MCCULLOUGH Date: 2019.10.17 06:33:25 -04'00'

VP Mission Support Services
Federal Aviation Administration

Appendix 8. FAA Special Use Airspace Environmental Processing Procedures

1. GENERAL

This appendix provides guidance for FAA participation in the environmental review of proposed special use airspace (SUA) actions. The requirements in this appendix are in addition to the airspace proposal processing procedures contained in this order and Appendix 4. The aeronautical and environmental processes for SUA proposals involve some overlap; actions taken, or modifications made to a proposal, in one process may affect the actions required and/or the outcome of the other process.

2. BACKGROUND

a. The SUA program is designed to accommodate national security requirements and military training activities wherein activities must be confined to designated airspace because of their nature, or in airspace where limitations are imposed upon aircraft operations.

b. SUA proposals are subject to both NEPA and aeronautical processing requirements. Since the FAA is the approval authority for SUA actions, the agency cannot make a final decision on any particular SUA proposal prior to the completion of the NEPA and aeronautical processing phases.

3. POLICIES

The following policies apply to the processing of SUA proposals:

a. In addition to responsibilities of a cooperating agency as defined in the NEPA implementing regulations at 40 CFR Parts 1500–1508, FAA must:

1. Provide to DoD information and technical expertise within the special expertise and jurisdiction of the FAA as it relates to the proposed action.

2. Resolve or respond to environmental issues raised during the NEPA process relating to aeronautical issues.

3. If an EA or EIS is required, identify and evaluate the environmental impacts relating to the proposal.

4. Furnish to DoD the names of organizations, agencies, or other parties the FAA believes may be interested in the DoD proposal.

5. Notify and coordinate FAA proposed airspace actions with DoD components that may be affected.

b. FAA Participation in NEPA Meetings. The FAA may be required to participate in scoping, interagency, and public NEPA meetings conducted by the Proponent. The Air Traffic Service Center Director (or the Director's Designee) with responsibility for Cooperating Agency participation will determine FAA representation in the meetings. When FAA personnel participate in such meetings:

1. The audience must be informed that FAA participation is to provide aeronautical technical expertise and is not to be construed as FAA endorsement or support of any SUA proposal, and that no decisions concerning the proposal will be made at the meeting.

2. If requested, the FAA will provide an overview of the procedures followed by the FAA for processing SUA proposals.

3. The FAA will advise the audience of the Service Center handling the processing of the aeronautical proposal. Written comments on the aeronautical aspects of the proposal should be submitted during the public comment period associated with the aeronautical circularization.

c. FAA NEPA Compliance Options. In accordance with CEQ regulations at 40 CFR §1501.6, the FAA must participate in the DoD Proponent's NEPA process as a Cooperating Agency in cases where the FAA has jurisdiction by law, and may participate as a Cooperating Agency where the FAA has special expertise. The FAA may adopt an EA or EIS prepared by the DoD Proponent if the FAA independently evaluates the information in the document and takes full responsibility for the scope and content that addresses FAA actions. Where the Proponent's NEPA documentation is deficient and does not meet the requirements for adoption in FAA Order 1050.1, corrections and/or additional NEPA documentation must be made by the Proponent before the FAA can make a final decision to adopt the document. The FAA may ask the DoD Proponent to correct any deficiencies and re−submit the document (see FAA Order 1050.1, Environmental Impacts: Policies and Procedures, paragraphs 2−2.1 and 2−2.2). The FAA must issue its own Adoption EA/FONSI or Adoption EIS/ROD in accordance with FAA Order 1050.1, Paragraph 8−2, Adoption of Other Agencies' National Environmental Policy Act Documents.

d. Time Limits for Final Environmental Impact Statements (EIS). If three years have expired following the approval of a final EIS, and major steps towards implementation of the Proponent's proposed action have not commenced, the Proponent agency must prepare a written reevaluation of the adequacy, accuracy, and validity of the final EIS. Written reevaluations must comply with the requirements set forth in FAA Order 1050.1, paragraph 9−2. The Proponent may also elect to prepare new documentation if circumstances dictate.

4. LEAD AND COOPERATING AGENCIES

The FAA/DoD MOU provides for the application of "lead agency" and "cooperating agency" responsibilities in the SUA environmental process. When the DoD is the Proponent, the DoD will serve as lead agency for the evaluation of SUA environmental impacts and the preparation and processing of environmental documents.

a. The DoD, as lead agency, will determine whether an SUA proposal:

1. Is a major action significantly affecting the quality of the human environment requiring an environmental impact statement (EIS);

2. Requires an environmental assessment (EA); or,

3. Is categorically excluded in accordance with FAA Order 1050.1, paragraphs 5−6.1 through 5−6.5.

These determinations must be coordinated with the FAA at the earliest possible time to prevent delay in preparation of any required NEPA documentation.

b. The appropriate FAA Service Center, as identified in response to the DoD Proponent's request that the FAA participate as a Cooperating Agency, will act as the point of contact during the evaluation of the proposal's environmental study. The FAA should review documents prepared by the Proponent in its environmental process for scope and content of the documentation and assumes responsibility as described in subparagraph 3c, above. (See FAA Order 1050.1, paragraph 8−2.)

c. Where the actions of one agency are subject to a categorical exclusion, and the actions of the other agency with respect to the same SUA, are not covered under a categorical exclusion, then the other agency will prepare an environmental assessment (EA). The applicability of a categorical exclusion by either the DoD Proponent or the FAA will be noted in the other agency's EA. FAA budget constraints may delay processing and implementation of the DoD Proponent's SUA proposal when a comparable categorical exclusion covering the same type of proposed action as the DoD's Proponent is not listed in FAA Order 1050.1, chapter 5.

5. SUA ENVIRONMENTAL CONCERNS

In addition to other environmental considerations required under NEPA, CEQ regulations, and FAA Order 1050.1, the following are items the FAA should consider, if applicable, in SUA environmental documents. These items include, but are not limited to:

a. Other Times by NOTAM. When specified in the proposal, this provision permits access to the SUA area 24 hours per day. The environmental document must address the potential impacts of the DoD users' activities within the SUA during the "other times by NOTAM" period of use.

b. Flares and Chaff. Address the potential impact of flare and/or chaff use when this activity is specified in the SUA proposal.

c. "No Action Alternative." Include discussion of this alternative.

d. Coastal Zone Consistency Determination. Include if applicable.

e. Proposed Airspace Parameters. The environmental analysis in a CatEx, EA, or EIS for the SUA proposal must match the airspace parameters contained in the SUA proposal (for example, boundaries, altitudes, times of use, and type and extent of activities).

f. Non−participating Aircraft. Include a discussion of the effect of the SUA proposed action on non−participating aircraft, if applicable.

g. Mitigation. As defined in CEQ regulations, mitigation includes:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;

2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;

3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and

5. Compensating for the impact by replacing or providing substitute resources or environments.

h. Cumulative Impacts. Cumulative impacts to the environment are those that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or Non−Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

i. Consultation. Consultation must be conducted in accordance with the National Historic Preservation Act, Section 106; the Endangered Species Act, Section 7; FAA Order 1210.20, American Indian and Alaska Native

Tribal Consultation Policy and Procedures, and other applicable laws, regulations, and Department of Transportation and FAA orders.

6. INTERAGENCY SUA ENVIRONMENTAL PLANNING MEETING

To facilitate early coordination between the FAA and the DoD Proponent, the DoD Proponent must make a request to the FAA for Cooperating Agency status as soon as the Proponent decides to initiate the environmental process.

When the FAA is invited to participate as a cooperating agency, it is suggested that a planning meeting be held as soon as practical. The agenda of the meeting should be based on the type of SUA proposal and the extent of the planned environmental analysis.

a. The appropriate Regional Military Representative (Milrep) will coordinate the Proponent's request for a planning meeting with the appropriate Service Center Director (or his/her designee). Representatives of the FAA, the Proponent, and the Proponent's NEPA consultant, if any, should be invited to participate by the military representative.

b. The meeting should include discussion of pertinent issues, including but not limited to:

1. The type of SUA proposal to be submitted,

2. Identification of points–of–contact and establishment of liaison between concerned parties,

3. Determination of the appropriate type of environmental documentation,

4. The appropriate extent of FAA participation,

5. Identification of potentially significant impacts,

6. Consideration of the need for scoping, interagency, and/or other public meetings,

7. Setting processing milestones,

8. Clarifying any questions the Proponent may have regarding the FAA's requirements for the environmental analysis and documentation; and,

9. Exchange of information on any environmental and/or aeronautical concerns in the area of potential effect.

c. At the meeting, the Service Center Airspace Specialist should:

1. Brief attendees on the airspace processing procedures in Part 5 of this order that will apply to the SUA proposal.

2. Encourage the Proponent to work proactively with aviation user groups and individuals to address aeronautical issues as they arise. This should ensure early consideration of aeronautical mitigation.

d. At the meeting, the Service Center environmental representative should:

1. Brief attendees on the environmental processing procedures in FAA Order 1050.1 and Chapter 32 of this order that apply to the SUA proposal.

2. Encourage the Proponent to work proactively with other Federal, State, and Local agencies; Tribal Governments; and the public on environmental concerns as they arise. This will ensure that mitigation to address environmental concerns is considered early in the process.

3. Advise attendees that the FAA cannot render a final determination on the environmental effects of the SUA proposal until after completion of the Proponent's environmental process, the FAA's aeronautical process, the FAA's independent review of the Proponent's environmental documentation, and any additional environmental analyses conducted by the FAA.

e. The meeting format may be tailored to the needs of the specific proposal. It may be conducted by a teleconference, if permitted by the scope of the proposal or if necessary due to funding or other constraints.

f. Additional meetings should be scheduled as needed to discuss changes, revise milestones, share updated environmental and/or aeronautical impact data or public comments, discuss alteration of the proposal in order to mitigate valid aeronautical objections, incorporate agreements by the Proponent to mitigate environmental impacts, or discuss other matters.

7. RELATIONSHIPS AND TIMING OF ENVIRONMENTAL AND AERONAUTICAL PROCESSES

a. SUA proposals are subject to both environmental and aeronautical processing requirements. These processes are separate but closely related. Any actions by a Proponent to mitigate environmental impacts, and/or changes to the proposal to address valid aeronautical objections, may alter the type and extent of environmental analysis required.

b. Normally, the SUA Proponent will initiate the environmental process well in advance of submitting an actual SUA proposal to the FAA for review. The appropriate Milrep should inform the appropriate Service Center as soon as possible after receiving notice that a DoD Proponent plans to initiate the environmental study process. A letter requesting FAA participation in the environmental study process as a Cooperating Agency should be forwarded to the Director, Policy, AJV−P, Mission Support at FAA Headquarters.

c. Proponents should submit SUA proposals to the applicable FAA Service Center prior to completion of the NEPA process. This will enable the FAA to initiate the aeronautical processing phase prior to completion of any required NEPA documents, which will facilitate the earlier consideration of aeronautical factors that may result in modification of the proposal and may affect the environmental analysis. In all cases, the FAA will defer a final decision on the proposal until the required DoD Proponent's NEPA documentation is completed.

d. During the aeronautical processing of a proposal with alternatives, only the alternative submitted to the FAA in accordance with Part 5. of this order will be subjected to the aeronautical process described in this order (such as non−rulemaking circularization or Notice of Proposed Rulemaking (NPRM)) by the FAA. However, all reasonable alternatives, including the alternative of no action, must be evaluated in the DoD SUA Proponent's environmental document.

8. SERVICE CENTER PROCEDURES

a. Normally, FAA participation in the SUA environmental process will begin at the headquarters level with a request by the Proponent of an SUA proposal for the FAA to participate in the process as a Cooperating Agency. However, the FAA point of contact will generally be a representative from the Air Traffic Organization at the Service Center level. Close coordination is required between the Service Center Airspace Specialist and Environmental Specialist throughout the process. This will ensure that FAA concerns are provided to the Proponent for consideration, and that NEPA and DOT/FAA environmental requirements are met.

b. Once notified of the initiation of the environmental process by the DoD SUA Proponent, the Service Center Environmental Specialist should request that the Proponent provide an electronic copy of all preliminary, draft, and final environmental documents for FAA review. The Service Center Environmental Specialist will forward these documents to FAA Headquarters Rules and Regulations Group (AJV−P2).

c. To the extent practicable, the Service Center should provide FAA representation at pre−scoping, scoping, and/or other NEPA public meetings concerning the SUA proposal. If requested by the Service Center, representation from the headquarters Airspace Policy and/or Airspace Management Groups will be provided.

d. Service Center Airspace Specialist Responsibilities:

1. Coordinate requests from the Milrep to schedule an interagency SUA environmental planning meeting with the Service Center Director (or the Director's designee) and the environmental specialist.

2. Participate in interagency SUA environmental planning meetings as directed, by the Service Center Director (or the Director's designee). (See paragraph 6, above.)

3. Participate in pre−scoping, scoping and/or other public meetings as directed.

4. Provide information and assistance as required to the Proponent regarding the aeronautical aspects of the proposal and processing procedures under Part 5 of this order.

5. Coordinate with and assist the Environmental Specialist in the review of environmental documents to ensure consideration of pertinent aeronautical issues. Compare the SUA proposal parameters with the analysis in the environmental document to ensure that the analysis is consistent with the Proponent's airspace request. Provide corrections and/or comments to the environmental specialist for transmittal to the Proponent.

6. Maintain liaison with the Proponent's environmental team to determine if any comments received pertain to aeronautical issues; provide information regarding the aeronautical aspects of alternatives developed by the Proponent.

7. Provide to the Proponent aeronautical impact information obtained from the formal aeronautical study conducted in accordance with Chapter 21 of this order and during the aeronautical public comment period. As required, negotiate with the Proponent to modify the proposal to mitigate valid aeronautical objections or adverse aeronautical impact.

8. Upon receipt of the SUA proposal, initiate processing in accordance with Part 5 of this order.

(a) Determine if an Informal Airspace Meeting will be held in accordance with the procedures in Part 5. of this order. If a meeting is planned, request participation by the Proponent to explain and answer questions about the proposal.

NOTE−
Informal Airspace Meetings are optional for SUA proposals. Normally, they are held only if the Service Center determines that there is a need to obtain additional aeronautical facts and information relevant to the SUA proposal under study. Informal airspace meetings may also be held based on known or anticipated controversy of the proposal.

(b) Complete the appropriate rulemaking or non−rulemaking processing requirements as defined in Part 5 of this order.

9. In consultation with the Service Center Environmental Specialist and the Regional Counsel, review the Proponent's decision document to ensure that it is consistent with any modifications made to the SUA proposal, if applicable, and that any agreed upon aeronautical mitigation measures are included.

10. If the Service Center Airspace Specialist recommends approval of the SUA proposal, submit the completed proposal package to the Airspace and Rules Team (AJV−P21) for final review and determination.

e. Service Center Environmental Specialist Responsibilities:

1. Coordinate as required with the Service Center Airspace Specialist regarding SUA matters.

2. Notify the Rules and Regulations Group (AJV−P2) when informed of scheduled interagency SUA environmental planning meetings. Participate in planning meetings as directed by the Service Center Director (or the Director's designee) (see paragraph 6 above). Provide a review copy of the Proponent's environmental documentation to FAA HQ AJV−P21 and request their participation in environmental planning meetings as necessary.

3. Provide information as required to the SUA Proponent regarding FAA environmental requirements and concerns.

4. In coordination with the Service Center Airspace Specialist, review the SUA Proponent's environmental documents to ensure that applicable impact categories and any specific FAA environmental concerns are considered. After each review, forward any corrections and FAA comments to the Proponent.

5. Review the Proponent's final document to assess whether it meets the standards for an adequate document under NEPA, the CEQ regulations, DOT Order 5610.1C, and FAA Order 1050.1. Following consultation with the Regional Counsel, determine if the FAA considers the document adequate for adoption. If so, prepare a draft Adoption document and provide a copy of the draft to FAA HQ AJV−P2 for review and comment, and to Regional Counsel or HQ AGC−600 for a Legal Sufficiency Review (LSR). In cases where the DoD Proponent's NEPA document does not meet the above−listed standards, the Service Center Environmental Specialist must return the document to the DoD Proponent for correction or additional analysis and documentation. Provide documentation of the results of each review and a recommendation regarding FAA adoption to the Rules and Regulations Group (AJV−P2).

6. If the DoD SUA Proponent determines that a DoD categorical exclusion (CATEX) applies to an SUA proposal:

(a) Determine if FAA Order 1050.1, Chapter 5, Categorical Exclusions, lists a CATEX that adequately covers the action. Verify that no extraordinary circumstances exist that would preclude use of the CATEX for the SUA proposal. Determine what additional environmental analysis would be required if the CATEX is not listed. Where the actions of one agency are subject to a categorical exclusion, and the actions of the other agency, with respect to the same SUA proposal require an EA, the agency requiring the EA will prepare the appropriate environmental analysis with the assistance of the Proponent. Applicability of a CATEX to parts of a proposed action of one of the agencies will be noted in the EA. Background information in support of CATEXs or project data necessary to support adequate impact analysis in an EA, identified by either DoD or FAA, must be forwarded to the agency requiring preparation of the EA and may be used by either agency, as allowed by their respective regulations/directives.

(b) Document the results of the review in subparagraph (a) above, and submit the findings to the Rules and Regulations Group (AJV−P2).

7. Retain the administrative record in accordance with FAA retention guidelines. If DoD is the lead agency for the proposed project, a copy of DoD Proponent's NEPA document, their letter requesting Cooperating Agency status, FAA's acceptance, and other supporting documentation should be included in FAA's administrative record.

9. MISSION SUPPORT, AIRSPACE SERVICES, AIRSPACE REGULATIONS AND RULES AND REGULATIONS GROUP (AJV−P2) ENVIRONMENTAL DOCUMENTATION REVIEW PROCEDURES:

a. Review the Proponent's environmental document(s) to verify that the analysis matches the parameters specified in the SUA aeronautical proposal and that any required environmental issues are adequately analyzed for potential impacts. Verify that the environmental analysis matches the parameters specified in the SUA proposal and that any required aeronautical issues are considered. Conduct this review simultaneously with the Service Center's review as described in paragraph 8. Provide corrections and identify deficiencies to the Service Center Airspace and/or Environmental Specialist for transmittal to the Proponent.

b. The Rules and Regulations Group (AJV−P2) must review the Proponent's environmental documents for content and compliance with NEPA, CEQ regulations, and applicable DOT and FAA Orders. Coordinate within the Rules and Regulations Group (AJV−P2) as needed, regarding concerns, corrections, or other comments on aeronautical impacts. Provide FAA Headquarters' comments to the Service Center Environmental Specialist for transmittal to the Proponent.

c. Ensure that the Service Center Airspace Specialist has provided a copy of the SUA aeronautical proposal, including any environmental documentation, to the Service Center Environmental Specialist. Provide assistance and policy guidance regarding SUA environmental processing to the Service Center Environmental Specialist upon request.

d. Coordinate within the Rules and Regulations Group (AJV−P2) as needed for additional information concerning the SUA proposal including any airspace and aeronautical impact matters.

e. Assist the Service Center Environmental Specialist in reviewing the Proponent's Final EIS or EA/Finding of No Significant Impact (FONSI), and the Service Center Environmental Specialist's comments regarding compliance with NEPA, CEQ, and applicable DOT and FAA requirements. Assist the Service Center Environmental Specialist in determining if the Proponent's NEPA document is suitable for adoption by the FAA. Assist the Service Center Environmental Specialist in preparing the FAA adoption documentation in accordance with FAA Order 1050.1, chapter 8, paragraph 8−2; and keep a copy with the Rules and Regulations Group (AJV−P2) for inclusion in the airspace docket or case file.

f. Review the Proponent's and Service Center Environmental Specialist's comments regarding applicability of a CATEX. If a CATEX does not apply, determine if additional environmental analysis is required. Consider if CATEX documentation is required in accordance with FAA Order 1050.1,chapter 5. Provide a copy of the determination to the Rules and Regulations Group (AJV−P2) for inclusion in the airspace docket or case file.

g. As appropriate, coordinate with the FAA Office of the Chief Counsel, Airports and Environmental Law Division. See FAA Order 1050.1, paragraphs 2−2.1b(2)(b); 4−3.3, 5−2a(2) and b(10); 5−3e; 6−4a; 7−1.2b; 7−1.2d(3)(c); 8−2c;8−7; 9−2e; 10−2b, d, e; 10−3b; 10−4a(2); 10−6a(2), b; 11−3; 11−4a, b.

h. Ensure that the FAA has adopted the Proponent's EIS or EA as applicable, that all additional FAA environmental requirements are satisfied, and that final decision notices are not published in the Federal Register

until after the NEPA process is completed. Submit copies of the DoD Proponent's and FAA's NEPA documentation for inclusion in the rulemaking docket file or non−rulemaking airspace case file.

i. For rulemaking SUA actions, prepare the environmental compliance statement for inclusion in the ENVIRONMENTAL REVIEW sections of the NPRM and Final Rule. Insert the following statement in the environmental review section of SUA NPRMs:

> "This proposal will be subject to appropriate environmental impact analysis by the FAA prior to any final FAA regulatory action."

For non−rulemaking SUA actions, include the DoD Proponent's and FAA's NEPA documentation for the airspace case file, and notify the public in accordance with FAA Order 1050.1, paragraph 6−2.2b.

NOTE−
For "Direct−to−Final−Rule" actions which are categorically excluded under FAA Order 1050.1, the following statement may be inserted in the environmental review section of the Final Rule:

> *"This action is categorically excluded under FAA Order 1050.1, Environmental Impacts: Policies and Procedures, Paragraph (insert Paragraph Number). Therefore, this action is not subject to further environmental review."*

j. Prepare and provide a signature copy of the Final FAA Adoption NEPA document to the manager of the Rules and Regulations Group (AJV−P2) for signature. Provide a signed copy to the Service Center's Environmental Specialist for additional distribution as necessary or requested.

Appendix 9. Noise Policy for Management of Airspace Over Federally Managed Lands

NOISE POLICY FOR MANAGEMENT OF AIRSPACE OVER FEDERALLY MANAGED LANDS

The FAA shares the national concern for the preservation of the natural environment. A critical objective in the FAA Strategic Plan is to provide leadership in mitigating the environmental impact of aviation. It is the policy of the FAA in its management of the navigable airspace over locations in national parks and other federally managed areas with unique noise−sensitive values to exercise leadership in achieving an appropriate balance between efficiency, technological practicability, and environmental concerns, while maintaining the highest level of safety. This policy envisions joint efforts between the FAA and the Federal agencies managing these locations to enhance the compatibility between management of the airspace and the management goals of these agencies.

The National Park System and other natural resource management areas under Federal jurisdiction include many locations with unique values which merit special environmental protection. Some areas provide opportunities for solitude and natural quiet and allow visitors to experience nature unaffected by civilization. Some provide opportunities for people to visit historically authentic settings, as they existed before the introduction of mechanized power. Others contain designated wilderness, critical habitat for endangered species, or solemnity of purpose, which would be diminished by the intrusion of noise. While aircraft noise is not the only noise or environmental impact that may be incompatible with areas having such unique values, this is the area of FAA's special expertise and jurisdiction.

In order to carry out the policy effectively, FAA staff and management will−

- Promote public participation to increase understanding and gain the cooperation of concerned parties when assessing noise impacts on designated locations in federally managed areas. An appropriate public process will be designated for each assessment to identify the stakeholders and provide for their effective participation.
- Communicate this policy to all stakeholders clearly. Educational information will be developed and disseminated to airspace users and other stakeholders, and appropriate advisories will be issued to minimize overflight activity and noise over particularly sensitive locations. A measured and balanced approach to the need for protective measures over specific unique locations will be taken in consultation with Federal agencies administering these areas.
- Consult actively with other Federal agencies to identify and mitigate appropriately aircraft noise levels that are not compatible with designated locations in federally managed areas. Such consultation will ensure that any resulting mitigation strategies will not transfer impacts to other noise−sensitive locations within or beyond the federally managed area. The FAA will evaluate appropriate airspace management options in consultation with the Federal agencies administering these resources to identify particular locations of concern on a priority basis. Such evaluation of alternatives will ensure that safety is not derogated and that technological and economic factors are weighed consistent with the FAA's responsibilities under 49 USC §§40101−46507 (former Federal Aviation Act).
- Develop or refine on a continuing basis methods and criteria to assess aircraft noise on designated locations in federally managed areas, in conjunction with the Federal Interagency Committee on

Aviation Noise (FICAN). Recognizing the lack of complete information and agreement on noise methodology, metrics, noise effects on animals, and appropriate land use compatibility criteria for uniquely quiet areas, the FAA in conjunction with the FICAN will continue to develop, refine, and reach more effectively aircraft noise impacts on unique national land and water resources.

- Train FAA airspace management personnel on effective airspace design techniques for mitigation of adverse aviation impacts on designated locations in federally managed areas.

This policy statement and the underlying actions are consistent with the goals of environmental responsibility and communication in the FAA's Strategic Plan, which state that FAA will:

- Provide strong leadership regarding the environmental impacts of aviation and commercial space transportation.
- Establish and maintain lines of communication with the public and with employees to promote understanding, awareness, and cooperation and to serve the interests of the traveling public.

Signed by

David Hinson

Administrator

Dated November 8, 1996

Appendix 10. Community Involvement Policy

Community Involvement Policy Statement

The first step in meeting the needs of the public is to understand the public's needs. Community involvement lets the agency know what the citizens think about our activities. Though community involvement, we will broaden our information base and improve our decisions.

The Federal Aviation Administration (FAA) is committed to complete, open, and effective participation in agency action. The agency regards community involvement as an essential element in the development of programs and decisions that affect the public.

The public has a right to know about our projects and to participate in our decision making process. To ensure that FAA actions serve the collective public interests, all stakeholders will have an opportunity to be heard. Our goals are:

- To provides active, early, and continuous public involvement;
- To provide reasonable public access to information;
- To provide the public an opportunity to comment prior to key decisions; and
- To solicit and consider public input on plans, proposals, alternatives, impacts, mitigation and final decision.

This task will require agency management and staff:

- To identify and involve the public and to consider specific concerns;
- To use public involvement techniques designed to meet the diverse needs of the broad public, including not only interested groups and the general public, but individuals as well;
- To ensure FAA planning and project managers commit appropriate financial and human resources to community involvement;
- To sponsor outreach, information, and educational assistance to help the public participate in FAA planning, programming, and project development activities;
- To ensure key personnel are trained properly in community involvement techniques and methods; and
- To development and evaluate public involvement processes and procedures to assess their success at meeting our goals.

The goals of community involvement are:

- To promote a shared obligation of the public and FAA decision makers in identifying aviation–related concern and developing and evaluating alternatives to address them; and
- To promote an active public role to minimize potential adverse community reaction to agency plans that are necessary for safe, effective, and environmentally responsible management of our airspace.

Signed by

David R. Hinson

Administrator

Dated: April 17, 1995

Appendix 11. Federal Aviation Administration (FAA) Notification of Proposed Project(s) Template

Concept of Project, Air Traffic Control Procedure, or Operational Change(s)

The FAA is in the process of conducting an Initial Environmental Review to determine the type of environmental analysis required under FAA Order 1050.1, Environmental Impacts: Policies and Procedures, *[include link to FAA Order 1050.1]*. The FAA regards community involvement as an essential element in the development of programs and decisions that affect the public and values your input at this early stage of development.

Below is a description of potential procedural or operational changes with attached graphics for your review. If you have any comments, please send them to the FAA by [*insert date*] to the following location:

[Include a method to solicit public comments, such as an ATO project link, email or mailing address. Note: Include notice in FAA Order 1050.1, paragraph 6−2.2g, if appropriate.]

Please provide your contact information with your comments. Your input will be considered to the extent applicable. In addition, for periodic updates on the status of the project including details on the ongoing environmental review per FAA Order 1050.1 Environmental Impacts: Policies and Procedures, please *[Provide instructions on how to get updates on the project such as through an FAA project link or individual point of contact.]* You will be notified of FAA's final determination per the contact information you provided.

Proposed Project Description

[Include a one or two paragraph general description of the proposed air traffic procedure change(s) and attach before and after graphics to illustrate the changes that can be clearly understood by those not familiar with air traffic control procedures. See also Appendix 5, Air Traffic Initial Environmental Review, Project Description section for other potential information to include.]

Purpose and Need

[Include a one or two paragraph description of the purpose of need of the project. See also Appendix 5, Air Traffic Initial Environmental Review, Purpose and Need Description section for potential information to include.]

Appendix 12. Evaluating Air Traffic Impacts for Wind Turbine Farm Proposals

I. GENERAL

This appendix is for use by field Air Traffic facilities in analyzing Air Traffic operational impacts from items of concern identified by the FAA Obstruction Evaluation Group (OEG) package. The Air Traffic *Objection* or *No Objection* response will be used to issue an FAA Determination of Hazard to Air Navigation or an FAA Determination of No Hazard to Air Navigation back to the submitting proponent per 14 CFR Part 77.

II. BACKGROUND

A National Wind Turbine Farm Safety Risk Management Document identified impacts wind turbine farms have on Air Traffic surveillance and navigation. One hazard was determined as a loss of air traffic control situational awareness from degradation and/or loss of primary radar services over wind turbine farms. Although wind turbines have great impacts on conventional Very−high−frequency Omni−directional Range (VOR) Navigational Aids (NAVAID), existing controls can be leveraged to eliminate this concern as a hazard.

III. POLICIES

When air traffic facilities receive a proposed wind turbine farm package from the OEG, the air traffic manager and NATCA facility representative (or their designees) need to analyze the items of concern as it relates to their local flight paths and operations. The following three (3) phases describe the process and responsibilities for the analysis when a sponsor proposes to build a new wind turbine farm. Only Phase 1 is required; subsequent phases are only to be followed based on response decisions as described.

IV. ACTIONS

Phase 1: (To be completed within 15 business days of receipt of OEG package.)
Air traffic facilities must analyze the effects contained in the OEG package for primary radar and NAVAID impacts along with their identified mitigations, and return a response based on the local operational impacts (*No Objection, Objection, or Has Concerns*).

Contact your OEG Specialist with any comments, concerns or questions.

The air traffic manager, with the Director of Operations (DO)/Terminal District Manager (TDM) concurrence, returns one of the following responses to OEG:

1. ***No Objection*:** Air Traffic review process will be complete.

2. ***Objection:*** Provide supporting data to OEG. Air Traffic review process will be complete.
Note: Supporting data must include significant volume of activity per FAA Order JO 7400.2, Paragraph 6−3−4.

3. ***Has Concerns:*** If package content doesn't provide enough data to determine impact, proceed to Phase 2.
Note: This response will be used to determine issuing a Notice of Presumed Hazard (NPH) to the sponsor/proponent.

Phase 2: (To be completed within 15 business days of receipt of Technical Operations (Tech Ops) In−depth Study.)
If the sponsor requests more information from the Notice of Presumed Hazard (NPH) issued by OEG, and an in−depth Tech Ops study is possible, OEG will notify the facility of expected date of completion. (*expect 3−6 months for study to be completed*).
Air Traffic facilities must analyze the in−depth Tech Ops study for primary radar impacts along with their identified mitigations.

Contact your OEG Specialist with any comments, concerns, or questions.

The air traffic manager, with the Director of Operations (DO)/Terminal District Manager's (TDM) concurrence, returns one of the following responses to OEG:

1. ***No Objection*:** Air Traffic review process will be complete.

2. ***Objection:*** Provide supporting data to OEG. Air Traffic review process will be complete.
Note: Supporting data must include significant volume of activity per FAA Order JO 7400.2, paragraph 6−3−4.

Phase 3: (To be completed 90 calendar days from completion of Phase 1 or Phase 2 as necessary.)
If unable to determine a response in Phase 1 or Phase 2, the air traffic facility may initiate the Safety Risk Management (SRM) process in order to determine the operational impact of any risk mitigation activities; specifically, those mitigations prescribed in the Tech Ops study, air traffic procedural mitigations, or other potential mitigations.

Contact your Service Center Quality Control Group (QCG) POC for guidance as necessary.

Note: Industry sponsors may present information for a limited time preceding the SRM Panel. They may not participate or observe the remainder of the panel.

1. An SRM document with or without hazards is completed and signed. The air traffic manager, with the Director of Operations (DO)/Terminal District Manager (TDM) concurrence, returns either an *Objection* or *No Objection* response with supporting data to OEG.

2. If the result is an SRM document with a high hazard:
- **a.** AJT−0 will forward a response to OEG per the OEG process.
- **b.** AJT−0 will forward the SRM document with Hazard to AJV−0 for review and processing per the ATO Safety Management System Manual.