

CHAPTER 6. NON-RULE MAKING ACTIONS/AIRPORT AIRSPACE ANALYSIS	2
SECTION 1. GENERAL	2
600. PURPOSE.....	2
601. BACKGROUND.....	3
602. STATUTORY BASIS FOR NRA/AAA 's.	3
603. REGULATORY BASIS FOR NRA 's	5
604. FAA INTERNAL DIRECTIVES AND PROCESSES.....	7
a. Airport Design Standards	7
b. Obstruction Marking and Lighting.....	8
c. Aeronautical Study of Existing Obstacles	9
605 – 609. RESERVED.....	9
SECTION 2. REGIONAL NRA PROGRAM.....	10
610. GENERAL.....	10
611. POLICY AND OBJECTIVES	10
a. ORGANIZATIONAL RESPONSIBILITIES	11
1. Airports Division	11
2. Air Traffic Division	11
3. Flight Standards Division.....	11
4. Flight Procedures Offices	11
5. Airway Facilities Division	11
6. Local Office Notification.....	12
b. ORGANIZATIONAL PROCESSING	12
1. Airports Division	12
2. Air Traffic Division	13
3. Flight Standards Division	13
4. Flight Procedures Offices	13
5. Airway Facilities Division	13
6. Local Office Notification.....	14
612. NRA/AAA AUTOMATION SUPPORT AND JOB AIDS.....	14
a. AIRSPACE MANAGEMENT SYSTEM (ASM)	14
b. RELAY GOLD (AIRPORT SAFETY DATA SYSTEM).....	14
c. INSTRUMENT APPROACH PROCEDURE AUTOMATION PROGRAM (IAPA):.....	14
d. AIRCRAFT MANAGEMENT INFORMATION SYSTEM (AMIS)	15
e. GEODETIC CALCULATION PROGRAMS:	15
f. SUPER PROSE or AUTO PROSE PROGRAM:	15
g. TRANSPARENT PLASTIC OVERLAYS, TEMPLATES or SCALES	15
613-619. RESERVED.....	15
SECTION 3. REQUIREMENTS AND GUIDELINES FOR THE NRA REVIEW PROCESSES.	16
620. GENERAL.....	16
621. DIRECTIVES APPLICABLE TO NRA EVALUATIONS	16
622. NRA EVALUATION RESOURCES AND SUPPORT ACTIVITIES.....	17
623. TYPES OF NRA PROPOSALS.....	18
624. FLIGHT PROCEDURES OFFICE POLICIES AND PRACTICES FOR NRA EVALUATIONS.....	18
625-629. RESERVED.....	19
SECTION 4. NON-RULEMAKING EVALUATION AND RESPONSE.	20
630. GENERAL.....	20
631. NONRULEMAKING CASES (NR).....	20
632. NON-RULE AIRPORTS (NRA) ANALYSES, EVALUATION, & RESPONSE.....	21
633. NRA (OE) ANALYSIS.....	21
634. OBSTRUCTION EVALUATION (OE)	22
635. SAFETY ANALYSIS.....	23
636. FLIGHT PROCEDURE OFFICE REVIEWS OF AIRPORT LAYOUT PLANS AND MASTER PLANS.....	24
a. Approach area	25
b. Obstacle Free Zone (OFZ)	25
c. Runway Safety Area (RSA).....	25
d. Runway Obstacle Free Area (ROFA).....	25
e. Declared distances.....	25

f. Master Plans	27
637. AIRPORT IMPROVEMENT PROGRAM PRE-APPLICATIONS (PRE-APPS).....	27
638. CONSTRUCTION	28
639. FLIGHT SAFETY REVIEWS.....	29
640. 157 AIRPORT PROPOSALS.....	29
641. PUBLIC USE AIRPORT	30
642. PRIVATE USE AIRPORT	30
643. PRIVATE/COMMUNITY OWNED AIRPORT/FLIGHT PARK	31
644. PUBLIC USE HELIPORT.....	31
645. PRIVATE USE HELIPORT.....	32
646. SEAPLANE BASE.....	33
647. VERTIPORT.....	33
648. GLIDERPORT	33
649. ULTRALIGHT FLIGHT PARK.....	33
650. MANNED BALLOON LAUNCHING FACILITY	34
651. DEACTIVATION/ABANDONMENT OF A FACILITY	34
652. CHANGE OF STATUS FROM PRIVATE TO PUBLIC OR FROM PUBLIC TO ANY OTHER STATUS..	34
653. CHANGE OF STATUS FROM VFR TO IFR OR IFR TO VFR.....	35
654. DESIGNATION OF PRECISION INSTRUMENT RUNWAY.....	36
655. MODIFICATION OF STANDARDS (REF CHAP 7).....	36
656. 150 NOISE STUDY.....	36
657. MISC. (PARACHUTE JUMPING, LASER, MODEL AIRPLANES, ETC.).....	37
658-660. RESERVED.....	37
SECTION 5. FPO RESPONSIBILITIES AFTER THE NRA EVALUATION.	38
660. GENERAL.....	38
661. RESPONSE TO AIR TRAFFIC.....	38
662. NOTAM's.....	38
663. AIR TRAFFIC/AIRPORTS ACTIONS AFTER THE FLIGHT PROCEDURES RESPONSE	38
664. NEGOTIATIONS AND MEETINGS.....	39
665. RECORD KEEPING POLICIES.....	39
FIGURE 6-1	40
FIGURE 6-3.....	43
FIGURE 6-4.....	45
FIGURE 6-5.....	47
FIGURE 6-6.....	49
FIGURE 6-7.....	50
FIGURE 6-8.....	52
FIGURE 6-9.....	54
FIGURE 6-10a.....	55
FIGURE 6-10b.....	56

Chapter 6. NON-RULE MAKING ACTIONS/AIRPORT AIRSPACE ANALYSIS

Section 1. GENERAL

600. PURPOSE

This chapter provides the Flight Procedures and Airspace Specialist assigned to the Flight Procedures Office with information and guidance to achieve the understanding, appreciation, and cooperation necessary to produce high quality work in processing and coordinating Non-Rule making actions and Airport Airspace Analyses (NRA/AAA). Policies, criteria, and procedures contained herein will improve decision making with respect to safety and efficient airport and airspace utilization, and standardize the responses to NRA/AAA cases.

601. BACKGROUND

The NRA/AAA coordination and review process involves a wide range of aeronautical subjects. It is interrelated with nearly everything for which the FAA has responsibility. NRA/AAA's exclude those airspace cases that relate to the designation, alteration, or revocation of airspace by rule, regulation, or order. Non-rule making airspace cases include:

- 1) existing and proposed objects affecting navigable airspace that are completely or partially on an obligated airport;
- 2) airport airspace analysis involving proposed airport development, airport plans, and airport layout standards;
- 3) proposed landing areas and changes to existing landing areas; and,
- 4) air navigation aids.

AVN's Flight Procedures Office(s), along with Flight Standards, Airway Facilities, Air Traffic, and Airports Divisions in the Regional Office are the functional entities normally involved in NRA/AAA matters, either as the office of primary interest (OPI) or as a coordinating office in the review and response process.

Note: All of the provisions, procedures, and figures presented in this chapter are intended to be an aid to the Flight Procedures Office specialist and should not be construed as the only course of action. They should never be used to circumvent good common sense and sound aeronautical judgement based upon knowledge gleaned from practical experience and education in subject matters relating to this topic. Responses presented in the "Figures" are suggested examples and are not meant to be the "ONLY" possible response to each situation. Automation in the OE/AAA program, which includes response items for NRA/AAA, may make the actual printed response unnecessary. Each regional FPO must respond according to their individual needs and practices.

602. STATUTORY BASIS FOR NRA/AAA's.

The Federal Aviation Act of 1958 (FA Act), and subsequent amendments, legislates the Secretary of Transportation's responsibility for maintaining a safe National Airspace System (NAS). Authority to act on behalf of the Secretary has been delegated to the FAA Administrator. The following sections contain the basic authority for the FAA to conduct airspace analysis studies, which culminate in an agency determination.

- (1) Section 305, Fostering of Air Commerce. Directs the Secretary to encourage and foster the development of civil aeronautics and air commerce.

(2) Section 307a, Airspace Control and Facilities - Use of Airspace. Authorizes and directs the Secretary to develop plans for and formulate policy with respect to the use of the navigable airspace and assign the navigable airspace under such terms, conditions, and limitations as he may deem necessary in order to insure the safety of aircraft and the efficient utilization of such airspace.

(3) Section 307b, Airspace Control and Facilities - Air Navigation Facilities. Authorizes the Secretary, within the limits of appropriations made by the Congress, to acquire, establish and improve air-navigation facilities wherever necessary.

(4) Section 308b, Expenditure of Federal Funds for Certain Airports, Etc. - Location of Airports, Landing Areas, and Missile and Rocket Sites. Requires reasonable prior notice of construction, alteration, and deactivation of airports involving Federal Funds.

(5) Section 309, Other Airports. Requires reasonable prior notice of construction, alteration, and deactivation of airports not involving Federal Funds.

(6) Section 312, Development Planning. Directs the Secretary to formulate long range plans for the orderly development of the navigable airspace, landing areas, other aids and facilities for air navigation.

(7) Section 1001, Conduct of Proceedings. Authorizes the Secretary to conduct his proceedings in such a manner as will be conducive to the proper dispatch of business and to the ends of justice, subject to the provisions of the FA Act and the Administrative Procedures Act.

(8) Section 1101, Hazards to Air Commerce. Directs the Secretary to require all persons to give public notice of construction or alteration, or of the proposed construction or alteration, of any structure where notice will promote safety in air commerce.

Aviation Safety and Noise Abatement Act of 1979, as amended. Requires that the Secretary of Transportation, in consultation with other public agencies, establish a single noise measuring system (Integrated Noise Model) and identify land uses that are compatible with airport development. The law also provides for funding of noise compatibility programs.

Airport and Airway Improvement Act of 1982, and subsequent amendments, replaced the Airport and Airway Development Act of 1970 which established the Aviation User Trust Fund. It is

through the Airport and Airway Improvement Act of 1982 that the Secretary of Transportation is authorized to make grants for airport development and planning (Airport Improvement Program). The Act also establishes priority for commercial service, cargo hub, and reliever airports, authorizes funding levels for the F&E Program, and authorizes a State block grant pilot program. The following sections pertain to NRA/AAA determinations.

(1) Section 505, Airport Improvement Program. Authorizes the FAA, through the Secretary of the Department of Transportation, to make grants of funds for airport development and planning.

(2) Section 509, Submission and Approval of Project Grant Applications. Authorizes the establishment of standards for, among other things, airport design and safety of approaches.

(3) Section 511, Project Sponsorship. Authorizes requiring assurances in writing that the aerial approaches to the airport will be adequately cleared and protected by removing, lowering, relocating, marking or lighting, or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards and the requiring of assurances in writing that appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operation, including landing and takeoff of aircraft.

(4) Section 534, State Block Grant Pilot Program. Authorizes the establishment of regulations to implement a State block grant pilot program whereby the states assume responsibility for administering all of their allotted airport grant funding except at primary airports. Court Decisions and the Statutes - Occasionally, legal actions result from an FAA airspace determination. A federal judge determines if the FAA was "arbitrary and capricious" in its determination. The court will consider if the determination was based on internal FAA guidance, the FAR's, and the laws. A court decision will normally be based on strengths or deficiencies in the FAA's internal guidance, procedures, or the FAR's and/or proper application of those documents.

603. REGULATORY BASIS FOR NRA's

The Administrator implements the provision of the Federal Aviation Act and other Acts by adoption of various FAR's. The following FAR's cover subjects involved in NRA/AAA determinations.

FAR 77 - Objects affecting navigable airspace. Establishes standards for determining obstructions in navigable airspace. Sets forth the requirements for notice to the Administrator of certain proposed construction or alteration. Provides for aeronautical studies of obstructions to air navigation, to determine their effect on the safe and efficient use of airspace. Provides for public hearings on the hazardous effect of proposed construction or alteration on air navigation. And, provides for establishing antenna farm areas.

FAR 101 - Moored balloons, kites, unmanned rockets and unmanned free balloons. Prescribes governing rules.

FAR 103 - Ultralight vehicles, Prescribes governing rules.

FAR 105 - Parachute jumping. Prescribes governing rules.

FAR 139 - Certification and operations: Land airports serving certain air carriers. Prescribes rules governing the certification and operation of land airports which serve any scheduled or unscheduled passenger operation of an air carrier that is conducted with an aircraft having a seating capacity of more than 30 passengers.

FAR 150 - Airport noise compatibility planning. Prescribes the procedures, standards, and methodology governing the development, submission, and review of airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs. This part also identifies those land uses which are normally compatible with various levels of exposure to noise by individuals.

FAR 151 - Federal aid to airports program. Prescribes policies and procedures for administrating.

FAR 156 - State Block Grant Pilot Program. Prescribes procedures by which a State may apply, State program administration, responsibilities, and enforcement.

FAR 157 - Notice of construction, alteration, activation, and deactivation of airports. This regulation requires proponents of civil airport projects not involving federal funds to give the Administrator reasonable prior notice of such proposals so that he may be advised as to the effects a proposal will have upon the safe and efficient use of airspace by aircraft.

FAR 169 - Expenditure of Federal funds for non-military airports or air navigational facilities thereon. Prescribes requirements for issuing a written recommendation and certification that a proposed project is reasonably necessary for use in air commerce and national defense.

FAR 171 - Non-Federal navigational facilities. Sets forth minimum requirements for the approval and operation of non-Federal navigational facilities that are to be involved in the approval of instrument flight procedures related to those facilities.

604. FAA INTERNAL DIRECTIVES AND PROCESSES

The procedures for accomplishing the NRA/AAA program incorporated in the FAA's internal orders are based on the laws passed by the Congress and the FAR's issued by the FAA.

The primary FAA directive concerning Non-rule making Airspace actions is Part 3 (Airport Airspace Analysis) and Part 4 (Air Navigation Aids) of Order 7400.2, Procedures for Handling Airspace Matters (as amended). This order prescribes policy, criteria, and procedures applicable to Air Traffic Rules and Procedures Service, Program Engineering and Maintenance Service, Systems Engineering Service, Office of Airport Planning and Programming, Office of Airport Standards, and Office of Flight Operations. It also applies to all regional and field organizational elements involved in rule making and non rule making actions associated with airspace allocation and utilization, obstruction evaluation, obstruction marking and lighting, airport airspace analysis, and the establishment of air navigational aids. Administration of the airspace program has required the FAA to take action in related areas of responsibility to provide broad guidance imposed by the statutes. The following are examples and situations relative to airspace evaluations.

a. Airport Design Standards

The FAA has the responsibility to develop airport design standards. Such standards are normally issued in the form of Advisory Circulars.

- (a) Numerous advisory circulars on airport and heliport design exist that define criteria, which the airport owner may use to insure protection of the airspace needed for the airport now and in the future. The FAA coordinates these standards with the international community through the International Civil Aviation Organization (ICAO). Current Advisory Circulars such as AC 150/5300-13 (Airport Design) and AC 150/5390-2 (Heliport Design) are commonly used to determine whether airports and/or heliports meet specific design standards.
- (b) The criteria emphasize runway obstacle protection especially in the innermost portion of the approach-departure areas. Local agencies are required to adopt these criteria if the airport is developed under the Airport Improvement Program (AIP). The intent of the criteria, especially in conjunction with AIP funds, is that obstructions near the airport will be prevented.
- (c) Airport management prepares an approach and clear zone plan in accordance with obstruction standards in FAR Part 77. The plan outlines the area

surrounding an airport to be protected from tall structures or other objects. More detailed information on imaginary surfaces can be found in FAR Part 77 and Order 7400.2 (as amended). These imaginary surfaces are important, as the underlying area determines the boundaries for land use planning for the airport.

- (d) Airport management is responsible for ensuring that the height restriction ordinances adopted by the local jurisdiction is in agreement with the FAR Part 77 imaginary surfaces. Thus, if an airport owner wishes to protect its airport from obstructions, close coordination is required with the local zoning jurisdiction to assure that a local height restriction ordinance is adopted and enforced. FAA Advisory Circular, (AC) 150/5190-4, (A Model Zoning Ordinance to Limit Height of Objects Around Airports), provides a model zoning ordinance to be used as a guide to control the height of objects around airports.

b. Obstruction Marking and Lighting

Since the statutes do not contain a basis for the mandatory marking and lighting of structures to warn pilots of those structures, the FAA provides guidelines to the public and industry on how to mark and light ground structures for air safety. These guidelines are published in AC 70/7460-1, (Obstruction Marking and Lighting), and are considered the minimum necessary to provide an acceptable conspicuous level to warn pilots of the presence of obstructions.

- (1) While compliance with the standards in AC 70/7460-1 for marking and lighting of obstructions is not mandatory, it is usually to the mutual benefit of both the property owners and aeronautical interests. The vast majority of obstructions to air navigation are marked and lighted, including all radio and television transmitting antenna towers over which the FCC has authority and requires compliance when it is a condition of an Obstruction Evaluation (OE) determination of "no hazard".
- (2) In certain situations, less than minimum marking and lighting, as defined by the AC, may be found acceptable, but only after a special aeronautical study has been made to determine that such action would not result in the creation of a hazard to air navigation.

c. Aeronautical Study of Existing Obstacles

Aeronautical studies of existing objects are conducted under the authority of Sections 307(a) and 313(a) of the FA Act of 1958, as amended. A notice received under FAR Part 77 for proposed construction or alteration that has already been started is considered an existing object.

- (1) As a practical matter, there are few differences between the way an existing obstacle is studied and the way a proposed obstacle is evaluated. The differences are only how the case is administratively handled.
- (2) Determinations or recommendations concerning existing objects are not subject to review under the provisions of FAR Part 77. Petitions or requests for review are granted or denied at the discretion of the Regional Administrator. Should a review be granted, it is processed outside the regulatory framework of FAR Part 77.

NOTE: In the absence of specific guidance, or in situations involving conflicting requirements, competing uses, etc., the application of common sense and sound professionally accepted standards will often be the basis on which determinations are based. How vigorously the objection to a proposal should be depends greatly on the amount and extent of conflict and how safety and efficiency may be adversely affected by the proposed action.

Directives specifically governing the Non-rulemaking activities are listed in Section 3, paragraph 631.

605 - 609. RESERVED

Section 2. REGIONAL NRA PROGRAM

610. GENERAL

The Region's processing of airspace cases is affected by several factors which can impact the delivery of high quality airspace decisions. These include: (1) appropriate priority given to processing airspace cases, (2) appropriate and timely airspace training, (3) quality of the products being processed to complete the desired review or task, (4) automation support.

611. POLICY AND OBJECTIVES

It is the policy of the Flight Procedures Offices, that FPO processing of airspace cases will display the following characteristics:

(1) Coordination Responsibilities: FPO personnel understand their own responsibilities and have at least a basic understanding of, and respect for the responsibilities of the other organizations involved in the coordination process.

(2) Consistency, Accuracy, and Completeness: The airspace coordination packages and response packages prepared by FPO personnel are accurate and complete thus minimizing or avoiding problems, delays, and negative impacts on others.

(3) Effective and Efficient Process: The processing and handling of NRA/AAA cases is assigned appropriate priority. The degree of complexity of each airspace case is a primary consideration in the assignment of personnel. The significant impacts of airspace cases are understood by all and they strive to achieve and maintain an effective and efficient process.

(4) Overall Understanding of the Process: All Flight Procedures Office personnel have at least a basic understanding of the overall airspace coordination and review process.

(5) Management and Control of the Process: FPO personnel manage and control their processing of NRA/AAA cases in a timely and responsive manner. They maintain an awareness of how delays in their processing activities impact others. Each respective FPO may develop a tracking/management vehicle that is appropriate to their respective offices. In most regions an automated software program has been incorporated into the overall processing functions of OE's, NRA's, AAA's, etc. Specialists in the Air Traffic Division normally administer the overall program, however, personnel in the Airports Division will normally update airport data within the program. Automated processing is encouraged where possible. This automated function will be updated periodically as time and resources permit.

a. ORGANIZATIONAL RESPONSIBILITIES

Handbook 7400.2 (as amended) specifies the authority for conducting the airport program be delegated to regional offices. Airport personnel shall administer the airports program with the coordinated assistance of AVN's Flight Procedures Offices, Air Traffic, Airway Facilities, and Flight Standards personnel.

1. Airports Division

Appropriate Airports Offices are responsible for the overall airports program, including studies of airport proposals, developing and forwarding the FAA determination to the airport sponsor/proponent, and where applicable, forwarding comments regarding potential noise problems to the airport proponent/sponsor for resolution.

2. Air Traffic Division

The appropriate air traffic 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 air traffic office shall be responsible for identifying potential noise problems and advising the airports office accordingly.

3. Flight Standards Division.

The appropriate flight standards office is responsible for evaluating whether aircraft operations can be conducted safely and in accordance with applicable criteria and standards.

4. Flight Procedures Offices

The appropriate flight procedures office is responsible for reviewing the proposal and making the necessary recommendations relative to the impacts on instrument procedures including landing and takeoff applications. If there are no impacts to instrument procedures, a note such as "Does Not Exceed", also noted as (DNE) should be included in the determination.

5. Airway Facilities Division

The appropriate airway facility office is responsible for conducting the following engineering studies:

- a. Studies of airport proposals to evaluate their effects upon commissioned and/or proposed air navigation aids.

- b. Electromagnetic studies to evaluate the effects existing and/or proposed objects will have upon air navigation and communications facilities.
- c. Line-of-sight (shadow) studies on existing and/or proposed objects for control tower visibility.

6. Local Office Notification

Each of the above offices are responsible for keeping their respective local and field offices advised of proposed and completed airport proposals as appropriate.

b. ORGANIZATIONAL PROCESSING

The major processing functions and requirements of AVN's Flight Procedures Offices, Airport, Air Traffic, Airway Facilities, and Flight Standards personnel are summarized in the following paragraphs. References for detailed descriptions are provided for each division.

1. Airports Division

(Reference Order 7400.2D, Par 11-1 through 11-19)

- a. Initial processing of Part 157 proposals and Airport Layout Plans (ALP). Checks information for correctness, clarity, completeness, and proper detail. Contacts the proponent for correction of any information deficiencies and maintains status records.
- b. Initial processing review of proposed construction of new airports, includes but is not limited to determining: conformance with agency design criteria; anticipated operational use of the airport; intended for personal, public, or private use; runway and taxiway layouts; controversial aspects; potential noise aspects; possible conflict with airport/improvement development or other agency plans.
- c. Review the nature and magnitude of proposals for alteration of existing airports. Determine the extent of processing necessary and analysis required.
- d. Coordinate proposals for deactivation and abandonment of airports.
- e. Coordinate proposals with Air Traffic, Flight Standards, and Airway Facility divisions.
- f. Negotiate with the sponsor to change the proposal as necessary.

- g. Develop and issue the official FAA determination to the airport sponsor.

2. Air Traffic Division

Reference Order 7400.2D, Par 11-40 through 11-48)

- a. Evaluate the effect on the safe and efficient utilization of airspace.
- b. Coordinate proposals with other air traffic offices and facilities as appropriate.
- c. Conduct an airspace review.
- d. Circularize airport proposals as necessary, in accordance with non-rulemaking procedures.
- e. Prepare a consolidated service position and forward to the Airports Office.

3. Flight Standards Division

(Reference Order 7400.2D, Par 11-20 through 11-29)

- a. Conduct flight safety reviews to determine the effect on the safety of flight. Prepare a consolidated service position and forward it to the Air Traffic Office.
- b. Include in flight safety reviews the effect on safety of flight operations (including takeoffs and landings) as well as safety of persons and property on the ground.
- c. Evaluation of instrument runway designations.
- d. Conduct or arrange for on site evaluations when considered necessary. This is required for heliport operations to determine safe ingress and egress routes as well as any obstructions that might impact safe operations near the heliport.

4. Flight Procedures Offices

(References TBA)

Process and coordinate requests for the establishment of instrument approach procedures, as well as Standard Terminal Departures (SIDs), Standard Terminal Arrival Routes (STARs), and other associated instrument operations requiring documentation, flight check, and publication processes.

5. Airway Facilities Division

(Reference Order 7400.2D, Par 11-30 through 11-39)

- a. Conducting engineering studies on airport proposals to evaluate their effects upon commissioned and/or proposed air navigation aids.
- b. Electromagnetic studies to evaluate the effects existing and/or proposed objects

will have upon air navigation and communications facilities.

- c. Line-of-sight (shadow) studies on existing and/or proposed objects for control tower visibility.

6. Local Office Notification

Each of the above offices shall be responsible for keeping their respective local and field offices advised of proposed and completed airport proposals as appropriate.

612. NRA/AAA AUTOMATION SUPPORT AND JOB AIDS

Many of the evaluations required for determining the effects of proposed structures/objects on instrument approach procedures can be simplified and/or accelerated by use of automation and job aids already available to FPO personnel. These aids vary from simple devices such as figures, graphs and tables to sophisticated automation systems that contain vast amounts of data meeting stringent accuracy requirements, and are capable of constructing procedures segments and areas, and can perform the calculations necessary to produce high quality NRA (OE) evaluations.

NOTE: Not all aids are available, or appropriate for all offices.

a. AIRSPACE MANAGEMENT SYSTEM (ASM)

The ASM is a computer program designed to automate the administrative functions of Obstruction Evaluations/Airport and Airspace Analysis (OE/AAA). The Airspace Management System Users Manual (dated June 1, 1987) provides instructions on the use of the ASM as it is currently developed. ASM can be used to provide responses to OE/AAA cases.

b. RELAY GOLD (AIRPORT SAFETY DATA SYSTEM)

Relay Gold is an Airport data retrieval program. Circle Search, menu item #7 provides a list of any airport(s) within six nautical miles of a set of coordinates. The data is extracted from the Airport Safety Data System (ASDS) data base. This program is primarily used by the ADO's when responding to a 7460-1 OE.

c. INSTRUMENT APPROACH PROCEDURE AUTOMATION PROGRAM (IAPA):

has been under development since the mid 1970's. It has been extensively tested and based on test results has been approved for use in the development of specific types of procedures. It is available in each FPO for use in this and other procedural matters.

d. AIRCRAFT MANAGEMENT INFORMATION SYSTEM (AMIS)

contains numerous data bases used frequently to support FPO functions. It has recently been identified as the agency standard for facility data.

e. GEODETIC CALCULATION PROGRAMS:

are available to calculate coordinates of proposed structures/objects based on their distances from the runway centerline and down the runway centerline projections. These programs can be found in IAPA, commercial sources and in-house developed programs. The use of any specific program should be left to the discretion of the procedures specialist.

f. SUPER PROSE or AUTO PROSE PROGRAM:

are other automated systems that can provide information relative to various proposals and can be used to determine impacts on various functions. It performs all calculations and quickly identifies the effect of proposed structures/objects on instrument flight procedures. It is a valuable screening process that offers significant time savings in accomplishing these critical FPO functions. Input requirements are minimal. As should be expected, it requires the accurate coordinates and elevation of the proposed structure/object and needs to know what type of criteria is to be applied. The program has the capability to check final approach areas for all non-precision approaches, circling MDA, zones 1, 2, & 3 of the departure areas of all runways, precision approaches including the CAT II/III missed approach areas and the light lane using either the ILS or MLS criteria. This program will also give the maximum height of the proposed structure/object for no IFR effect. This is an optional use program and is left to the individual FPO's to determine it's effectiveness within their own offices.

g. TRANSPARENT PLASTIC OVERLAYS, TEMPLATES or SCALES

Are marked or etched with the final and missed approach areas to appropriate scales.

613-619. RESERVED

Section 3. REQUIREMENTS AND GUIDELINES FOR THE NRA REVIEW PROCESSES.

620. GENERAL

The Non-Rule Making/Airport Airspace Analysis process requires Flight Safety Reviews be conducted to determine the effects of NRA proposals on safety of flight and on the safety of people and property on the ground. Regional Flight Standards Divisions are responsible for completing such studies. The Flight Standards All Weather Operations personnel are normally the focal point within the division for processing NRA/AAA proposals and responses.

Criteria and guidance for making the required determinations are provided in applicable FAR's, FAA Orders, and Advisory Circulars. Paragraph 633 contains a listing of applicable directives. Quantifying safety is a difficult task at best. Criteria and guidance to cover every possible situation and condition having potential safety impacts can not be provided. Proper completion of these studies requires careful application of all available criteria, coordination with all appropriate elements of the division to take advantage of available expertise, and the use of sound professional judgment.

Certain NRA evaluations will involve input from the appropriate FSDO office. For these NRA cases the Flight Standards Division primarily serves as the focal point for receiving the NRA, reviewing the proposal to determine if special instructions or clarifications are needed, forwarding a copy to the appropriate FSDO, receiving the FSDO response, reviewing the FSDO response for completeness, and forwarding the response to the Airports Division/ADO office.

As a general rule, NRA evaluations for the establishment of a landing area (airport, heliport, seaplane base, or private flight park) are performed by FSDO inspectors. All other NRA evaluations are performed by the FPO specialist. The regional operations branch may also become involved with NRA's to review on-airport construction project drawings and specifications for safety issues whereas the FPO will review these project packages for effects on IFR operations. Close coordination between the FPO specialist and Flight Standards personnel is essential to accomplish timely responses to these cases.

This section provides an overview of the regional NRA/AAA process and practices.

621. DIRECTIVES APPLICABLE TO NRA EVALUATIONS

The following is a list of agency directives which are applicable to the NRA process. This is not intended to be an "all inclusive" list but rather a good starting point.

- a. FAR Part 77, Objects Affecting Navigable Airspace.

- b. FAA Handbook 7400.2D, Procedures for Handling Airspace Matters.
- c. FAA Handbook 8260.3, United States Standard for Terminal Instrument Procedures (TERPS).
- d. FAA Handbook 8260.19, Flight Procedures and Airspace.
- e. FAA Advisory Circular 150/5300-1, Airport Design.
- f. FAA Order 8440.5, General Aviation Operations Inspector's Handbook (old version).
- g. FAR Part 157, Notice of Construction, Alteration, Activation, and Deactivation of Airports.
- h. Order 6750.16B, Siting Criteria for Instrument Landing Systems.
- i. Order 6850.2A, Visual Guidance Lighting Systems.

622. NRA EVALUATION RESOURCES AND SUPPORT ACTIVITIES

The following is a list of formal training courses and supporting activities that provide the FPO specialist with information for conducting NRA/AAA studies.

- a. FAA Course 12051, Basic Obstruction Evaluation and Airport/Airspace Analysis (104 hours). This course is primarily designed for Flight Procedures Office specialists, Air Traffic, Flight Standards, Airports, and Airway Facilities personnel involved in the Obstruction Evaluation and Airport/Airspace Analysis Programs at the Regional and Washington Headquarters level. The course consists of classroom instruction and laboratory exercises. Content includes application of FAR Part 77 criteria, evaluation of aeronautical effect, obstruction marking and lighting, FAR Part 157 and AIP airport project processing, and issuance of airport airspace determinations.
- b. Meetings to Discuss Changes to Order 7400.2. The Air Traffic organization in Washington, specifically the Airspace and Obstruction Evaluation Branch, ATP-240, hosts periodic meetings to discuss and explain changes to Order 7400.2. Regional participation is expected and FPO specialist should be adequately represented.
- c. Instrument Procedures. A comprehensive knowledge is required of the concepts of criteria application and the procedure development process addressed in TERPS, 8260.19, and AC 120-29.
- d. Air Operations. A comprehensive knowledge is required of general aviation, air carrier, and military aviation practices in both fixed wing and rotor aircraft, for evaluating both VFR and IFR effects.

623. TYPES OF NRA PROPOSALS

(Refer to 7400.2(as amended), par 10-10.)

- a. Airport proposals submitted pursuant to the provisions of Part 157.
- b. Airport Improvement Program (AIP) projects. When a request for an AIP grant is made, the proposed project is subject to Aeronautical Study unless it was studied under a previous grant proposal.
- c. Notice of Existing Airports where prior notice of the airport construction or alteration was not provided.
- d. Disposal of Federal surplus real property for public airport purposes.
- e. Airport Layout Plans (ALP's). ALP's are subject to aeronautical study to evaluate the effects that future airport development proposals, including on-airport structures, may have upon line-of-sight capability, electronic and visual navigational aids, safety and current and proposed instrument procedures.
- f. Military proposals for military airports used only by the military.
- g. Proposals on joint-use (civil/military) airports.
- h. Proposed designation of precision instrument landing runways.
- i. Airport site selection feasibility studies.
- j. On-airport construction projects including the associated safety plan.
- k. Change in airport status from VFR to IFR or vice versa.
- l. Part 150 Noise Studies.
- m. A waiver/modification to Airport Design standards.
- n. 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, including model airplane functions at airports, ultra-lights, parachute jumping, etc.

624. FLIGHT PROCEDURES OFFICE POLICIES AND PRACTICES FOR NRA EVALUATIONS

This paragraph outlines the Flight Procedures Office policies and practices regarding the conduct of NRA evaluations.

- a. Change in airport status from VFR to IFR is required prior to publication of an instrument approach procedure. It is Flight Procedures policy that IFR status will be granted prior to the implementation of a SIAP. Airports Division/ADO's will determine the Airport Reference Code (ARC) and designate the status of the runway as Basic/Visual, Non-Precision or Precision. High terrain or other obstructions closely surrounding the airport usually requires hazard beacon lights to mark FAR Part 77

- surface penetrations. Partial hazard beacon lighting may be allowed with appropriate restrictions such as "night minimums NA" or "circling NA", etc.
- b. ALP reviews can provide valuable advance information. Be alert for planned precision runway designations and instrument runway designations for consideration in future decision making. Also, make sure that the planned precision runway designation is realistic.
 - c. Be careful that on-airport construction does not interfere with F&E CAT II/III upgrades. The expansion of a terminal and the subsequent parking of large aircraft at the jetway may penetrate the CAT II/III touchdown or missed approach surface.
 - d. Watch for appropriate phasing plans and safety/notification requirements outlined in an airport construction project package of drawings, specifications, and possibly a safety plan. The contractor must inform airport management with appropriate lead times (24hrs or more) when work activities will close runways and affect navaid performance so that appropriate NOTAM's can be issued.
 - e. When the FPO is the only office that will review AIP projects and construction plans, it must also review the haul route location and general proximity of the construction work activity to aircraft operating areas. An assessment must also be made of the type of operators using the airport and what effect runway displacements, navaid outages, etc. will have on the use of instrument approach procedures and any adjustments to existing or proposed minimums.
 - g. The FPO should comment on ALP's as necessary to ensure compatibility with F&E navaid submissions and IFR initiatives.
 - h. Maintain close communications with NFDC/ATP when a new site number and name must be issued prior to the publication of a SIAP to avoid confusion and/or delays due to disparities in data and information provided on the 7480-1 form and the 8260 forms.

625-629. RESERVED

Section 4. NON-RULEMAKING EVALUATION AND RESPONSE.

630. GENERAL

Non-rulemaking cases are those concerning navigation aids, non-regulatory airspace, ground structures, and airports where public notification and participation is warranted. Non-rulemaking cases generally consist of three different types: Obstruction Evaluation (OE) involving structures; Nonrule (NR) involving navigational aids and Nonrule Airports (NRA) involving airports. The processing of OEs is covered in chapter 5 of this Handbook. Procedures for processing NRs are contained in paragraph 643, and procedures for processing NRAs are contained in paragraph 645. Processing NRAs is one of the primary responsibilities of the FPO and can involve all three types of studies. These studies typically require consideration of many aspects. Normally they deal with a structure or development of some kind of an airport and have two separate and distinct aspects. The first is to study the proposal as if it was an OE and evaluate the effects the proposal may have on existing or proposed instrument procedures. The second is to evaluate the effect of the obstacle on the safety of all aircraft operations; this usually requires evaluating the separation distances between the obstacle and operational movement areas on the airport. Other safety concerns, such as impacts on personnel and people on the ground must also be assessed. Safety concerns should be closely coordinated with the Flight Standards representative for final determination.

Most NRA proposals do not present the OE aspect as a primary concern but, it must be fully examined to determine if the proposal has the potential for affecting an instrument approach procedure. Another major responsibility is to review the material and evaluate if or how the proposal meets the standards of applicable FAA Advisory Circulars (AC's), handbooks or orders. The response to any proposal can be in the form of advice to assist in correcting deviations from applicable standards. If the FPO specialist suspects or determines there is a potential safety related issue for pilots and aircraft operators they should notify Flight Standards personnel so they can identify proposals that derogate safety and make the necessary recommendations to mitigate such actions.

631. NONRULEMAKING CASES (NR)

NR proposals and studies usually involve the establishment of new navigational aids (NAVAIDS), but can also be for discontinuance or de-commissioning of a NAVAID. An NR study to establish a NAVAID can be an opportune instrument to initiate airspace actions required by the establishment of the subject facility. The FPO should as a minimum:

- a. Assist in determining that the facility is sited in accordance with applicable orders.

- b. Confirm that the coordinates of the facility compute and match the verbal description.
- c. Perform an IFR feasibility study to determine the best runway for optimum minimums.
- d. Recommend possible relocation if warranted.

NOTE: The FPO should also encourage other involved organizations to start the required actions to facilitate completing future activities resulting from the establishment of the NAVAID. This may involve such functions as F&E projects, Non-Fed projects, AIP projects, etc.

632. NON-RULE AIRPORTS (NRA) ANALYSES, EVALUATION, & RESPONSE

FAA Handbook 7400.2D, Part 3, Airport Airspace Analysis contains processes and instructions for conducting aeronautical studies that form the basis for an Airport Airspace Analysis (AAA). Aeronautical studies are performed to determine what effect a proposal may have on compliance with the overall Airports Program and on the safe and efficient utilization of the navigable airspace by aircraft. A complete study consists of an airspace analysis and a flight safety review of the potential of the proposal on air traffic control and air navigation facilities. The Airport Airspace Analysis is used to advise the proponent, in the form of a determination, as to the effect the construction, alteration, activation or deactivation will have on the safe and efficient use of the navigable airspace by aircraft.

NRA cases can pertain to, or result from, a number of different proposals. An NRA may encompass some of the same aspects of OE and NR cases for structures that are located on airport property. The FAA sometimes receives notice through some vehicle other than FAR Part 77. The sponsor often notifies FAA through an Airports District Office (ADO), FAA Regional Airports Division, or State Aviation/Aeronautics Department depending on procedures established by the FAA Region for the administration of airport programs within its geographic area of responsibility.

The following paragraphs describe the types of NRA cases most frequently submitted. Each paragraph contains a description of the pertinent characteristics, evaluation items and techniques; and, where appropriate, sample response formats.

633. NRA (OE) ANALYSIS

These cases are usually submitted on an FAA Form 7460-1, Notice of Proposed Construction or Alteration. These changes usually involve a construction project on an airport but may involve almost any change on an airport, such as:

- a. Air Traffic Control Tower.
- b. Terminal buildings.
- c. Temporary construction cranes & other equipment.
- d. Parked aircraft.

- e. Hangars & other buildings.
- f. Antennas, Nexrad weather radar, etc.

The submitted package should contain descriptive information including height and location of the proposed structure/object. It often includes an airport sketch or copy of the ALP marked to show its location, but still may not provide enough accurate information for a proper evaluation of the effects of the proposed structure/object.. In these instances, the FPO should contact the Airport Division/ADO to obtain all of the data required to complete a proper evaluation.

The ADO cover letter transmitting the proposal to the FPO will sometimes include the results of their preliminary review. Airport Division/ADO comments such as, does not penetrate FAR Part 77 Airport surfaces, meets standards of FAA A/C 5300-13, penetrates Obstacle Free Zone (OFZ), Rwy 27 to be closed, note proposed runway extension, etc. can facilitate the FPO evaluation.

634. OBSTRUCTION EVALUATION (OE)

The purpose of these evaluations is to determine if the proposed object/structure has an effect on any instrument approach procedure. All new on-airport structures should meet FAA A/C 5300-13, Airport Design, Standards. Those proposals that do, will not normally have any effect on instrument approach procedures, especially if they are not near the approach areas or Runway Protection Zones (RPZ). Noted exceptions are ATCTs and temporary cranes.

When the location of the proposed structure/object is within the confines of the runway end(s), there are three instrument approach segments that must be considered. They are the final, missed approach and circling segments or areas.

The final segment need only be examined when the SIAP has an on-airport facility that is used for the missed approach point and the proposed structure/object is located within the final approach area. The circling MDA must be at least 350 feet above the airport elevation, so any structure/object less than 50 feet above the airport elevation will not effect the circling MDA. Penetrations of any applicable surfaces must be evaluated to determine effects on the MDA, identify and recommend mitigating possibilities, or document a basis for objections.

The missed approach needs to be examined when the proposed structure/object exceeds the lowest non-precision missed approach elevation.

Evaluations of proposed permanent structures/objects in Category I precision missed approach areas shall be based on MLS criteria. Evaluations of temporary objects such as cranes, equipment, and parked aircraft may be based on ILS Category I criteria provided the procedure was originally developed using that criteria. The Cat II/III precision runway missed approach area can be affected even if the proposal does not penetrate FAR Part 77 airport surfaces. The specialist must be completely familiar with FAA A/C 120-29, Appendix 2, paragraph 7., Touchdown Area, paragraph 8., Touchdown Area Transitional Surfaces, and paragraph 9., Missed Approach Area. Sound judgment dictates that every effort be made to prevent any permanent penetration(s) of a CAT II/III missed approach area. This includes ramp areas that might be used to park aircraft that could penetrate applicable obstacle clearance surfaces. Temporary penetrations of the CAT II/III missed approach surface can be accommodated by issuing an FDC NOTAM denying the CATII/III minimums.

Evaluation of proposed structures/objects outside the confines of the runway ends - that is towards the approach areas, must consider the departure area zone 1, light lane, ILS/MLS approach slopes, and non-precision approach areas. The zone 1 departure area is defined in TERPS Chapter 12, paragraph 1202. Zone 1 starts at the runway end and slopes up at a 40:1 slope. Objects may also penetrate the runway safety area, if they are located within 1000 feet of the end of the runway. Penetrations of the 40:1 Obstacle Identification Surface (OIS) will exceed FAR Part 77.23(a)(3) unless there is an existing takeoff restriction.

No objects are permitted to penetrate the plane of the light lane. The light lane is defined as that area 200 feet either side of the centerline of the approach lights (and RAIL) from the end of the runway to 200 feet past the last light. Approach light installation criteria does not allow the plane of the lights to exceed a 50:1 slope. Any penetration requires that light credit be denied for visibility minimums and the approach lights be turned off.

635. SAFETY ANALYSIS

The purpose of this analysis is to determine if the proposal meets all minimum safety standards. The procedures specialist must be familiar FAA A/C 5300-13, Airport Design, particularly with the Runway Obstacle Free Area (ROFA), Obstacle Free Zone (OFZ) and Runway Safety Area (RSA). Financial and/or land constraints often result in proposals to locate structures/objects in areas that do not meet minimum safety standards or Airport Design Standards. The sponsor can then pursue the proposal through another NRA study directed at

modification of standards. Paragraph 645(g) contains instructions for dealing with that type of NRA.

On occasion an NRA will be submitted proposing equipment locations that violate airport design standards including ROFA, OFZ, RSA, etc. based on rationale that the equipment location is "fixed by functional purpose". FAA Handbook 7400.2D, paragraph 4-21, references some examples of equipment installations "of a type approved by the Administrator" and states No notice is required under Part 77.15© when the equipment is installed in accordance with 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.

Paragraph 4-21 makes no reference to equipment locations being fixed by functional purpose. Part 77 .15 states that notice is not required for types of equipment approved by the Administrator if its location and height are fixed by its functional purpose. This means, however, that the correct operation of the equipment is dependent upon its location, e.g. a glide slope antennae, a VASI, RVR, etc. There is no valid reason to locate equipment in safety areas if it will function properly when moved out of safety areas.

Obstacles located in a Runway Protection Zone (RPZ) that penetrate the FAR Part 77 approach slopes are objectionable because of potential adverse impact on safety and action should be taken to remove the obstacles or reduce their heights to acceptable levels. The safety impacts can be mitigated by lighting and marking the obstacle but should be considered only as a last resort.

Appendix 2 of FAA A/C 5300-13, Threshold Siting Requirements, may be used to determine if a temporary structure/object meets minimum obstacle clearance requirements. Sometimes a threshold may need to be temporarily displaced so as to provide obstacle clearance.

It is also necessary that the 200-foot area between the end of the runway and the beginning of the approach slope and taxiway safety areas be clear of all obstacles. Sample response comments are included in Figure 6-1.

636. FLIGHT PROCEDURE OFFICE REVIEWS OF AIRPORT LAYOUT PLANS AND MASTER PLANS

FAA Reviews of new or revised airport master plans and Airport Layout Plans (ALP) provide an opportunity to advise sponsors of the "best" way to do things and allows for early identification and correction of problem areas. FPO personnel should take

advantage of these opportunities. Comments can be made on any aspect of the plans but they should concentrate on issues that fail to meet FAA Design Standards as well as possible impacts on existing or proposed SIAPs.

The ALP must identify an Airport Reference Code (ARC) for proper evaluation of compliance with the standards of AC 150/5300-13. The approach area, CAT II/III missed approach area, departure area, OFZ, ROFA, and RSA are of particular interest to the FPO during a safety analysis of an ALP review.

a. Approach area

Much of the guidance in paragraph 645(a)(1) NRA (OE) is applicable during an ALP review. There should be no planned structures/objects that penetrate the approach surfaces. The FPO should object to any planned penetrations of the 34:1 approach surface or the 20:1 plane to a point 200 feet out from the threshold.

b. Obstacle Free Zone (OFZ)

The OFZ must be kept clear of all obstacles except those that are legitimately fixed by their functional purpose. The FPO must protect this safety area by objecting to any plans to locate obstacles (including parked aircraft) in it.

c. Runway Safety Area (RSA)

There is no IFR penalty for obstacles in this area, but the FPO must use sound judgment to evaluate safety impacts and inform Flight Standards personnel whenever safety may be compromised.

d. Runway Obstacle Free Area (ROFA)

The ROFA must be free of all Obstacles except those having locations that are legitimately fixed by their functional purpose.

e. Declared distances

The ALP coordinate information should be cross-checked with AMIS data (if available) to ensure that the runway end coordinates produce the proper information regarding the runway length and runway true bearing. Proposed new runways and/or planned lengthening or shortening of existing runways must be well documented using NAD83 data and all computed lengths and bearings must be supported by the stated data. The ALP data blocks should be examined closely to ensure that there is no erroneous, conflicting, or out of date information. If any of the preceding conditions exist, appropriate comments should be included and the ALP returned to the Airports Division/ADO for corrections as deemed necessary. Once the corrections have been accomplished,

they should be verified by the FPO prior to final approval. Some examples of response comments applicable to many ALP reviews are:

1. The ALP must meet all the design and separation standards contained in FAA AC 150/5300-13, Airport Design, unless modified in accordance with (IAW) FAA Order 5300.1D
2. No adaptation/deviations to design standards were identified and none are implicitly or explicitly approved by this memo.
3. The establishment of future projects shown on the ALP that involves construction are conditionally approved for planning purposes only. All construction projects are subject to final FAA approval via a separate aeronautical study.
4. Any runway extension/shortening project must be coordinated, via FAA Form 7460-1 and supporting material, with the Flight Procedures Office. Many runway extension/shortening projects may require instrument approach procedure revisions.
5. All construction done in accordance with the ALP should be accomplished using the procedures of FAA AC 150/5370-2C, Operational Safety on Airports During Construction, as amended.
6. All taxiways that connect to a runway end for the purpose of entering the runway should have a 90-degree approach to the runway. This is a safety feature to provide pilots with the opportunity to visually check for traffic in both the approach area and on-coming runway/departure traffic.
7. Any ALP revision should incorporate all new/revised data and applicable directives. The following items need to be revised or added as applicable:
 - a. The Datum reference "NAD 83" needs to be added and all coordinates need to be revised to NAD 83.
 - b. An Airport Reference Code (ARC) needs to be identified for this ALP in order to properly evaluate it according to the standards of AC 150/5300-13. (NOTE: The designations of ARC's should be carefully considered because they may have a direct impact on the publication of instrument approach minima relative to the approach categories authorized to use the procedures into this airport.)
 - c. ALP data should agree with the applicable current AMIS data and the following needs to be added or revised as applicable:

- (1) Runway end coordinates to the nearest 100th of a second.
- (2) ARP coordinates to the nearest 100th of a second.
- (3) Runway true bearing
- (4) Magnetic declination (may need to be updated to a more current year).

f. Master Plans

Master Plans usually are reviewed in conjunction with an ALP review. Much of a master plan deals with subject areas that do not concern the FPO. Occasionally, there are statements in a master plan regarding instrument approach procedures. The statements need to be carefully reviewed for truth of concept. Review noise abatement procedures to ensure that the written procedure does not require the pilot to operate in an unsafe manner. The master plan should not incorporate projects that do not meet design standards even if accompanied by a statement that they plan to ask the FAA for a modification of standards. This must be addressed at the planning stage to avoid a misconception that the FAA's acceptance of the master plan implicitly approved the proposal for a modification of standards.

Sample response comments are included in Figure 6-2. These response items should be tailored to suit each individual review.

637. AIRPORT IMPROVEMENT PROGRAM PRE-APPLICATIONS (PRE-APPS)

The Airport Improvement Program (AIP) is a federal program to provide funding assistance to individual airports in grant form for airport improvements. The Airport Service administers this program through either the region or Airport District Office (ADO), or in some instances state authorities on a grant basis. Each potential project is submitted as a pre-application (Pre-App) to Airports for review and coordination with other services. The Pre-App contains a brief description of the proposed project and the estimated cost. The information is usually too general to allow or warrant a full safety review. Suggested responses are: No objection to the project provided:

- (1) The project is in accordance with the FAA approved ALP.
- (2) It meets recommended standards of A/C 150/5300-13.
- (3) Facilities are installed in accordance with applicable FAA siting criteria.

The response should also state which flight standards office is designated to review the safety plans for future project activities. It should also alert the sponsor that early notification of any proposed or planned runway extension at IFR airports may improve the probability of meeting project

schedules. The response must make clear that this is not flight procedures final concurrence and construction associated with the AIP is not to be initiated until the FPO completes an aeronautical study. The study will be based on a review of the construction plans, which must include:

- (1) The resulting height of planned structures.
- (2) The maximum height and location of construction equipment to be used.

Sample response comments are included in Figure 6-3.

638. CONSTRUCTION

FAA A/C 150/5370-2C, Operational Safety on Airports During Construction, specifies minimum standards. The FPO response to all construction proposals coordinated with the branch should include the statement, "All construction must be performed in accordance with the procedures of A/C 150/5370-2C, as amended." The primary concern during construction is the height of the construction equipment and where it is to be located. Equipment at its maximum height must not have any impact on IFR operations and the equipment must not penetrate the approach surfaces, departure surfaces, or CAT II/III missed approach surfaces. When work is performed in the approach area of a runway used for VFR operations, the threshold can be located using A/C 150/5300-13, Appendix 2. Runways expected to accommodate large turbojet aircraft should have, as a minimum, a clear 34:1 plane to the threshold to enable flight operations to be conducted as required by FAR Part 121.

When work is proposed in the areas prohibited by A/C 150/5370-2C, the runway should be closed and appropriate NOTAMS issued for the period of time that the personnel and equipment are within that area.

When a precision runway has a temporarily displaced threshold and the localizer facility is proposed to remain in an operational status, the glide slope facility MUST be removed from service to prevent vertical guidance to a runway that is closed or has a temporary displaced threshold having no relationship with the glide slope indications.

Occasionally, there are proposals to mark a temporarily displaced threshold in a non-standard way by putting markers such as plywood panels outboard of the displaced threshold location. The rationale being that no action would be required to revert to full length because the outboard markers would be visible only during daylight conditions when construction activity would be in process on or near the runway. Maintaining an adequate level of

safety requires that the displaced threshold be designated using FAA approved standard marking procedures or the runway be closed. Approach lights MUST be turned off when equipment penetrates the plane of the light lane.

Landing minimums should be raised as necessary via an NFDC NOTAM to provide equivalent levels of safety when any of the construction equipment is of a height having the potential to adversely impact safety of flight. The time normally required for issuing and cancelling such NOTAMs is too slow to cope with the frequently changing situations associated with construction activity. Therefore, it is usually necessary to issue the NOTAMs and accept the degradation in IFR capability and capacity for the duration of the project.

IFR capability and capacity may be critical at a vital hub airport. The ATCT, at their discretion, may assume the responsibility for tracking construction activity having potential impacts on safety and issue a NOTAM with a statement of this nature, "(specific procedure MDAs, DHs, & VISs) increased unless advised otherwise by ATC."

639. FLIGHT SAFETY REVIEWS

FAA Order 7400.2D, paragraph 11-20 identifies Flight Standards as the organization having primary responsibility for performing flight safety reviews of airport proposals. These studies must determine the effect on safety of flight and the safety of persons and property on the ground. Guidelines and criteria by which to assess the proposal can not be provided to cover every possible situation. In those instances, the AWOP inspector must exercise sound judgments based on his or her experience and knowledge. Consultation with other flight standards safety inspectors to take advantage of expertise available in the regional office, FSDO, FIAO, AVN, and AFS-420 is recommended when processing complex or controversial cases.

The Collision Risk Model (CRM) should be employed when necessary to determine if a proposal meets minimum risk criteria for Category I, II, and III ILS procedures. The CRM results alone can not justify waivers for ILS procedures that do not meet the standards of TERPS and/or AC 120-29. Waiver approval requires that mitigating measures be identified and employed as necessary to provide an acceptable equivalent level of safety.

640. 157 AIRPORT PROPOSALS

FAR Part 157 - Notice of Construction, Alteration, Activation, and Deactivation of Airports, has information vital to FPO personnel and they should take time to become completely familiar with it. It is a two-page document that contains definitions, applicability and identifies projects requiring notice.

FAA Handbook 7400.2D, paragraph 11-20, identifies flight standards as the organization responsible for performing flight safety reviews of airport proposals to determine whether aircraft operations can be conducted safely and in accordance with applicable criteria or standards. Paragraph 11-21 requires the study also consider the Effect on Safety of Persons and Property on the Ground. Guidelines for evaluating the more frequent types of Airport Proposals are contained in paragraphs 645 (f)(1) through 645 (f) (12).

641. PUBLIC USE AIRPORT

Public use airport proposals filed under FAR Part 157 can involve large or small-scale projects. Proposals for large-scale projects usually include Master Plans or Airport Layout Plans and provide sufficient information for a complete evaluation. These can and should be evaluated in the same manner as new Master Plans and ALP's. The smaller proposals often consist of nothing more than the FAA Form 7480-1 and do not provide sufficient information for an adequate evaluation. In these cases, the sponsor should be informed as to the specific information needed for a proper evaluation and requested to provide it in order to facilitate processing the proposal. Sponsors should be advised of the nominal time for processing their type of proposal. It should be made clear that proposals involving Standard Instrument Approaches (SIAP) can take up to 18 months for SIAPs based on existing facilities and up to 24 months for SIAPs based on Non Federal NAVAIDS.

The proposal should be carefully evaluated to ensure that clear 20:1 approach slopes are provided to each runway threshold. The FPO should object to any proposal that does not provide clear 20:1 approach slopes.

The FSDO should be requested to give input regarding a proposed public use airport. They often have in-depth knowledge of the local area that could be particularly valuable in evaluating the proposed. The FSDO should be requested to make an on-site inspection if needed.

Sample response comments are included in Figure 6-4.

642. PRIVATE USE AIRPORT

A private use airport is for the use of the owner and invited guests. The owner is responsible for assuring that all users are informed to the maximum extent possible of all conditions at the airport so that aeronautical operations can be conducted safely. Responses to private airport proposals should normally be in the form of recommendations or comments/observations to enhance safety of flight. Stronger responses including objections are warranted when a proposal contains unsafe conditions that can not

be corrected by mitigating procedures or actions. Examples of some conditions that warrant an objection are:
Power lines crossing over the runway.

Any obstructions penetrating a 20:1 approach slope surface.
A road with public access that crosses the runway.

Sample response comments are included in Figure 6-5.

643. PRIVATE/COMMUNITY OWNED AIRPORT/FLIGHT PARK

Community flight parks are those airports that serve more than one operator and their invited guests. The runways at this type of airport are sometimes surrounded by private homes. The airport/flight park may be owned by an association of these homeowners with each being a part owner or by an individual. They are not open to the public and technically are described as "Private Use" airports.

Community flight parks should be evaluated as "Public Use" and be required to meet all the safety standards prescribed in FAA A/C 150/5300-13, Airport Design. In order to properly evaluate these kinds of proposals, the sponsor should be requested to supply a complete ALP type description, including all proposed houses, garages, hangars and other buildings to be built along the strip.

Sample response comments are included in Figure 6-5

All FPO personnel should be aware that the following types of landing areas need to be inspected by Flight Standards inspectors for safe operations and the issuance of public use instrument procedures. No SIAPs should be authorized to non-inspected and/or non-approved landing areas until such time as all safety related issues have been resolved and approval for IFR operations have been submitted by flight standards personnel.

644. PUBLIC USE HELIPORT

Public use heliports are published in the Airport/Facilities Directory (AFD). Any proposed public use heliport approved by the FAA, will eventually be published in the AFD and may be open to all types of operators from student pilots to certificated air carrier helicopter operations.

FAA Handbook 7400.2D, paragraph 11-24, On-site Evaluations, and Order 8260.19C, require that all proposals for the establishment of heliports be given an on-site operational evaluation by operations specialists or inspectors, preferably those who are qualified in helicopters. Proposed heliports to be located in congested areas, or any rooftop heliport, should be evaluated by helicopter-qualified operations inspectors. These inspections should be scheduled and completed within 60 days from the date

the proposal was made by the proponent, since Part 157 allows the proponent to give only a 90 day notice prior to building. This will allow the Airports Division specialist adequate time to respond to the proponent prior to the expiration of the 90 day notice period.

When requesting FSDO assistance to do an on-site inspection of a "Public Use" proposal, the cover letter should specifically state that this is a "Public Use Heliport". The FSDO inspector should advise the sponsor of the differences between private and public use. Many heliport requests marked as public use are actually private use. This error is particularly prevalent in hospital heliport requests. The Hospital mistakenly files as "Public Use" because its medical services are provided to the public, when in fact, the hospital heliport operations fall in the category of "Private Use".

Public use heliports must meet all the safety criteria and requirements contained in FAA A/C 150/5390-2, Heliport Design, as amended.

645. PRIVATE USE HELIPORT

FAA Handbook 7400.2D, paragraph 11-24., On-site Evaluations, and Order 8260.19C, require that all proposals for the establishment of heliports must be given an on-site operational evaluation by operations specialists or inspectors, preferably those who are qualified in helicopters. Proposed heliports to be located in congested areas, or any rooftop heliport, should be evaluated by helicopter-qualified FSDO operations inspectors. The same time frame exists as in para. 643(f)(3).

When the FPO receives a request for Flight Standards input for a heliport request, the on-site inspection must be performed by the FSDO. The FPO should forward all materials to Flight Standards personnel to assure that there is adequate information for the FSDO inspector. As a minimum, the name, address, and telephone number of the contact person at the proposed heliport must be provided. The information is to be attached to a cover letter (Figure 6-645-7) requesting an on-site inspection and a suggested response memo (Figure 6-645-8) to encompass the areas that need to be addressed in the inspection.

The criteria in FAA A/C 150/5390-2, Heliport Design provides an acceptable level of safety for helicopter operations. The approach slope surface for helicopters is 8:1. The response to AT should include the ingress/egress route(s). To avoid a tail wind during ingress/egress, the assigned areas should provide for a choice of routes at least 90 degrees apart. If this cannot be done, consider assigning a tailwind limitation of 10 kts or less, as applicable.

The FSDO responses to heliport inspection requests can often vary from a simple "no objection" to mandatory requirements including detailed measurements that must be met in order for the proposal to be acceptable. A sample response is included in figure 645-8 to assist FSDO inspectors in completing the response. It can be used both as a response and a checklist of areas to be covered in any heliport inspection.

Sample response comments and letters are included in Figures 6-6, 6-7, 6-8.

646. SEAPLANE BASE

No FAA approved written guidance exists for seaplane bases at this time. Proposals for a private use seaplane base are normally submitted on FAA Form 7480-1. They are usually proposed on public waterways, controlled by either state or federal authorities. The FAA has no jurisdiction over the use of state controlled waterways. The FPO normally responds with a no objection provided the approach slopes are clear to a 20:1. Sample response comments are included in Figure 6-9.

647. VERTIPOINT

Vertiport/vertistops are designed for use with tiltrotor aircraft that will:

- (1) fly a 9 degree approach path during an IFR instrument approach:
- (2) decelerate to zero velocity before reaching the touchdown point:
- (3) transition from IFR to VFR flight before reaching touchdown, and:
- (4) eliminate the need for missed approach areas.

FAA A/C 150/5390-3, Vertiport Design contains guidance for this type proposal.

648. GLIDERPORT

No FAA approved written guidance exists for gliderports at this time. Requests for a safety evaluation of a proposal of this type should be sent to the FSDO for an on-site inspection by a glider-qualified safety inspector.

649. ULTRALIGHT FLIGHT PARK

No FAA approved written guidance exists for ultralight flightparks at this time. Requests for a safety evaluation of a proposal of this type should be sent to the FSDO for an on-site inspection.

FAR 103 govern the operation of ultralight vehicles and there is further guidance in FAA A/C 103-6, Ultralight Vehicle Operations-Airport, ATC, and Weather.

FAA A/C 150/5300-13, Appendix 2, paragraph 5.a.(1) defines a 15:1 approach slope surface for small airplanes with approach speeds less than 50 knots. This surface is adequate for Ultralight Flight Parks.

650. MANNED BALLOON LAUNCHING FACILITY

No FAA approved written guidance exists for manned balloon-launching facilities at this time. Requests for a safety evaluation of a proposal of this type, should be sent to the FSDO for an on-site inspection by a balloon-qualified safety inspector.

651. DEACTIVATION/ABANDONMENT OF A FACILITY

FAR Part 157 requires notice and FAA Order 7400.2D requires coordination of notices of deactivation/abandonment of a facility (airport, etc.) The only FPO concern in these cases is the cancellation of all instrument approach procedures to the deactivated airport. All SIAPs, standard, military, and special must be cancelled.

652. CHANGE OF STATUS FROM PRIVATE TO PUBLIC OR FROM PUBLIC TO ANY OTHER STATUS

The change from public to any other status usually is not objectionable from an FPO point of view. The only concern is standard (public use) instrument approach procedures (IAP), have to be cancelled or changed to "special" IAP's. Conversion to "special" requires a memorandum of agreement between the owner and the FAA whereby the owners agree to reimburse the FAA for flight inspection costs.

The change of status from private to public use is treated the same as a new proposal for a public use airport. The FSDO should be advised of the request and asked for input. An on-site visit by a FSDO inspector may be in order since the facility already exists. The FPO specialist should review the information submitted to determine if an on-site inspection is necessary and if required, request the FSDO to accomplish this task.

These proposals are treated as new proposals for a public use facility, so there is no valid requirement for a "grandfather" clause. The airport must meet the minimum safety standards of FAA A/C 150/5300-13, Airport Design for a "no objection" FPO response. Clear 20:1 approach slopes and minimum separation standards between the runways and parallel taxiways are particularly important.

653. CHANGE OF STATUS FROM VFR TO IFR OR IFR TO VFR

FAA Order 7400.2D, paragraphs, 10-15, 11-1, 11-22, 11-32, and 11-47 contain information pertinent to the processing of status changes from VFR to IFR. Also a MOA between FAA and NOAA is in place for processing of initial VFR to IFR airports. Guidelines in the MOA should be followed by FPO personnel to help expedite the transition process and the development of requested instrument procedures.

The existence of an instrument approach procedure at an airport is evidence that the existing status of an airport is IFR. Airports that have an FAA approved ALP that shows existing or future plans for an instrument approach, is adequate to determine that the airport status has previously been approved for IFR status. Most other airports have existing airspace determinations that specifically state "VFR use only". This study, if approved, should result in the issuance of an amended determination for the airport that removes/revises the "VFR use only" statement.

This airspace action can result from one of the following:

- (1) Request for an instrument approach procedure from almost any source to the FPO. The FPO is the responsible coordinating office.
- (2) Request for the installation of a navaid. Airways Facilities is the responsible coordinating office. This may be either federally or non-federally sponsored.
- (3) A proposal submitted under Part 157. Order 7400.2D, Paragraph 11-1 references that this is a required notice under FAR Part 157. The Airport Division is the responsible coordinating office.

Regardless of where the coordination begins, AT, AF, Airports, the FPO must have an opportunity to review and comment on the proposal. No division shall require dual reporting of such a proposal. The responsible division shall correspond directly with the proponent and formulate the official determination. (Reference Order 7400.2D, paragraph 10-15)

The airport changes status to IFR when an instrument approach is published. The FPO has the final authority for authorizing the development and publication of a SIAP and must conduct an airport airspace safety analysis to determine that the airport meets minimum safety criteria and that IFR operations can be conducted safely.

The request for instrument approach procedures should normally be disapproved if:

- (1) The change in airport status indicates a safety problem.
- (2) A previous airport study determination was objectionable and not corrected.
- (3) The determination listed provisions that have not been complied with by the airport owner or sponsor.

Changing a status from IFR to VFR is a much simpler task. The FPO takes action to cancel all standard and special instrument approach procedures. This is usually done with a memo to the servicing AVN-100 Branch. Courtesy copies should be sent to the applicable state department of aviation/aeronautics, ADO and/or Airports Division, FSDO, Airways Facilities Division, AFSFO, Air Traffic Division, and military liaison representatives.

654. DESIGNATION OF PRECISION INSTRUMENT RUNWAY

The FPO shall carefully evaluate runways proposed for instrument procedures. Consideration should be given to items such as IFR wind rose data, runway dimensions and weight bearing capacity, expected users, conflicts with IFR traffic, location of existing and proposed NAVAID's, availability of weather information, and probable minimums.

The FPO should coordinate with the Airports Division/ADO to assure they have completed a safety analysis study of the proposal and evaluate whether the obstacle clearance and airport design meets minimum safety criteria for a precision runway. The Airports Division/ADO is the responsible office for designating the status of a runway.

655. MODIFICATION OF STANDARDS (REF CHAP 7)

The FPO specialist should coordinate with Airports Division/ADOs when requests for modification to design standards are received. There are no standard "mitigating" factors. Some common means offered as mitigation's are, marking, lighting, signs, wing-walkers, local NOTAMS, ATIS information, barricades, flags, flashing lights, training, closures, raise the minimums, deny light credit or increase visibility. There should never be an agreement that results in reduced safety levels. Implementations of valid mitigating actions that truly provide an equivalent level of safety protect against such reductions.

656. 150 NOISE STUDY

Noise studies are usually part of an environmental assessment (EA) study. EAs are performed by the Airports office or airways facilities. Many times they are contracted. The FPO is responsible for providing certain information such as the altitude and flight tracks associated with all instrument approaches when requested to do so.

Detailed information and instructions are contained chapter 10.

657. MISC. (PARACHUTE JUMPING, LASER, MODEL AIRPLANES, ETC.)

FAR 105, Parachute Jumping, FAA A/C 105-2C, Sport Parachute Jumping, and FAA A/C 91-57, Model Aircraft Operating Standards provide guidance for these activities. The FPO has no responsibility except to assist Flight Standards, Air Traffic and Airports organizations as necessary.

658-660. RESERVED

Section 5. FPO RESPONSIBILITIES AFTER THE NRA EVALUATION.

660. GENERAL

The primary FPO responsibility after an NRA evaluation is to send a complete and clear response to the originating office, in a form acceptable to all parties that outlines the results of the FPO analysis and states the consolidated FPO position. Certain NRA's may require additional actions by the FPO until the final determination is issued by the Airports Office and even beyond the final determination if the determination is contested by the proponent.

661. RESPONSE TO AIR TRAFFIC

The FPO's findings and consolidated position must be accurately communicated to the originating office. The FPO specialist accomplishes this by submitting a written response to the appropriate office. Some NRA cases may be largely completed by the FSDO, and their findings will be forwarded to the FPO by letter or electronic means. After review for completeness and clarity, the FPO may simply transmit the FSDO comments to the appropriate office. Agreements between the FPO, Air Traffic, and the Airports Office on the form and wording of responses are encouraged. Misunderstandings between these offices concerning organizational positions are unacceptable.

Verbal responses are not acceptable because there is no permanent record of the Flight Procedures Office response. Samples of an AUTOMATED ENTRY SCREEN and RESPONSE SCREEN are shown in Figures 6-10a and 6-10b

662. NOTAM's

There may be occasions where a procedural NOTAM should be issued to accommodate an AIP project or some other NRA case proposal. The FPO specialist must insure that proper coordination is set up to inform the appropriate AVN-100 branch to issue the appropriate NOTAM's in a timely manner or have the capability and authorization to issue that NOTAM's themselves.

663. AIR TRAFFIC/AIRPORTS ACTIONS AFTER THE FLIGHT PROCEDURES RESPONSE

Although the Air Traffic office provides the vehicle for circularization, the final determination of an NRA study is made by the Airports Office. The Airports Office may issue one of the following (See Part 157 par 157.7):

- (1) No Objection
- (2) Conditional. A conditional determination will identify the objectionable aspects of a project or action and specify the conditions that must be met and sustained to preclude an objectionable determination.

(3) Objectionable. An objectionable determination will specify the FAA's reasons for issuing such a determination.

664. NEGOTIATIONS AND MEETINGS

Representatives of all concerned parties are encouraged to meet as necessary to negotiate acceptable solutions to problems.

665. RECORD KEEPING POLICIES

All NRA cases with the associated Flight Procedures response should be kept on file in the FPO, or an agreed upon alternate site, for a period of three years.

666-670. RESERVED

FIGURE 6-1

 Memorandum

U.S. Department
of Transportation
Federal Aviation
Administration

Subject: ACTION: Aeronautical Study No.
 99-XXX-0000-NRA

Date:

From: Program Manager, Flight Procedures Office,
 XXX FPO

Reply
to
Attn.
of:

To: Airports Division / ADO

We have reviewed the subject on-airport NRA/NR/NS case in accordance with FAA Handbook 7400.2 and offer the following comments:

_____ The proposal has no aeronautical effect on the areas for which we are responsible.

_____ Although this case has no effect, the attached comments are offered for your consideration.

_____ This study did NOT consider the height of construction equipment.

_____ This study did consider construction equipment of _____ height.

This study did NOT evaluate the plans for operational safety during construction. Those plans should be coordinated with the appropriate Regional Flight Standards personnel or the area _____ FSDO.

The proposal has the following adverse aeronautical effects. Based upon the listed effect(s) consider this our objection to the proposal.

_____ (See attached comments if this item is checked)

Name,
Program Manager, XXX FPO
cc: As appropriate

Memorandum

U.S. Department
of Transportation
Federal Aviation
Administration

Subject: ACTION: Aeronautical Study No.
99-XXX-0000-NRA

Date:

From: Program Manager, Flight Procedures Office,
XXX FPO

Reply
to
Attn.
of:

To: Airports Division / ADO

We have reviewed the subject NRA case in accordance with FAA Handbook 7400.2 and offer the following comments:

(NOTE: The following comments are meant as examples and are not intended to be the only possible responses. Insert your responses as appropriate.)

1. Our position is that the ALP must meet all the design and separation standards contained in FAA AC 150/5300-13, Airport Design, unless modified in accordance with FAA Order 5300.1.
2. No adaptation/deviations to design standards were identified and none are implicitly or explicitly approved by this memo.
3. The establishment of future projects shown on the ALP that involve construction are conditionally approved for planning purposes only. All construction projects are subject to final FAA approval via a separate aeronautical study.

Any runway extension project must be coordinated, via FAA Form 7460-1 and supporting material, with XXX FPO. Most runway extensions or displaced/relocated thresholds require instrument approach procedure revisions.

5. All construction done in accordance with the ALP should be accomplished using the procedures of FAA AC 150/5370-2, Operational Safety on Airports During Construction, as amended.

6. All taxiways that connect to a runway end for the purpose of entering the runway should have a 90 degree approach to the runway. This is a safety feature to provide pilots with the opportunity to visually check for traffic in both the approach area and on-coming runway and departing traffic. We note the following exception(s): (include detail description(s) of excepted items)

7. Any ALP revision should incorporate all new/revised data and applicable directives. The following items need to be revised or added as applicable:
The Datum reference "NAD 83" needs to be added and all _____ coordinates need to be revised to NAD 83.

b. Non-compliance with AC 150/5300-13 in the following areas was identified for this ALP review and each exception needs to be _____ corrected in order to properly evaluate this ALP. (Insert exceptions as noted)

c. ALP data should agree with the applicable current NOS/AMIS data and the following needs to be added or revised as _____ applicable:

_____ 1. Runway end coordinates to the nearest 100th of a second.

_____ 2. ARP coordinates to the nearest 100th of a second.

_____ 3. Runway true bearing

_____ 4. Magnetic declination

_____ 5. Any others as applicable

8. Additional notes as necessary.

Name,
Program Manager, XXX FPO
cc: As appropriate

FIGURE 6-3

 Memorandum

U.S. Department
of Transportation
Federal Aviation
Administration

Subject: ACTION: Aeronautical Study No.
 99-XXX-0000-NRA

Date:

From: Program Manager, Flight Procedures Office,
 XXX FPO

Reply
to
Attn.
of:

To: Airports Division / ADO

1. The submitted documents have been reviewed per your request.

CONCUR DO NOT CONCUR (See attach reason(s))

We have no objection to the proposed AIP project provided:

It is in accordance with an approved ALP.

2. It meets recommended standards of AC 150/5300-13.

The following comments apply. (NOTE: *The following are examples only and should be replaced with your specific comments.*)

Construction associated with this AIP project shall not be initiated until the construction, including equipment, is coordinated through XXX FPO, in accordance with AC 7400.2 by an aeronautical study, including, but not limited to the following:

NRA/OE for resulting height of the planned structures.

NRA/OE for height of equipment during construction.

The aeronautical study should include a simple layout of the project showing at least:

1. Height of obstacles (structures or equipment).

2. Location of obstacles in relation to identified runways and all runway ends (i.e. feet perpendicular to centerline and feet along centerline (CL) from that runway end, also direction of each distance, e.g. NW of CL). DO NOT send

complete set of plans and specs for the entire project. Send only a synopsis showing the above information.

() The _____ FSDO ___ or Regional Flight Standards personnel are designated to review safety plans and attend predesign and preconstruction meetings. Please do not send complete set of plans and specs to the FSDO. They only need the safety plan and an overall construction plan marked on an ALP or airport diagram showing the construction activity in relation to ALL runways.

Name,
Program Manager, XXX FPO
cc: XXX FSDO-# (w/attachments)
Others as appropriate

FIGURE 6-4

 Memorandum

U.S. Department
of Transportation
Federal Aviation
Administration

Subject: INFORMATION: Aeronautical Study No.
 FAR Part 157 Review for (Airport, City, St.)

Date:

From: Program Manager, Flight Procedures Office,
 XXX FPO

Reply
to
Attn.
of:

To: As Appropriate

The submitted Public Use proposal was reviewed and the following comments are offered:
(NOTE: *The following comments are meant as samples responses only*)

I. An airport, as ambitious as this proposal seems to be, should have a master plan and an FAA approved Airport Layout Plan (ALP). Our position is that the airport must meet all the design and separation standards contained in FAA AC 150/5300-13, Airport Design.

- A. No adaptation/deviations to design standards were identified and none are implicitly or explicitly approved by this memo.

II. Regarding anticipated IFR operations

- A. XXX FPO must be notified at least 18 months prior to the desired onset of IFR operations in order to develop and publish instrument approach procedures to the new runway predicated upon existing or newly installed nav aids.
- B. Federal funding of terminal navigation aids (nav aids) is a very lengthy and demanding process. The sponsor should not rely on future federally funded terminal nav aids for this airport. If IFR instrumentation is desired, the non-federal facilities planning branch should be contacted for information on establishment and installation of non-federal nav aids. They should be contacted approximately 2 years prior to the desired onset of IFR operations in order to develop and publish instrument approach procedures to the new runway predicated upon proposed non-federal nav aids.
- C. An in-depth feasibility study was not completed for the proposed IFR operations. Accomplishment of such a task requires the same information as paragraph D below. However, a cursory review of submitted Quad chart indicates that terrain and trees may penetrate a

clear 34:1 approach slope required for a precision instrument approach to runway 34.

D. In order to develop an instrument approach, XXX-FPO needs to be furnished the following information:

1. An ALP or sophisticated engineering drawing showing the runways and taxiways.
2. Surveyed runway end coordinates to the nearest hundredth of a second.
3. Runway end elevations to the nearest foot.
4. The highest point of the runway, elevation, and location.
5. Documentation showing that each approach slope surface is clear to at least 20:1.

Name,
Program Manager, XXX FPO

cc: As appropriate

FIGURE 6-5

 Memorandum

U.S. Department
of Transportation
Federal Aviation
Administration

Subject: INFORMATION: Aeronautical Study No.
99-XXX-0000-NRA for (Airport, City, St.)

Date:

From: Program Manager, Flight Procedures Office,
XXX FPO

Reply
to
Attn.
of:

To: As Appropriate

We have reviewed the subject Airport Airspace Study in accordance with FAA Orders 7400.2 (as amended) and 8260.19B.

We have no objections to the private use airport proposal. We recommend a clear 20:1 approach slope.

If there are obstructions that penetrate a clear 20:1 approach slope surface that cannot be removed/lowered, we recommend that the runway threshold be displaced, and appropriately marked, so as to provide clear 20:1 approaches to each runway threshold.

NOTE: *The following comments are meant to be examples only.*

1. The 64' trees at the east end of the runway are obstructions to a clear 20:1 approach slope to the runway and would require that the threshold be displaced 1280' to achieve a clear 20:1 approach slope surface to the runway threshold.

2. Public roads are considered to be 15' above grade obstructions. The submitted quad chart indicated that there are roads at both ends of the runway. The thresholds need to be displaced so as to provide 15' clearance over the roads.

3. The 20' power line 200' northeast of the runway is an obstruction to a clear 20:1 approach slope and would require that the threshold be displaced approximately 200' to achieve a clear 20:1 approach slope surface to the runway threshold. We recommend that the power line be buried so as to not present any obstruction. If the power line is to remain, then we recommend that it be marked with aviation obstruction marking such as orange marker balls.

POSSIBLE RESPONSES TO A PRIVATE USE PROPOSAL THAT LOOKS LIKE IT MIGHT BE A COMMUNITY FLIGHT PARK, STATED OR NOT

NOTE: *The following comments are meant to be examples only.*

This seems to be a quite ambitious size private airport. This might be an "airport community type" airport, with numerous private residences along the strip. If so, that fact should have been disclosed on the FAA Form 7480-1 that was submitted. The ADO should determine if this is in fact the case. If so, then it should be treated as a public use airport and we recommend that the proponent reference FAA Advisory Circular 150/5300-13, Airport Design, in establishing an acceptable level of safety for aeronautical operations at this airport.

The ambitious forecast of 15 + 1 aircraft and radio control of lighting indicates that this might be a "airport community type" airport, with numerous private residences along the strip. If so, that fact should have been disclosed on the FAA Form 7480-1 that was submitted. The Airports Division/ADO should determine if this is in fact the case. If so, then:

1. It should be treated as a public use airport.
2. A full plan of all proposed development should be solicited from the proponent.
3. All of the above recommendations would become mandatory provisions to a safe determination.
4. The recommendation would be that the proponent reference FAA Advisory Circular 150/5300-13, Airport Design, in establishing an acceptable level of safety for aeronautical operations at this airport.

Name,
Program Manager, XXX FPO

cc: As appropriate

FIGURE 6-6

 Memorandum

U.S. Department
of Transportation
Federal Aviation
Administration

Subject: INFORMATION: Aeronautical Study No.
99-XXX-0000-NRA for (Airport, City, St.)

Date:

From: Program Manager, Flight Procedures Office,
XXX FPO

Reply
to
Attn.
of:

To: Manager, FSDO-#

Reference Part 3, Chapter 11, Sections 1 and 2, FAA Order 7400.2 (as amended) and Chapter 5, Section 3, FAA Order 8260.19B. Flight Standards is responsible for determination of the Flight Safety aspect in the region's formulation of official FAA determinations concerning subject airport aeronautical notices.

In an attempt to standardize the FAA position in heliport airspace proposal determinations, we are attaching a suggested response letter to this request. It is applicable to "NO OBJECTION" determinations. Use it at your discretion and feel free to add applicable pertinent comments or strike out those that may not apply. Our intent is to give the sponsor our best possible direction for safe operations.

Determinations indicating an objection are usually due to a lack of an 8:1 obstruction clearance, lack of suitable approach/departure routes, or a lack of ingress/egress routes at least 90 degrees apart to account for variable wind conditions; sometimes this can be alleviated by a limiting tailwind restriction.

Attached FAA Form 7480-1 with pertinent documents, maps, charts, etc., is forwarded for your review and comments.

Please reply by _____.

Name,
Program Manager, XXX FPO

cc: As appropriate

FIGURE 6-7

 Memorandum

U.S. Department
of Transportation
Federal Aviation
Administration

Subject: INFORMATION: Aeronautical Study No.
99-XXX-0000-NRA Heliport for (Airport, City, St.)

Date:

From: Manager, FSDO-#,

Reply
to
Attn.
of:

To: Program Manager, Flight Procedures Office, XXX-
FPO

This office has studied the subject Public/Private Use Heliport from the standpoint of helicopters operating from the heliport.

Our position is that helicopter operations can be conducted safely at this heliport, provided the following conditions are met:

1. All approach/departure route helicopter operations are conducted in an area from () degrees clockwise to () and from () degrees clockwise to () degrees using the touchdown pad as the center of a compass rose.
2. The takeoff/landing area is appropriately marked.
3. A non-obstructing wind indicator is maintained adjacent to the takeoff/landing area.

We recommend the following: (Sample responses only)

1. No night helicopter operations be conducted, unless the takeoff/landing area and wind indicator are lighted and a heliport identification beacon is installed.
2. Unauthorized persons be restrained from access to the takeoff/landing area during helicopter flight operations by use of a non-obstructing safety barrier.
3. Fire protection be provided in accordance with the local fire code and/or FAA Advisory Circular 150/5390-2, "Heliport Design "
4. The proponent reference FAA Advisory Circular 150/5390-2, "Heliport Design Guide," in establishing an acceptable level of safety for helicopter operations at this heliport/heliport.

Name,
Manager, FSDO-#

cc: As appropriate

Name,
Program Manager, XXX FPO

cc: As appropriate

FIGURE 6-9

 Memorandum

U.S. Department
of Transportation
Federal Aviation
Administration

Subject: INFORMATION: Aeronautical Study No. 99-XXX-0000-NRA Seaplane Base for (City, St.) Date:

From: Program Manager, Flight Procedures Office, XXX-FPO Reply to Attn. of:

To: As Appropriate

We have reviewed the subject Airport Airspace Study in accordance with FAA Orders 7400.2 (as amended) and 8260.19B.

Comments to the seaplane base airspace study.

This aeronautical study DID NOT consider the interaction of seaplane operation with surface craft traffic which is regulated by CFR Part 91.115, nor does it give approval for floatplane operations on this body of water. Approval authority is vested with the owner/controlling agency of the body of water.

We recommend the following: (Sample responses only)

1. The proponents reference FAR 91.115 Right-of-Way rules; water operations.
2. A clear 20:1 approach slope to expected touchdown point.

Name,
Program Manager, XXX FPO

cc: As appropriate

FIGURE 6-10a

The following is an example of an automated NRA case along with the sample response

CASE ENTRY SCREEN

```
=====
7480-1 File Control Screen

>Study No   : 99-AXX-0250-NRA                >Airport   : HOMETOWN
AIRFIELD
Received    : 01/05/1999                    >City      : ANYTOWN
>State:    NE
Proponent   : JACK NEUCUM                    >Lat (NAD27) : 41-18-04.00
Address     : ANYTOWN AIRPORT AUTHORITY>Longitude  : 095-53-
27.00
Address     : PO Box 123 HOMETOWN AIRFIELD>Lat (NAD83) : 41-18-
03.99
City,St,Zip : ANYTOWN, USA 68000            >Longitude  : 095-53-28-04
Phone Num   : 123-456-0987                  >MSL        : 980
ADO Contact : John Dough                    >AGL (AGL1) :
22
Phone Num   : 123-678-4567                  >AMSL (AMSL1): 1002
ADO        : Region Airports Div           >Submitted  (*):
01/05/1999
                                                >Det-to-Prop : 00
>Describe/Remarks: FORMER LLWAS POLE TO BE CONVERTED TO MOUNT A VIDEO
CAMERA FOR PART 107 SECURITY PURPOSES.

*Submitted to:  AT- Y, AF- Y, FPO- Y, FS- N, ATCT- ,
                FSDO- , SMO- , CASFO- , AP(139)- , OTHER- Y.
S C R E E N   O P T I O N S
FIND CASE BY   S)Study #   P)Prop   L)Lat   C)City   U)St
N)Airpt   Q)Quit

=====
```

FIGURE 6-10b

CASE RESPONSE SCREEN

=====

AIRSPACE MANAGEMENT Response Page 3

Study No. :99-AXX-0250-NRA City: ANYTOWN State: NE
Proponent: JACK NEUCUM Lat:41-18-03.99 Lon:095-53-
28.04

*****FLIGHT PROCEDURES
RESPONSE*****

REMARKS: DATE:01/10/1999 SPECIALIST:XXX

We have no objection to the subject proposal

*****FLIGHT STANDARDS
RESPONSE*****

REMARKS: DATE: 01/10/1999 SPECIALIST:YYY

No Response Required

S C R E E N O P T I O N S
FIND CASE RESPONSES S)Study # Q)Quit
E)Edit A)AutoResponse