

Advisory Circular

Subject: Instrument Flight Procedure Service Provider Authorization Guidance for Required Navigation Performance Authorization Required Procedures **Date:** 02/13/2015 **Initiated by:** AFS-460

AC No: 90-110A

1. Purpose. This advisory circular (AC) provides guidance for Instrument Flight Procedure (IFP) developers, hereinafter referred to as "IFP Service Providers," to become authorized by the Federal Aviation Administration (FAA) to develop Title 14 of the Code of Federal Regulations (14 CFR) Part 97 Required Navigation Performance IFPs with Authorization Required (RNP AR).

2. Audience. The primary audience for this AC is non-FAA IFP Service Providers, who desire FAA authorization to develop 14 CFR Part 97 RNP AR IFPs. The secondary audience for this AC is FAA Flight Standards Service (AFS) personnel, directly associated with the procedure development process and/or charged with the responsibility to authorize and provide oversight of non-FAA IFP Service Providers.

3. Applicability.

a. Instrument Flight Procedure Service Providers. They may elect to use guidance in this AC or an alternative method provided the method is approved by the FAA.

b. Mandatory terms used. In this AC, terms such as "must" denote compliance and are the only means authorized when applying this AC. This AC does not change, add, or delete regulatory requirements or authorize deviations from regulatory requirements.

Director, Flight Standards Service

Chapter 1. Instrument Flight Procedure Service Provider Requirements

1-1-1. General. This chapter provides a list of requirements and identifies required reference material for IFP Service Providers applying for FAA authorization to develop 14 CFR Part 97 RNP AR IFPs.

1-1-2. Organization. The IFP Service Provider must meet the following requirements:

a. Operations Manual. The organization must have an FAA Flight Procedure Implementation and Oversight Branch (AFS-460) accepted Operations Manual that will be available to each staff member. The Operations Manual must contain the following:

(1) Organizational structure relevant to IFP design and maintenance;

- (2) Functions, limitations, and product(s) authorized by the FAA (AFS-460);
- (3) Process for performing the authorized functions;
- (4) Locations at which authorized functions are performed;
- (5) Process for periodic internal audits;
- (6) Process for communicating and coordinating with appropriate FAA offices;

(7) Process for acquiring and maintaining regulatory guidance material associated with each authorized function;

(8) Process for maintaining the currency of all reference material;

(9) Training program, including recurrent training;

(10) Processes and requirements related to maintaining records and submitting

reports;

(11) Process for IFP maintenance;

(12) Document how IFP development and support software performs intended functions;

(13) Process for transfer of data, including forms and documents, to the FAA National Flight Data Center (NFDC);

(14) Procedures for revising the operations manual;

(15) Notice to Airman (NOTAM) plan;

(16) Aeronautical data obtained from an FAA approved data source; and

(17) Environmental issues, review, and processing through the FAA service centers.

b. Safety Management System (SMS). A Safety Management System, as contained in the approved Operations Manual, established and authorized by appropriate IFP Service Provider authority. The SMS must define the safety policies, processes, and practices for managing all aspects of IFP design. The SMS must include the following elements:

(1) Definition of the organization's safety objectives;

(2) Ability to present the safety situation in respect to compliance with all relevant FAA, internal, and other safety related standards;

(3) Definition of the safety accountabilities of all personnel;

(4) Continual review process for effectiveness by all personnel;

(5) A process for staff to identify safety hazards or concerns and suggest methods for enhancement of safety;

(6) Establish internal procedures for the communication and processing of safety concerns within the organization;

(7) Definition of the interface arrangements between internal groups of the organization;

(8) A compliance process applicable to all personnel of the organization;

(9) A safety hazard/risk analysis and risk control/mitigation assessment in accordance with an established methodology endorsed by the FAA; and

(10) An oversight and audit program.

c. Chief Designer.

(1) The organization will appoint a Chief Designer, who is responsible for the IFP Service Providers IFP development operations.

(2) The Chief Designer must certify in writing that each IFP submitted to NFDC meets FAA requirements.

d. Library. Maintain a current library of all relevant FAA and IFP Service Provider publications and correspondence pertinent to IFP development. Libraries may be maintained in electronic format. The library must be accessible to all procedure designers.

e. Training. The IFP Service Provider must establish a training program with specified minimum qualification standards for personnel involved in IFP development. The training program must be approved by the FAA (AFS-460) and must include:

(1) Initial Training;

(2) Recurrent Training; and

(3) A suitable training syllabus as outlined in chapter 3.

f. Record Keeping. IFP Service Providers must maintain the following records:

(1) A file containing all documents required by FAA Order 8260.19, Flight Procedures and Airspace, and the IFP Service Providers operations manual. The file must be retained for a period of two years after an IFP is canceled;

- (2) Personnel training records; and
- (3) All records must be available to the FAA for audit.

1-1-3. Required Functional Positions.

a. Chief Designer. Must be approved by the FAA and meet the following minimum standards:

(1) The qualification and experience requirements of a Qualified Designer or equivalent;

- (2) Experience in the development of IFPs;
- (3) RNAV and/or RNP design experience;
- (4) Knowledge of applicable design regulations in 8260-series orders; and
- (5) Knowledge of the principles of Quality Assurance.

b. Qualified Designer. The minimum standards for the qualifications and experience of a Qualified Designer are:

(1) Satisfactory completion of a formal course of training approved by the FAA;

(2) Satisfactory completion of on-the-job training, consistent with the requirements outlined in the IFP Service Providers operations manual;

- (3) Knowledge of applicable design regulations; and
- (4) Written approval by the Chief Designer.

c. Quality Assurance (QA) Specialist. The IFP Service Provider will appoint a person responsible for performing QA activities. The minimum standards for the qualifications and experience of a QA Specialist are:

(1) Meet or have met the qualification for a qualified designer and

(2) Knowledge and experience in IFP Quality Assurance as outlined in the IFP Service Providers operations manual.

d. Flight Validation. The IFP Service Provider is responsible for ensuring all IFPs are flight validated in accordance with FAA AC 90-113, Instrument Flight Procedure Validation (IFPV) of Satellite-based Instrument Flight Procedures (IFP), and FAA Order 8900.1, Flight Standards Information Management System (FSIMS), Flight Validation requirements;

(1) A person may be appointed within the IFP Service Provider organization to fulfill this function, or;

(2) The IFP Service Provider may enter into an agreement with an FAA-approved flight validation provider, or;

(3) Enter into an agreement with the FAA for flight validation services.

1-1-4. IFP Design and Development Process. An outline of this process is included in chapter 2. This process includes the following coordination functions:

a. Required Coordination. IFP Service Providers are responsible for IFP coordination and design with all stakeholders per FAA Order 8260.19, Flight Procedures and Airspace, and FAA Order 8260.43, Flight Procedures Management Program;

b. Data Sources. The IFP Service Provider must use FAA databases for Obstacle, Terrain, Airport, navigational aid (NAVAID), and Fix information. Any other data that is used must be coordinated with the appropriate FAA office;

c. Environmental. The IFP Service Provider is responsible for coordinating environmental determinations in accordance with FAA Order 1050.1, Environment Impacts: Policies and Procedures, and FAA Order JO 7400.2, Procedures for Handling Airspace Matters;

d. Airspace. Determine airspace requirements in accordance with FAA Order 8260.19;

e. Flight Validation (FV). Complete Flight Validation in accordance with Flight Validation requirements (see FAA Order 8900.1), and

f. Maintenance. The IFP Service Provider must maintain each IFP until maintenance is assumed by the FAA or the IFP is canceled (see FAA Order 8260.60, Special Instrument Procedures, chapter 2). Maintenance of IFPs must include;

(1) Periodic Review. A plan must be in place for the periodic review and amendment process of IFPs as required by FAA Order 8260.19;

(2) Obstacle Evaluation/Airport Airspace Analysis (OE/AAA). The IFP Service Provider must continuously monitor for proposed obstacle cases that may impact the IFP. Obstacle analysis and communication of impact must be accomplished in accordance with 14 CFR Part 77, FAA Order JO 7400.2, and the process outlined in their operations manual; and

(3) Safety of flight information. A plan must be established for monitoring and disseminating relevant safety of flight information [i.e., NOTAMs]. Establish a plan to notify

Mission Support Services (AJV) when a NOTAM is sent. This plan should also include details how AJV will notify the IFP Service Providers.

1-1-5. Application. The IFP Service Provider will submit a letter of application to AFS-460, including a detailed proposal of compliance with this AC to the address listed below. The FAA will review the letter of application and provide guidance on how to proceed with the authorization process.

FAA Mike Monroney Aeronautical Center Flight Procedure Implementation and Oversight Branch, AFS-460 6500 S. MacArthur Boulevard Building 29, Room 104 Oklahoma City, OK 73169

1-1-6. FAA Authorization Process and Program. The FAA (AFS-460) will:

a. Applicant's compliance. Verify the applicant's compliance with this AC, which will include, but not limited to:

- (1) Audit(s) of the applicant's facilities (including any subcontractor facilities);
- (2) Interview(s) of applicant's staff;
- (3) Examination of relevant documentation; and
- (4) On site evaluation of the development process.

b. IFP Quality Review. Perform an IFP Quality Review (see table 1-1-1 for a sample quality review checklist).

c. Oversight Process. Oversight and compliance will be performed by AFS-460 as outlined in FAA Order FS 8260.57, Oversight of Third Party Instrument Flight Procedure Service Providers, and FAA Order 8000.368, Flight Standards Service Oversight.

d. Notification of Change. The IFP Service Provider will provide AFS-460 (in writing) 14 days advance notice for any proposed change, which may affect compliance with this AC.

e. Letter of Authorization (LOA). Upon determination of compliance with this AC, issue a LOA to produce 14 CFR Part 97 RNP AR IFPs.

Airport:			
Designer:			
Reviewer:			
Date:			
IFP Name:			
Requirement Phase and Data Collection:	Yes	No	NA
Existing IFPs and Obstacles Reviewed?			
Airport Name			
Airports geographic location			
Runway characteristics (TDZE, THLD, Profile)			
Runway Threshold Latitude/Longitude			
Departure End Threshold Latitude/Longitude			
Touchdown Zone Elevations - All Runways			
Landing Threshold Elevations - All Runways			
Navigational Aids			
Airport Lighting			
Weather Reporting and Forecasting Capabilities			
Airspace Limitations and Restrictions			
ATC Contacted - Approach?			
ATC Contacted - Center?			
Category Exclusion Letter included?			
Mountainous Terrain?			
Assumed Tree/Vegetation heights per the region's Flight Procedures Team (FPT)			
Obstacle Data			
5 year average LOW temperature Analysis			
Dosign Bhaso	Voe	No	ΝΛ
Bearings, Headings, Courses, and Radials are Magnetic and documented to the	103		
closest hundredth of a degree			
Elevations and altitudes are in feet			
Distances are in Nautical Mile			
Waypoints are Named and have completed Form 8260-2			
Minimum Altitudes are At or Rounded Up the nearest 100-foot increment (i.e., 1,701 feet and 1,751 feet both round up to 1,800 feet)			
Missed Approach Design must match the Missed Approach Instructions			
Feeder, Initial and Intermediate Segment Documented			
Holding Patterns Evaluated and Documented			
All Bank Angles Evaluated			
Form 8260-3 fill out per FAA Order 8260.19			
Form 8260-9 fill out per the FAA Order 8260.19			
Form 8260-2 for all Waypoints and NAVAIDs are filled out per FAA Order 8260.19 to include turn centers			
Form 8260-10 fill out per the FAA Order 8260.19			
ARINC 424 Coding			

Chapter 2. Process for RNP IFP Design and Development

2-1-1. General. This chapter provides guidance on the coordination process to design/develop public RNP approach IFPs.





2-1-2. Preliminary Activities. Prior to design of a 14 CFR Part 97 RNP AR IFP, several tasks must be completed.

a. Initial Coordination. This includes air traffic facilities, airport, operator(s), IFP Service Provider.

(1) Discuss objective for designing the IFP.

(2) Facilitator should provide briefing on RNP AR capabilities, benefits, and limitations.

(3) Discuss the environmental impact of the IFP. This may require obtaining radar track data of existing flight paths.

(4) Coordinate with the airport and air traffic facility on projects under development or issues that could impact IFP implementation.

(5) Determine the minimum airport infrastructure requirement needed to support the proposed IFP per AC 150/5300-13.

(6) Determine the status of the airport survey.

(7) Research airport infrastructure and equipage levels and determine intent of operators to fly particular type of approach.

(8) Produce an evaluation of all obstacles considered pertinent to the proposed IFP development project and recommendation for resolving conflicts.

(9) Submit an IFP preliminary design concept to the Regional Airspace and Procedures Team (RAPT).

(10) Obtain concurrence from airport sponsor/owner of IFP request.

b. RAPT. Submit the proposed procedure for RAPT coordination.

c. Kickoff Meeting. This step begins when the RAPT determines that a requested IFP is feasible. The purpose of the kickoff meeting is to provide a forum in which the Working Group can reach a consensus on the objectives, finalize the initial design concept, and establish a timeline for the proposed IFP.

(1) Arrange meeting with all interested stakeholders.

(2) Introduce the process and emphasize the Working Group concept by highlighting the roles and responsibilities of the various members.

(3) Review objective for designing the IFP.

(4) Consider RAPT assigned publication date to determine a project timeline.

(5) Facilitator should provide briefing on capabilities, benefits, and limitations.

(6) IFP's proponent (lead carrier) should present an IFP design concept to the group for comment and act as the facilitator.

(7) Environmental impact of the IFP should be addressed.

(8) Adjoining facility coordination should begin discussion on revising (if needed) their letter of agreement.

(9) Identify, discuss, and track other projects that may impact the proposed IFP.

(10) Identify operator RNAV IFPs (critical for RNAV IFP naming convention, when more than one RNAV IFP designed to the same runway).

(11) Review action items and responsible person/organization.

- (12) Establish Working Group roster.
- (13) Task Output:
 - (a) Agreed upon draft IFP design concept;
 - (b) Establish meeting schedule;
 - (c) Track action items.

2-1-3. IFP Design. IFP design is a complex process that requires a detailed understanding of criteria, air traffic operational needs, and aircraft capabilities. Successful design and implementation depends on collaboration between industry and the FAA across all relevant lines of business. Additionally, the consistent and active participation of all Working Group members is required throughout all phases of the project.

a. Develop IFP Concept. IFP development primarily consists of the further detailed definition of the lateral and vertical path first discussed during the kickoff meeting. The Working Group must review the IFP throughout the development process to verify several key elements listed below.

(1) For approach IFPs that will not be wholly contained within terminal airspace ensure coordination between all affected facilities as work proceeds. These must include any bordering TRACON and ARTCC facilities that may be impacted by the IFP.

(a) The coordination process must address the IFP's compatibility with other existing/planned IFPs, airspace borders, and controller sectors.

(b) Coordination must also include consideration of the NFDC charting and publication cycles.

(2) Terminal Facility Management will obtain a list of waypoint names for the project from Air Route Traffic Control Centers (ARTCC) Facility Management. The waypoint list should be verified using available FAA databases, including Aviation System Standards Information System (AVNIS) and National Airspace System Resources (NASR).

(3) IFP Service Provider must perform an initial airspace assessment to ensure that the proposed IFP is wholly contained within controlled airspace.

(4) IFP development must include identification of Air Traffic Control (ATC) operational requirements.

(5) A timeline must be established that includes consideration of implementation and ATC training requirements as appropriate.

(6) Final IFP Design.

b. Environmental Review. Ensure that an environmental review will be conducted per FAA Order 1050.1.

c. Document IFP. Document the IFP and airspace requirements as specified in FAA Order 8260.19 prior to submission to NFDC.

2-1-4. Instrument Flight Procedure Validation (IFPV). Conduct IFPV in accordance with FAA AC 90-113 and FAA Order 8900.1 Volume 11, chapter 12.

2-1-5. Pre-Implementation. The IFP Service Provider will ensure the final design is coordinated with all stakeholders.

2-1-6. Post-Implementation. IFP Service Provider will conduct an implementation review consistent with SMS principles to ensure continual process improvement and feedback.

Chapter 3. Training Syllabus Example

3-1-1. General. This chapter provides an example for a training syllabus. Training (including specialized training) and establishment of minimum qualification standards of personnel actively involved in IFP development is the responsibility of each IFP Service Provider. In order to meet the requirements of this AC, the IFP Service Provider will be required to have a training program approved by the FAA to ensure the proficiency of all staff IFP designers. The training program will address both initial and recurrent training, and will include skill and knowledge requirements for all aspects of IFP design.

3-1-2. Training Syllabus. The training syllabus will include, but not be limited to the following general and specific knowledge areas to ensure continuity of instrument IFP development expertise;

3-1-3. General Areas.

a. Title 14 Code of Federal Regulations (14 CFR).

(1) Part 71-designation of Class A, B, C, D, and E Airspace Areas; Air Traffic Service Routes; Reporting Points;

- (2) Part 73-Special Use Airspace;
- (3) Part 77-Objects Affecting Navigable Airspace;
- (4) Part 91-Air Traffic and General operating Rules;
- (5) Part 93-Specific Air Traffic Rules;
- (6) Part 95-IFR Altitudes;
- (7) Part 97-Standard Instrument Procedures;

(8) Part 121-Operating Requirements: Domestic, Flag, and Supplemental Operations; and

(9) Part 135-Operating Requirements: Commuter and On-Demand Operations and Rules Governing Persons On Board Such Aircraft.

- b. Flight Procedures Management Program. See FAA Order 8260.43.
- c. 8260-series orders applicable to Instrument Procedure Development.
- d. IFP Service Providers' Operating Procedures.
- e. FAA Safety Management System.
- f. Navigation systems and aircraft performance.

- g. ATC procedures.
- h. Airspace design.
- i. Environmental regulations.

3-1-4. Specific Areas.

a. Security. Security as it pertains to protecting FAA provided data, software, and/or equipment.

- **b.** Maintenance. Maintenance of FAA provided references and resources.
- c. Data submission and accuracy requirements.
- d. Process Environmental Assessments and Impact Statements.
- e. Prepare the IFP package for submission to the FAA.
- f. The IFP Approval Process.

Chapter 4. Administrative Information

4-1-1. General. This chapter provides an alphabetical listing of frequently used acronyms and abbreviations [see table 4-1-1] and definitions.

14 CFR	Title 14, Code of Federal Regulations
AC	Advisory Circular
AFS	Flight Standards Service
AFS-460	Flight Procedure Implementation and Oversight Branch
AIS	Aeronautical Information System
AJV	Mission Support Services
AR	Authorization Required
ARTCC	Air Route Traffic Control Centers
ATC	Air Traffic Control
AVNIS	Aviation System Standards (AVN) Information Systems
AVS	Aviation Safety
DP	Departure Procedure
GPS	Global Positioning System
GUI	Graphic User Interface
IAP	Instrument Approach Procedure
IFP	instrument flight procedure

Table 4-1-1. Acronyms and Abbreviations

IFPV	Instrument Flight Procedure Validation	
IFR	instrument flight rule	
LOA	letter of authorization	
LOB	line of business	
NAS	National Airspace System	
NASR	National Airspace System Resources	
NAVAID	navigational aid	
NFDC	National Flight Data Center	
NOTAM	Notices to Airmen	
OE/AAA	Obstruction Evaluation/Airport Airspace Analysis	
QA	quality assurance	
RAPT	Regional Airspace and Procedures Team	
RNAV	area navigation	
RNP	required navigation performance	
SMS	Safety Management System	
STAR	standard terminal arrival route	

4-1-2. Definitions.

a. Area Navigation (RNAV). RNAV is a method of navigation which permits aircraft operation on any desired flight path within the coverage of ground– or space–based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

Note: Area navigation includes performance–based navigation as well as other operations that do not meet the definition of performance–based navigation.

b. Authorization Required (AR). AR is authorization by the FAA to conduct RNP approaches designated as "Authorization Required." Standards and criteria for development of RNP AR IFPs are based on a higher level of aircraft equipage and additional aircrew requirements.

c. Aviation System Standards Information System (AVNIS). AVNIS is the working database that stores all of FAA's data relating to airport and facility surveys and pertinent flight inspection reference data.

d. Departure Procedures (DP). DP encompass two types of procedures, those developed to assist pilots in obstruction avoidance, referred to as Obstacle Departure Procedure (ODP), and those developed to communicate air traffic control clearances, referred to as Standard Instrument Departure (SID).

e. Global Positioning System (GPS). GPS refers to the worldwide positioning, navigation and timing determination capability available from the U.S. satellite constellation. The service provided by GPS for civil use is defined in the GPS Standard Positioning System Performance Standard. GPS is composed of space, control, and user elements.

f. Instrument Approach Procedure (IAP). IAP is a series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing, or to a point from which a landing may be made visually. It is prescribed and approved for a specific airport by competent authority.

g. Instrument Flight Procedure (IFP). IFP is a charted flight path defined by a series of navigation fixes, altitudes, and courses provided with lateral and vertical protection from obstacles from the beginning of the path to a termination point. IFPs can be Departure Procedures (DPs), Airways, Standard Terminal Arrival Routes (STARs), and Instrument Approach Procedures (IAPs).

h. IFP Service Provider. IFP Service Provider is an entity that provides IFP development services to the public.

i. National Airspace System Resources (NASR). NASR is the FAA's aeronautical database of record and is a client-server system employing a graphical user interface (GUI) for aeronautical information specialists (AIS) accessing NAS data. This system provides the FAA with the means for storing and maintaining a reference database with descriptive details of the NAS infrastructure and the operational status of all components.

j. Obstacle Evaluation/Airport Airspace Analysis (OE/AAA). OE/AAA is the conduct of aeronautical studies of existing or proposed objects based on information provided by proponents on an FAA Form 7460-1, Notice of Proposed Construction or Alteration, as prescribed by FAA Order 7400.2, Procedures for Handling Airspace Matters. Sign up as a new user <u>online</u>.

k. Required Navigation Performance (RNP). RNP is a statement of the navigation performance necessary for operation within a defined airspace. On board monitoring and alerting

is required. See RTCA DO-236B, Minimum Aviation System Performance Standards: Required Navigation Performance for Area Navigation.

I. Standard Terminal Arrival Route (STAR). STAR is a preplanned instrument flight rule (IFR) air traffic control arrival procedure published for pilot use in graphic and/or textual form. STARs provide transition from the en route structure to an outer fix or an instrument approach fix/arrival waypoint in the terminal area.

m. Working Group. Working Group refers to a cadre of personnel representing affected Lines of Business (LOB). This group includes a facilitator as spokesperson for the group.

4-1-3. Related Publications.

a. Regulations. Title 14 Code of Federal Regulations (14 CFR), Part 97.

b. Reading Material (current editions). These publications address IFPs development and implementation.

(1) FAA AC 90-101, Approval Guidance for RNP Procedures with AR;

(2) FAA AC 90-113, Instrument Flight Procedure Validation (IFPV) of Satellitebased Instrument Flight Procedures (IFP);

(3) FAA Order 1050.1, Policies and Procedures for Considering Environmental Impacts;

(4) FAA Order JO 7100.9, Standard Terminal Arrival Program and Procedures;

(5) FAA Order JO 7400.2, Procedures for Handling Airspace Matters;

(6) FAA Order 8000.367, Aviation Safety (AVS) Safety Management System Requirements;

(7) FAA Order 8000.368, Flight Standards Service Oversight;

(8) FAA Order 8000.369, Safety Management System;

(9) FAA Order 8200.1, United States Standard Flight Inspection Manual;

(10) FAA Order 8260.3, United States Standard for Terminal Instrument Procedures;

(11) FAA Order 8260.19, Flight Procedures and Airspace;

(12) FAA Order 8260.26, Establishing and Scheduling Civil Public-Use Standard Instrument Procedure Effective Dates;

(13) FAA Order 8260.42, United States Standard for Helicopter Area Navigation;

(14) FAA Order 8260.43, Flight Procedures Management Program;

(15) FAA Order 8260.46, Department Procedure (DP) Program;

(16) FAA Order FS 8260.57, Oversight of Third Party Instrument Flight Procedure Service Providers;

(17) FAA Order 8260.58, United States Standard for Performance Based Navigation (PBN) Instrument Procedure Design;

(18) FAA Order 8260.60; Special Instrument Procedures;

(19) FAA Order 8900.1, Flight Standards Information Management System (FSIMS),

(20) RTCA DO-236B Minimum Aviation System Performance Standards: Required Navigation Performance for Area Navigation.

4-1-4. Forms. The following forms were referred within the document and are available in electronic form for use.

a. FAA Form 7460-1, Notice of Proposed Construction or Alteration;

b. FAA Form 8260-2, Radio Fix and Holding Data Record;

c. FAA Form 8260-3, ILS-Standard Instrument Approach Procedure;

d. FAA Form 8260-9, Standard Instrument Approach Procedure Data Record,

e. FAA Form 8260-10, Standard Instrument Approach Procedure (Continuation Sheet).